



Forest Service

Region 4

Targhee

1997 Revised Forest Plan for the Targhee NF

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FEIS

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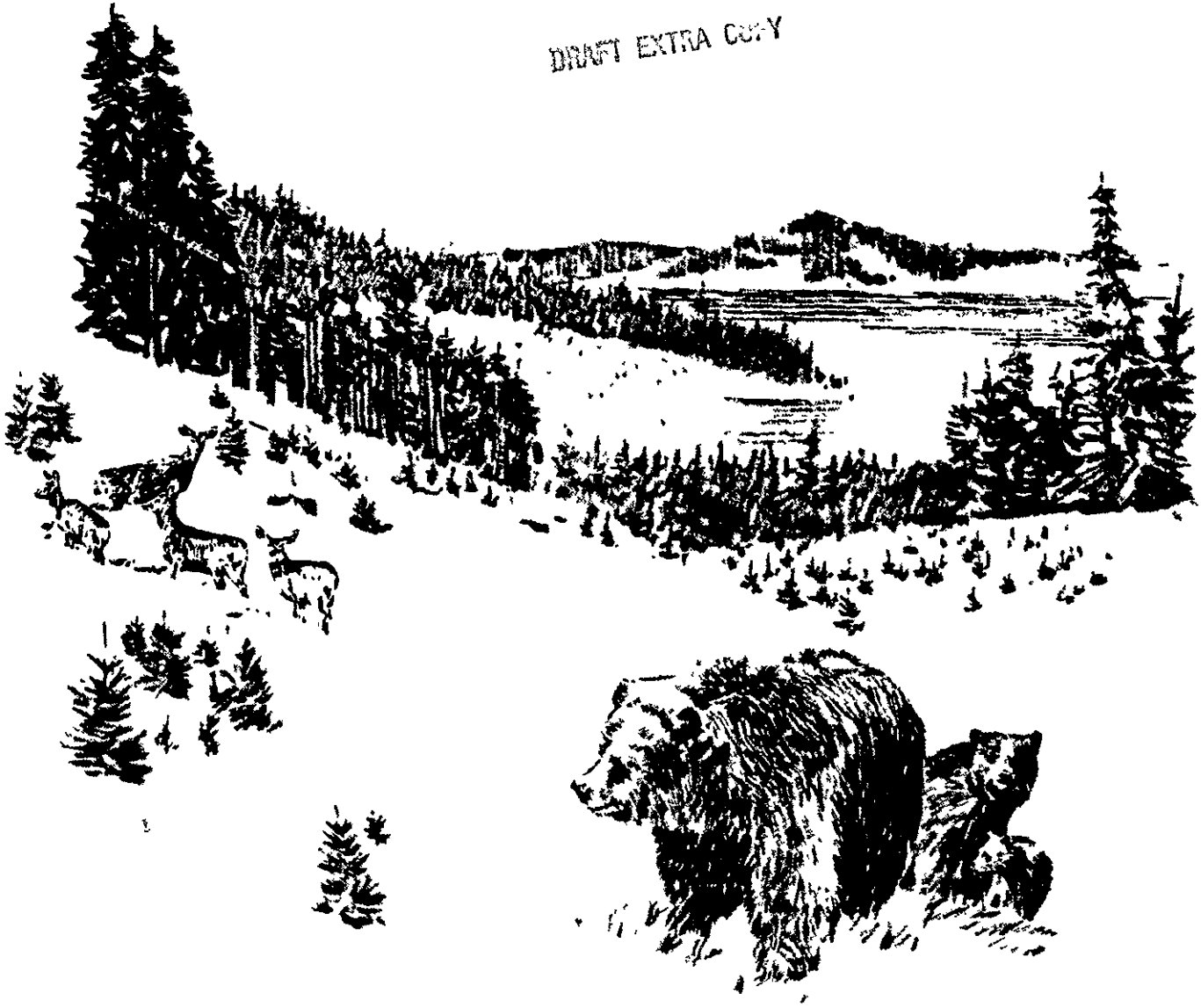
Targhee
National
Forest



Draft Environmental Impact Statement

Forest Plan Revision Targhee National Forest

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United States
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Targhee
National
Forest

P.O. Box 208
St. Anthony, ID 83445

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FEB 23 1996

Dear National Forest Planning Participant:

Enclosed is a copy of the Draft Environmental Impact Statement (DEIS) and Draft Revised Forest Plan for the Targhee National Forest. The primary purpose of these documents is to outline the proposed management of the Targhee National Forest for the next 10-15 years.

I appreciate all the assistance some of you in the community have provided as we developed these plans.

Your review and comments on the Draft EIS and Revised Forest Plan are important to the analysis process. In your review, I encourage you to pay particular attention to concerns you may have raised earlier in the process to see if the analysis is responsive. Comments on the DEIS should be as specific as possible and must be received no later than JUN 7 1996.

E-mail comments can be submitted to /s=drev/oui=r04f15a@mhs-fswa.attmail.com. It would be helpful to know the reasons for your comments, to help us make better informed decisions. Positive comments about portions that are acceptable to you would also be appreciated. After the comment period ends, the comments will be analyzed and the Final EIS and Record of Decision prepared.

If you have questions or comments please contact me or Carol Cushing, Forest Planner, at P.O. Box 208, St. Anthony, ID 83445 or call (208) 624-3151.

Sincerely,

JERRY B. REESE
Forest Supervisor



DRAFT ENVIRONMENTAL IMPACT STATEMENT
for the
TARGHEE NATIONAL FOREST
FOREST PLAN REVISION

Bonneville, Butte, Clark, Fremont, Jefferson,
Lemhi, Madison, and Teton Counties, Idaho

and

Lincoln and Teton Counties, Wyoming

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ABSTRACT: This Draft Environmental Impact Statement documents the analysis of seven alternatives, which were developed for possible management of the 1.8 million acres administered by the Targhee National Forest. Alternative 3-M is the Forest Service's preferred alternative.

The alternative ultimately chosen may change based on input from the public, other agencies, and this agency's own internal deliberative process. That alternative, selected by the Regional Forester, will be published in the final EIS, and will become the Forest Plan Revision, which will guide management of the Targhee National Forest in the future.

Date of transmission to the Environmental Protection Agency and the public is: MAR 1 1996.
Send comments regarding this Draft Environmental Impact Statement to the Forest Supervisor, Targhee National Forest, at the above address by JUN 7 1996.

The comment period of the draft EIS will be 90 days from the date the Environmental Protection Agency publishes the notice of availability in the Federal Register.

The Forest Service believes it is important to give reviewers notice of several court rulings related to *public participation in the environmental review process*. First, reviewers of draft EISs must structure their participation in the environmental review of the proposal so that it is meaningful and alerts an agency to a reviewer's position and contentions. (*Vermont Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. 519, 553 (1978)) Also, environmental objections that could be raised at the draft EIS stage, but are not raised until after completion of the final EIS may be waived or dismissed by the courts. (*City of Angoon v. Hodel*, 803 F.2d 1016, 1022 (9th Cir. 1986) and *Wisconsin Heritages, Inc. v. Harris*, 490 F. Supp. 1334, 1338 (E D. Wis. 1980)) Because of these court rulings, it is very important that those interested in this proposed action participate by the close of the comment period so that substantive comments and objections are made available to the Forest Service at a time when it can meaningfully consider them and respond to them in the final EIS.

To assist the Forest Service in identifying and considering issues and concerns on the proposed action, comments on the draft EIS should be as specific as possible. It is also helpful if comments refer to specific pages or chapters of the draft EIS. Comments may also address the adequacy of the draft EIS *or the merits of the alternatives formulated and discussed in the statement*. Reviewers may wish to refer to the Council on Environmental Quality Regulations for implementing the procedural provisions of the National Environmental Policy Act at 40 CFR 1503.3 in addressing these points.

Please note that comments on the draft EIS will be regarded as public information.

The policy of the United States Department of Agriculture Forest Service prohibits discrimination on the basis of race, color, national origin, age, religion, sex, or disability, familial status, or political affiliation. Persons believing they have been discriminated against in any Forest Service related activity should write to: Chief, Forest Service, USDA, P.O. Box 96090, Washington, DC 20090-6090.

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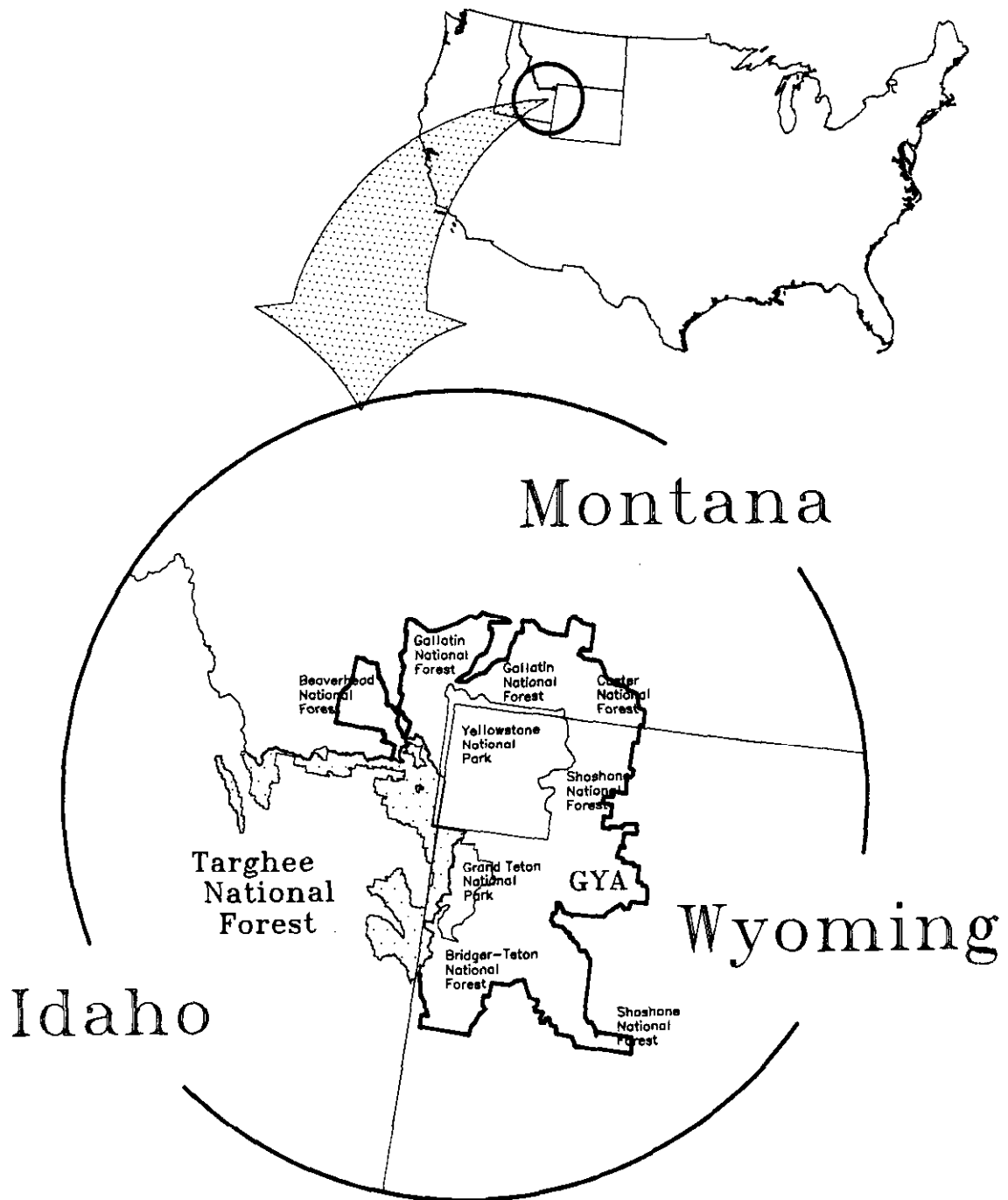
SUMMARY OF THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE TARGHEE MANAGEMENT PLAN

The purpose of the summary of the Draft Environmental Impact Statement (DEIS) for the Forest Plan Revision is to provide the reader with a quick overview of the planning process, the issues, and the alternatives, including the preferred, that will affect the management of the Targhee National Forest for the next ten years and beyond.

The DEIS considers and evaluates an array of alternatives, identifying the preferred. This summary will not cover the Draft Revision (DREV). The DREV carries out the actions of the preferred alternative and provides key decisions for the long-term management of the Forest. The DREV summary is contained in a document called "The Executive Summary."

Readers wanting more in-depth information or who wish to comment on the DEIS and DREV may write or call the Targhee National Forest Supervisor's Office at P.O. Box 208, St. Anthony, Idaho 83445, (208) 624-3151.

Vicinity Map of Targhee National Forest on a National Scale



GENERAL INFORMATION: LOCATION AND SETTING FOR THE TARGHEE NATIONAL FOREST

The Targhee National Forest is an administrative unit of the Department of Agriculture, Forest Service, encompassing 1.8 million acres. Established by President Theodore Roosevelt in 1908, the Forest is named in honor of a Bannock Indian warrior. The Targhee Forest Supervisor's Office is located in St. Anthony, Idaho with District offices in Dubois, Island Park, Ashton, Idaho Falls, and Driggs. The Forest is bordered by six other National Forests.

The Forest lies almost entirely within the Greater Yellowstone Ecosystem, an area of 12 million acres and the largest remaining block of relatively undisturbed plant and animal habitat in the contiguous United States.

On a larger scale, the Forest lies along the Continental Divide, at the uppermost reaches of the Columbia River Basin, an ecosystem of 40 million acres extending from Western Washington to the Southeastern Idaho border and encompassing parts of Montana, Wyoming, Nevada and Utah. The Forest includes all or portions of several distinct mountain ranges, including the Lemhi, Beaverhead, Bitterroot, Centennial, Henry's Lake, Teton, Big Hole, Caribou, and Snake River Ranges. Elevations range from near 5,000 feet on the Snake River to over 12,000 feet on the Forest's western and easternmost reaches. The Forest contains the Island Park Caldera and several reservoirs. Topography ranges from rolling foothills to rugged, glaciated mountain peaks.

Although most of the land is dry and semi-arid, 190 stream headwaters situated on the Forest provide varied vegetation to support a multitude of uses. The area has cold, moist winters and hot dry summers. Average annual precipitation, most of which falls as snow, increases with elevation. As little as ten inches of precipitation falls in lower valleys and as much as forty inches occurs at the highest elevations. Wide temperature extremes exist, with summer temperatures at lower elevations exceeding 100 degrees Fahrenheit and winter temperatures at higher elevations falling to less than 40 degrees below zero Fahrenheit.

SUMMARY OF THE DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

The 1985 Current Forest Plan emphasized an extensive salvage and reforestation program of dead lodgepole killed by a massive mountain pine bark beetle epidemic over the previous 3 decades. The 1996 DEIS recommends a preferred alternative that provides for sustainable management with a more balanced program for recreation, wildlife habitat, timber harvest, and other uses of the Forest.

Need for Change

Several reasons triggered the need to change from the old direction to a new one. In summary these were,

The salvage program was over, much of the remaining dead lodgepole was no longer marketable or accessible. An overabundance of old salvage roads was impacting wildlife and riparian habitat and soil productivity.

The recently adopted concept of Ecosystem Management by the Forest Service needed to become an integral part of the Forest's direction. A revision would require the Forest to be managed for sustainability of all ecologic and social components for the present and the future

New knowledge and findings for wildlife habitat management, unknown at the time of the 1985 Current Forest Plan, needed to be incorporated into a new Forest direction.

Results from monitoring data indicated that the Forest was not meeting all of the 1985 Current Forest Plan goals for some resources such as wildlife habitat, riparian areas, vegetation, and human access management.

Desired Future Condition for the Year 2010

Based on public and Forest Service employee comments received between 1991-1994, a set of goal statements, called the "Desired Future Condition for the Year 2010", emerged that collectively represent where the Forest would ideally like to be. The Desired Future Condition influenced the selection of the preferred alternative in the Draft EIS. These are described as follows:

Ecosystem Processes and Patterns Desired Future Condition:

A mosaic of age classes and types of vegetation are sustained through time and exist across the landscape. Natural disturbances such as insects, disease and fires continue their natural roles in the ecosystem. The Forest functions as an integral part of the Greater Yellowstone Ecosystem as well as adjacent systems, sustaining habitat and conditions necessary for free movement of wildlife.

Biological/Physical Desired Future Condition:

Riparian zones are healthy and productive. Aquatic systems are allowed to function naturally while protecting flows for downstream consumptive uses. Riparian area integrity contributes to productive fisheries and excellent water quality. Native plant and animal species are favored over undesirable nonnative species and sustained populations of all native and desirable species thrive. Habitat conditions contribute toward the recovery of Threatened, Endangered and Sensitive Species.

Forest Use and Occupation Desired Future Condition:

Growing and diverse recreational, cultural, visual, historical and prehistoric management, interpretive, and spiritual needs are accommodated based on the capability of the ecosystem to sustain these uses. Recreation use is managed to minimize conflicts between incompatible uses and provides high levels of satisfaction. Year-round human access is managed to provide both motorized and nonmotorized opportunities. A system of trails and support facilities exist which are compatible with resource capabilities. Roadless characteristics are preserved in the proposed wilderness areas and in existing Wildernesses.

Production of Natural Resources Desired Future Condition:

Commodity production, such as timber, firewood, mining, livestock forage; or outfitting and guide services are conducted at sustainable levels and maintain the capability of the land to produce an even flow and variety of goods and services for present and future generations. Timber harvest, prescribed fires and livestock grazing are used as tools to achieve desired ecological vegetation conditions. Forest products are provided to sustain social and economic values and needs of the local communities within limits which maintain ecosystem health.

Key Issues

Although there were over 70 issues and concerns identified by the public and Forest employees, seven Key Issues were the ultimate driving force for developing the alternatives and for the recommended direction of the Revised Forest Plan. The Key Issues had the most significance as variables between the alternatives and are points of conflict

Each Key Issue received an "Issue Indicator", a unit of measurement that showed how the issue was addressed in each alternative. The leadership team, consisting of the Forest Supervisor, District Rangers, Branch Chiefs and Public Affairs Officer, studied the issues and selected one major indicator for each issue that best reflected the variability for that issue between the alternatives.

Key Issue 1: Sustainability, Fire, and Natural Disturbances

An Ecosystem is a large, complex, integrated system of living and nonliving components that interact and change continually. Healthy ecosystems are those that retain all of their parts and functions for future generations even though vegetation patterns, human uses, or other conditions may change. Because ecosystem management is a new approach for the Forest Service, a variety of approaches are possible in working towards implementation. Issue 1 mainly focuses on determining actions needed for sustainability and maintenance of a healthy ecosystem, particularly as it relates to fire, insects and disease, collecting and monitoring data; and identifying the range of variability.

Issue 1 Indicator: Of all the indicators of ecosystem health, patch size limit (in acres) was selected. A patch is defined as an area of vegetation that is structurally and/or compositionally different from what surrounds it — for example, a clearcut of 40 acres within a lodgepole pine component is a patch. Patch size limit was selected because the forest has gathered some general information about the subject from old historical photos and maps. Changes in patch sizes from what existed historically, particularly as it relates to fire and other natural disturbances, may affect individual species or ecosystem sustainability. As our knowledge increases about the nature and magnitude of patch size limits, the Forest may be constrained in its ability to achieve desired patch sizes by the National Forest Management Act's harvest unit size limit or other species or resource considerations. At this time the Forest does not know the implications of historical changes in vegetation patch sizes for other resources such as animal populations.

Key Issue 2: Riparian

Riparian areas lie adjacent to water and are composed of vegetation communities dependent upon water near the ground surface. Riparian areas are associated with lakes, reservoirs, springs, bogs, wet meadows, and streams. Riparian areas are essential breeding, rearing and feeding grounds for many species of wildlife and all fish. They serve people as important sources for water and flood control and for recreational purposes such as camping, fishing, floating and aesthetics. Although riparian areas constitute less than 5 percent of the total land base, they are the most productive areas in terms of plant and animal species diversity and consumptive use. A healthy riparian area indicates that the aquatic, water and soil components are also healthy.

Issue 2 Indicator: The issue indicator showing the differences between the alternatives for riparian areas is Desired Vegetation Condition. The riparian area's health is indicated by the amounts and types of riparian vegetation along the streambanks, with highest preference to native deep-rooted grasses, shrubs and trees that maintain streambank stability and provide for a high rate of recovery following disturbance.

Key Issue 3: Security for Elk

Although the Forest provides habitat for a number of wildlife species (85 mammals, 301 birds, 17 reptiles and amphibians), for many there were only slight differences in the management of their habitat amongst the alternatives. Security for elk was chosen as a key issue relating to future hunting conditions and opportunities and cooperative relations with Fish and Game Departments. Observations and studies by agency and university scientists determined that, as motorized road and trail densities increase, elk security declines. Portions of the Forest have high densities of trails and roads open to motorized use due to the extensive road building associated with the salvage activity of removing the dead lodgepole.

Issue 3 Indicator: The best indicator showing the differences between alternatives for elk security is "the percentage of the Forest meeting State Fish and Game vulnerability thresholds for elk." Elk vulnerability is defined as a measure of elk susceptibility to being killed during the hunting season. As cross country off-highway vehicle travel and motorized road and trail densities increase, the security for elk decreases and mortality rate increases. The primary effect that the Forest Service has control over, related to elk vulnerability, is the density of open motorized roads and trails and the amount of area open to cross-country, off-highway vehicle travel.

Key Issue 4: Grizzly Bear Management Units

Portions of the Forest are within the Yellowstone Grizzly Bear Ecosystem which has been divided into Bear Management Units (BMU's). Portions of the Forest are within three BMU's and feature grizzly bear recovery. As with all threatened and endangered species, all alternatives must meet the stringent guidelines of the Endangered Species Act. The importance of managing motorized access is one of the most influential parameters affecting grizzly bear habitat security. New information accumulated over the last ten years provides better insight and direction regarding effective management of roads, timber and human activities in grizzly bear habitat.

Issue 4 Indicator: The indicator for the Bear Management Units issue is the Open Road and Open Motorized Trail Route Density. By managing motorized access, the Forest can minimize human interaction and potential grizzly bear mortality, displacement from important habitats, and habituation to humans.

Key Issue 5: Access

The Forest currently has 1,367 miles of open system road and 1,021 miles of open nonsystem roads; 433 miles of open system trail and 199 miles of open nonsystem trail. "Open" means road and trail miles without restrictions on motorized use. There are currently road and trail miles with restrictions on motorized use as follows: 633 miles of restricted system road (61 miles with seasonal restrictions and 572 miles with yearlong restrictions), 201 miles of restricted nonsystem road (24 miles with seasonal restrictions and 177 miles with yearlong restrictions); 597 miles of restricted system trail; 102 miles of restricted nonsystem trail.

Recreational motorized use has increased over the last decade. The current plan allows cross-country motorized travel across much of the Forest and does not establish road density standards. Road closures would provide more protection and fewer impacts upon wildlife, threatened, endangered, and sensitive species, soils and water, and fisheries; less visual, garbage and noise pollution; reduced maintenance, and more opportunity for escape and solitude. Open roads and trails would allow more access for hunting, fishing, berry-picking, developed camping, hiking and other recreational pursuits, increased opportunities for sightseeing, challenging cross-country travel for off-highway vehicles, and greater access for persons with disabilities and the elderly.

Issue 5 Indicator: The indicator that best showed differences between alternatives is the Number of Miles of Road/Trails Open to Summer (June-Sept) Motorized Use.

Key Issue 6: Management of Roadless Areas

The Forest has sixteen areas which qualify as roadless, totaling 841,000 acres. The Wyoming portion of the Palisades Roadless Area was designated by Congress as a Wilderness Study Area in the Wyoming Wilderness Act of 1984. Portions of three roadless areas in Idaho were recommended as wilderness in the current Forest Plan, but no legislative action has been taken to resolve the roadless areas question in Idaho. During the last planning period, some roadless areas were roaded as part of the salvage program. As motorized recreation demands increase, public debate increases over whether or not the Forest should maintain the roadless character of the remaining roadless areas. More acres of a Congressionally designated wilderness assures protection from resource uses and national recognition of wilderness character. Fewer acres in wilderness would allow more motorized access for recreation, oil and gas, timber and other industries.

Issue 6 Indicator: The indicator for Issue 6 is the Number of Acres Recommended for Wilderness. Prior to designation by Congress, recommended wilderness areas' roadless character is protected. Once a roadless area is designated as wilderness by Congress, it is managed in perpetuity for non motorized, scientific, and dispersed recreational purposes.

Key Issue 7: Timber Harvest

The three major timber species available for harvest on the forested areas of the Targhee are quaking aspen (15%), Douglas fir (15%), and lodgepole pine (60%). Previously, large scale salvage of dead and dying lodgepole pine timber was conducted at levels that could not be sustained. Since the harvest of dead timber has largely been completed, the Forest must now harvest at sustainable levels. The Endangered Species Act; Grizzly Bear Recovery Plan and Guidelines, Ecosystem Management principles, demise of availability of dead lodgepole, increased knowledge about the impacts of motorized use of roads and trails upon the Forest's resources, and other factors result in a greatly reduced availability of timber for harvest, called the allowable sale quantity (ASQ). The amount of firewood availability does not vary among the alternatives. A greater harvest of timber aids the local economy, better maintains the 25% payments to local governments, maximizes the removal of the remaining dead or mature wood, and assists in faster regeneration of the fire-dependent lodgepole pine. A reduction in timber harvest results in fewer impacts by motorized trail and road uses upon wildlife, riparian areas, soils and water, aesthetics and other resources.

Issue 7 Indicator. The key indicator for this issue is the Allowable Sale Quantity (ASQ). The ASQ does not include firewood and is defined as the quantity of timber that may be sold from the area of suitable land for a ten-year period specified in a Forest Plan.

The Alternatives

Before creating alternatives, the Forest and public put together an "Analysis of the Management Situation," (AMS) which looked at current conditions and direction of the Forest. Alternatives were developed by using the AMS data that identified problem areas that needed changing.

The alternatives reflected a range of options that responded to the issues, the desired future condition, and the need for change. The interdisciplinary team evaluated the significant physical, biological, economic and social effects of each alternative that was considered in detail. The evaluation included social and economic impacts, outputs of goods and services, and overall protection and enhancement of environmental resources.

The Forest analyzed in detail seven alternatives; the Forest Supervisor and Leadership Team recommended Alternative 3-Modified to the Regional Forester and the public for review.

The Alternative Continuum

The numbering scheme for alternatives ranges from 1-6, with alternative 3-M being the preferred Alternative and Alternative 1 being the No-Action or continue the Current Forest Plan Alternative. As the numbers increase from Alternatives 2 to 6, they move consistently towards.

- *Greater protection of wildlife habitat
- *Greater protection of riparian areas
- *More protection for Bear Management Units
- *More security for elk
- *More nonmotorized, dispersed recreation opportunities
- *More recommended wilderness
- *Less cross-country motorized use
- *Fewer open roads and trails
- *Reduced livestock grazing and timber harvest
- *Fewer lasting visual impacts from management activities

A Summary Description of the 7 Alternatives

ALTERNATIVE 1 = Continue the Current Forest Plan (No Action)

The purpose of Alternative 1 is to continue management of the Forest under the current Forest Plan, finalized in 1985, and updated with amendments, litigious concessions for the grizzly bear; and changes for new listings of sensitive wildlife species over the last ten years. Timber harvest occurs at the highest levels possible within the management constraints required for threatened and sensitive wildlife species like grizzly bears and goshawks. Vehicle access is slightly reduced over current levels due to the implementation of the interagency grizzly bear guidelines and better road management across the Forest. Cross-country, motorized access in summer and winter would continue close to current levels. Riparian, wildlife and recreation values are emphasized in specific areas of the Forest. Alternative 1 recommends portions of the Lionhead, Italian Peaks and Winegar Hole roadless areas for wilderness designation. Their roadless characteristics are maintained until Congress acts on the recommendation.

ALTERNATIVE 2

The purpose of Alternative 2 is to resolve the needs for change by emphasizing cross-country, winter access and timber production, while adding more restrictions to summer, cross-country access. Timber harvest occurs at the highest levels within the management constraints required for maintaining threatened, endangered and sensitive species habitat. Grazing continues at current levels. *Vehicle access is slightly reduced to meet requirements of the interagency grizzly bear guidelines.* Riparian, wildlife and heritage resource values are emphasized in specific areas of the Forest. Alternative 2 makes no recommendations to Congress for wilderness designation.

ALTERNATIVE 3

The purpose of Alternative 3 is to resolve the needs for change by emphasizing management of wildlife habitat and sustaining timber harvest levels within wildlife constraints. Grizzly bear recovery is enhanced with a reduction in motorized use allowed in each BMU. Grazing allotments continue at current levels and larger percentage of riparian areas meet the desired vegetation condition. Cross-country, summer, motorized vehicle use is restricted to specific areas. Lionhead, Palisades and

Italian Peaks, plus the Idaho roadless portion adjacent to the Winegar Hole Wilderness are recommended to Congress for wilderness designation; until Congress acts on the recommendation, their roadless characteristics are maintained.

ALTERNATIVE 3-M = Alternative 3 Modified (Also the Proposed Programmatic Action and Preferred Alternative)

The purpose of Alternative 3-M is to resolve the needs for change by providing sustainable management with a balanced program among, wildlife habitat, timber harvest, recreation, and other uses and resources of the Forest. Alternative 3-M also provides increased emphasis for wildlife habitat management and allocates more core areas for grizzly bear. Motorized access, timber harvest levels and livestock grazing are all reduced from levels allowed in the current Forest Plan. Riparian areas with cutthroat trout are further protected with increased vegetation and reduced livestock grazing. Cross-country, summer, motorized vehicle use is restricted to specific areas. Lionhead, Palisades and Italian Peaks, plus the Idaho roadless portion adjacent to the Winegar Hole Wilderness are recommended to Congress for wilderness designation; until Congress acts on the recommendation, their roadless characteristics are maintained.

All the alternatives respond to and incorporate the resource objectives set forth in the Recommended 1990 RPA Program. Alternative 3-M has been selected as the RPA Alternative because it represents the Forest's best attempt to simultaneously implement multiple-use management, ensure resource sustainability, emphasize the quality of resource outputs, and to provide for the economic well-being of rural communities.

ALTERNATIVE 4

Alternative 4 emphasizes watershed and wildlife habitat improvement and a reduction in timber harvest. Riparian areas receive increased emphasis. Motorized access is restricted to designated routes and more roads are closed in BMU's than in previous alternatives. Lionhead, Palisades and Italian Peaks, plus the Idaho roadless portion adjacent to the Winegar Hole Wilderness and another 14,000 acres of roadless areas are recommended to Congress for wilderness designation; until Congress acts on the recommendation, their roadless characteristics are maintained.

ALTERNATIVE 5

The purpose of Alternative 5 is to meet the needs for change that reduce focus on human management and human disturbances of wildlife and riparian habitat. Motorized access is restricted to designated routes and more roads are closed in BMU's. Lionhead, Palisades and Italian Peaks, plus the Idaho roadless portion adjacent to the Winegar Hole Wilderness and another 100,000 acres of presently roadless areas are recommended to Congress for wilderness designation, until Congress acts on the recommendation, their roadless characteristics are maintained.

ALTERNATIVE 6

The purpose of Alternative 6 is to meet the needs for change by de-emphasizing human management and human disturbance of wildlife and riparian habitat to the lowest level in all the alternatives. Timber harvest is not scheduled. All access is strongly restricted to designated routes and more roads are closed to reduce human disturbance than in any other alternative. Lionhead, Palisades and Italian Peaks, plus the Idaho roadless portion adjacent to the Winegar Hole Wilderness and another 340,000 acres of presently roadless areas are recommended to Congress for wilderness designation. Almost all the roadless areas retain their roadless characteristics.

COMPARING THE ALTERNATIVES USING SOME ISSUE INDICATORS

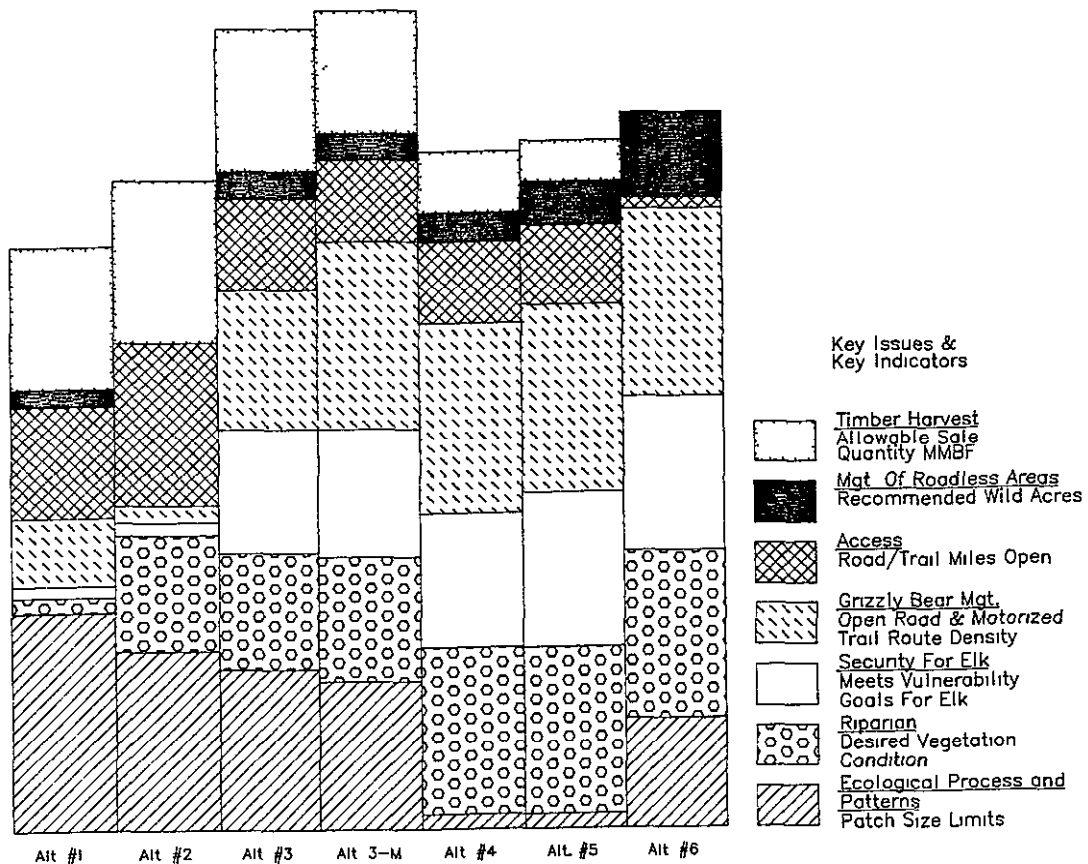
This page contains a summary of the environmental effects of the seven alternatives. This summary is drawn from information in Chapters II and IV of the DEIS and Table II-1. M means that all acres are in the thousands (* are Key Issue Indicators)

	Exist Level	Alt #1	Alt #2	Alt #3	Alt #3-M	Alt #4	Alt #5	Alt #6
* M Acres restricted to openings < Range of Variability	NA	47	25	82	259	310	333	330
- M Acres where prescribed fire is allowed	1,282	1,282	1,401	1,302	1,232	1,223	1,202	1,256
- M Acres open to locatable and mineral entry	1,722	1,383	1,414	1,324	1,277	1,340	1,197	968
* M Acres not meeting DVC 1/	37	40	25	25	25	17	17	17
- # stream crossings	5,680	3,461	3,056	2,724	2,724	2,121	1,721	1,204
- M Acres of timber harvest in headwater areas	216	36	41	36	29	19	14	0
* Elk Vulnerability (EV) - M Acres mtg state thresholds	774	1,075	1,296	1,526	1,673	1,640	1,802	1,802
- % of winter range acres meeting DVC	78	81	82	82	82	84	84	84
- Percent of Forested acres in Mature Age Class	79.6	78.4	78.2	78.5	78.7	79.0	79.2	79.6
* OROMTRD 2/ (mi/sq mi) - Henry's BMU, Sub 1	1.52	0.60	0.52	0.55	0.40	0.35	0.41	0.43
- Henry's BMU, Sub 2	0.98	0.45	0.37	0.38	0.29	0.33	0.37	0.28
- Plateau BMU, Sub 1&2	1.29	0.87	1.03	0.65	0.56	0.50	0.49	0.56
- Bechler BMU	0.77	0.58	0.59	0.53	0.48	0.39	0.39	0.39
Miles of open system roads	1,367	1,320	1,411	1,221	1,197	1,072	972	961
Miles of open nonsystem roads	1,021	564	453	368	363	299	281	268
Miles of open system trails	433	449	357	337	340	320	171	28
Miles of open nonsystem trails	199	123	113	98	98	101	61	54

1/ Only includes riparian acres open to grazing (about 79% of the Forest). Does not include acres closed to grazing prior to 1995. Source - FSRAMIS Database

2/ OROMTRD = Open Road and Open Motorized Trail Route Density

COMPARING THE ALTERNATIVES USING SOME ISSUE INDICATORS								
	Exist Level	Alt #1	Alt #2	Alt #3	Alt #3-M	Alt #4	Alt #5	Alt #6
- Mi of reclaimed system roads	-	113	286	448	562	711	875	864
- Mi of reclaimed nonsystem roads	-	562	699	749	764	834	830	873
- M Acres (and percent of forest) open to winter x-country OHV	1,511 (84%)	1,511 (84%)	1,590 (88%)	1,532 (85%)	1,532 (85%)	1,513 (84%)	1,392 (77%)	1,107 (61%)
- M Acres (and percent of forest) open to summer x-country OHV	1,126 (62%)	960 (53%)	761 (42%)	368 (20%)	121 (7%)	79 (4%)	50 (3%)	34 (2%)
- M Acres recommend wilderness	65	65	0	125	125	139	226	465
- M Acres allocated to dispersed camping	NA	13	29	28	28	28	15	15
- # of jobs	2,069	2,136	2,138	2,132	2,113	2,106	2,100	2,091
- 25% return-local govt M\$/yr	311	113	119	111	98	89	81	70
- Pay-in-lieu of Taxes M\$/yr	877	905	905	905	905	905	905	905
- ASQ volume (MMBF per year)		5.1	6.0	5.0	3.7	2.5	1.5	0
- Firewood and products volume (MMBF per year)	5.4	3.8	3.8	3.8	3.8	3.8	3.8	3.8
- M AUM's	148	144	139	139	**129	**121	121	121
** These figures include implementation of the "phase out" as described in the narrative								

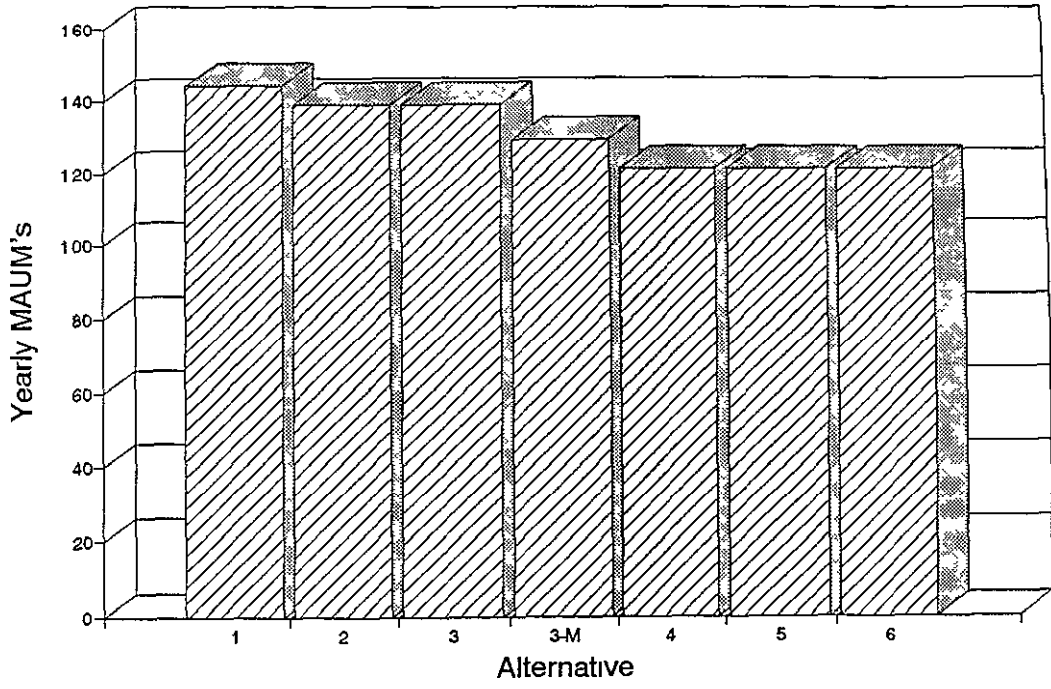


Alternatives Comparison Chart

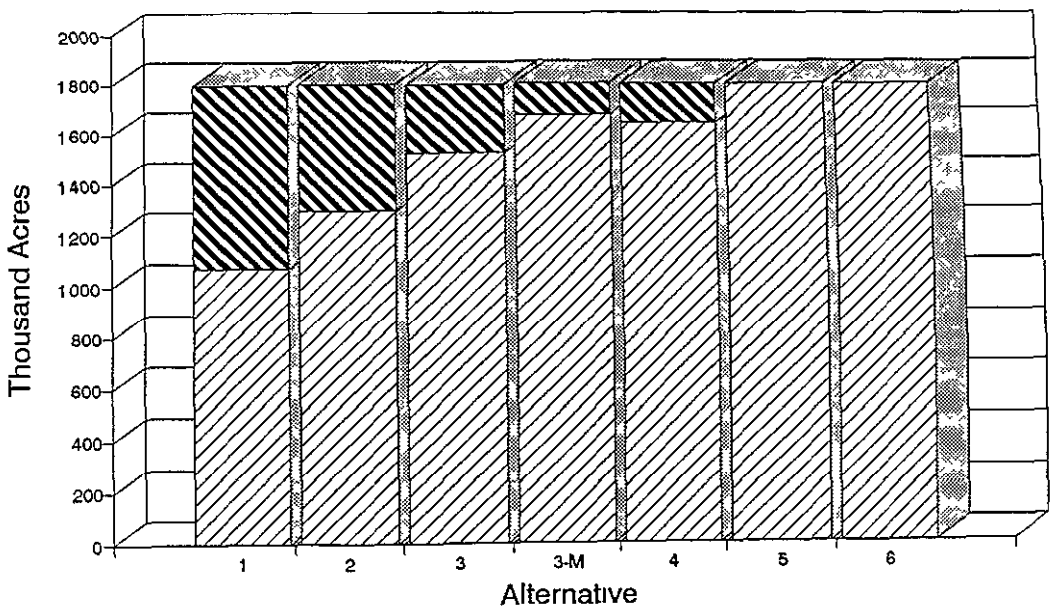
This chart shows how the alternatives compared, or stacked up against each other when the Key Issue indicators' differences were analyzed. The differences are determined by the alternative with the most advantages. For grizzly bear management, the alternative with the fewest number of open roads and motorized route density receives the highest rating. For the access issue, the alternative with the most numbers of trails and roads open per mile received the highest rating

All alternatives meet baseline State and Federal Standards; Grizzly Bear Recovery Plan Goals for Greater Yellowstone Ecosystem, Threatened and Endangered Species Act, Wilderness Act; Wild and Scenic Rivers Act, National Historical Act; NFMA, Native Americans Act; etc.

Livestock Grazing
 Thousand Animal Unit Months (MAUM's)

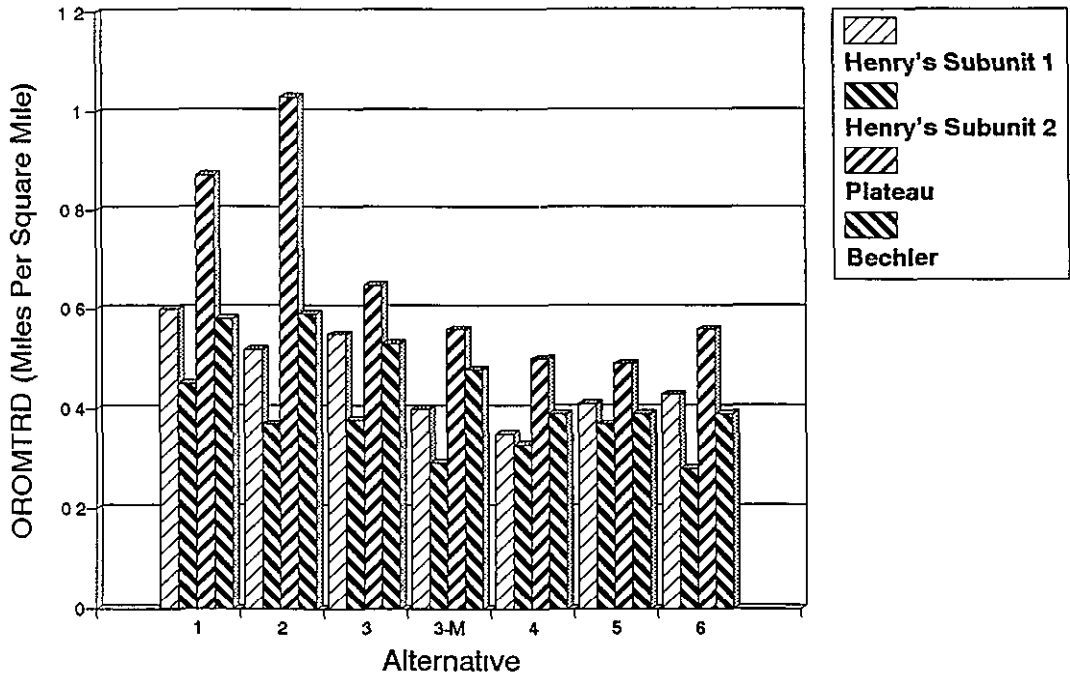


Elk Vulnerability
 State Thresholds Achieved/Not Achieved

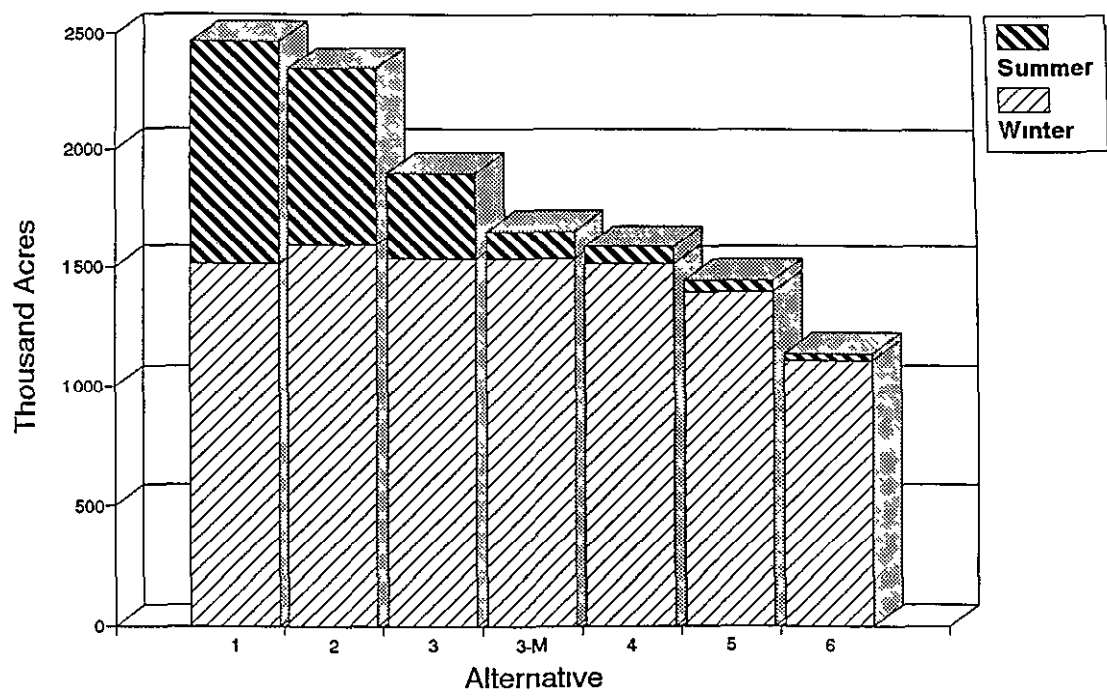


Achieved
 Not Achieved

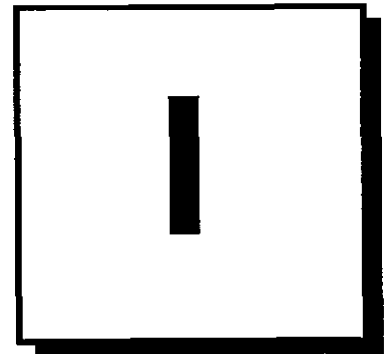
Bear Management Units (BMU's) Open Road/Motorized Trail Route Density



X-Country Motorized Access (Summer and Winter)



Chapter



Purpose and Need for a Forest Plan Revision



CHAPTER I

PURPOSE AND NEED FOR A FOREST PLAN REVISION

READER'S GUIDE - In this chapter you will find:

General Information about the Targhee National Forest
Legal Background for Preparing Forest Plan Revisions
Decisions Based on this EIS
Decisions Made in a Revision
Background about the 1985 Targhee National Forest Management Plan
Reasons for Revising the Plan
Introduction to Issue Components
Introduction to Key Issues and Key Indicators Driving the Revision
Discussion of Key Issues and Key Indicators

GENERAL INFORMATION: LOCATION AND SETTING FOR THE TARGHEE NATIONAL FOREST

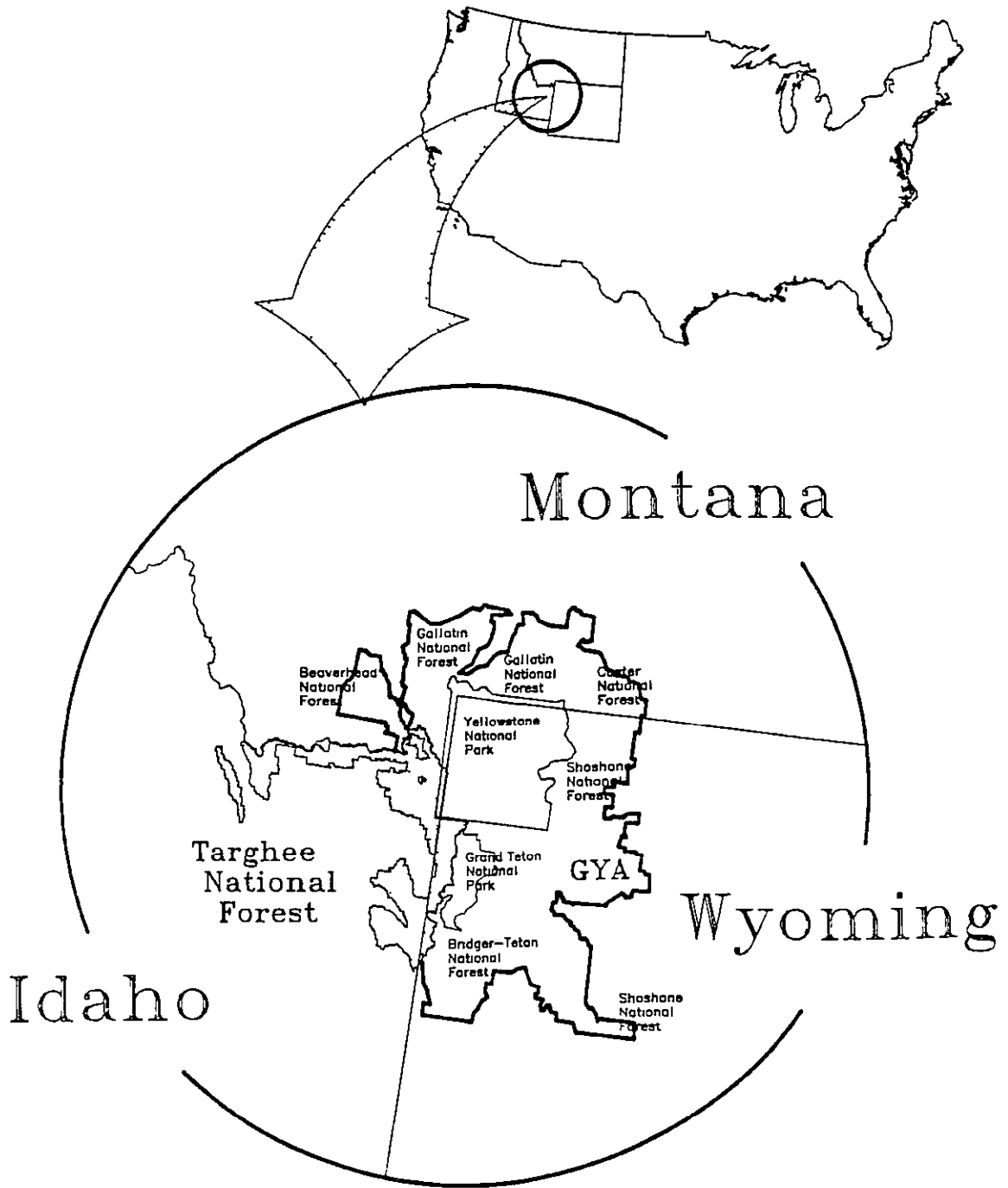
The Targhee National Forest (hereafter usually referred to as "the Forest") is an administrative unit of the Department of Agriculture, Forest Service, encompassing 1.8 million acres. Established by President Theodore Roosevelt in 1908, the Forest is named in honor of a Bannock Indian warrior. The Shoshone-Bannock Tribe, has ancestral Treaty Rights to uses of the Forest. The Targhee Forest Supervisor's Office is located in St Anthony, Idaho, with District offices in Dubois, Island Park, Ashton, Idaho Falls, and Driggs. The Forest is bordered by six other National Forests. Part of the Caribou National Forest is administered by the Targhee and part of the Targhee is administered by the Bridger-Teton National Forest.

The majority of the Forest lies in eastern Idaho and the remainder in western Wyoming (Figure I-1). Situated next to Yellowstone and Grand Teton National Parks, the Forest is home to a diverse number of wildlife and fish, including Threatened and Endangered species, wilderness, scenic panoramas and intensively managed forest lands.

The Forest lies almost entirely within "the Greater Yellowstone Area" or "the Greater Yellowstone Ecosystem," an area of 12 million acres and the largest remaining block of relatively undisturbed plant and animal habitat in the contiguous United States. The area continues to gain prominence for its ecological integrity. The United Nations has identified the area as a Biosphere Reserve.

On a larger scale, the Forest lies entirely within the Upper Columbia River Basin, an ecosystem of 40 million acres extending from Western Washington to the Southeastern Idaho border and encompassing parts of Montana, Wyoming, Nevada and Utah. The Forest includes all or portions of several distinct mountain ranges, including the Lemhi, Beaverhead, Bitterroot, Centennial, Henry's Lake, Teton, Big Hole, Caribou, and Snake River Ranges. Elevations range from near 5,000 feet on the Snake River to over 12,000 feet on the Forest's westernmost reaches. The Forest contains the Island Park Caldera and several reservoirs. Topography ranges from rolling foothills to rugged, glaciated mountain peaks.

Vicinity Map of Targhee National Forest
on a National Scale



Although most of the land is dry and semiarid, 190 stream headwaters situated on the Forest provide varied vegetation to support a multitude of uses. The area has cold, moist winters and hot, dry summers. Average annual precipitation, most of which falls as snow, increases with elevation. As little as ten inches of precipitation falls in lower valleys and as much as forty inches occurs at the highest elevations. Wide temperature extremes exist with summer temperatures at lower elevations sometimes exceeding 100 degrees Fahrenheit and winter temperatures at higher elevations falling to 40 degrees Fahrenheit below zero and lower.

LEGAL BACKGROUND FOR PREPARING FOREST PLAN REVISIONS

The National Forest Management Act (NFMA) of 1976 requires the Forest Service to develop 10-year integrated land management plans for units of the National Forest System within the framework of a public involvement process. NFMA directs the Forest Service to review and/or update forest plans every ten to fifteen years or more frequently when resource and management conditions have changed significantly. The plans must include management guidelines, an assessment of suitability of the lands, and consistency with the two other laws relating to the management of National Forests: The Multiple Use-Sustained Yield Act of 1960, and the Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974. The Management Plan for the Forest was finalized in 1985. This is the first Revision of that plan.

DECISIONS BASED ON THIS EIS

An Environmental Impact Statement (EIS) is a document that proposes two or more alternatives to a proposed action of significance for public review and input. One alternative is always a 'No-Action' Alternative; the other is the proposed action or preferred alternative. In this Draft Environmental Impact Statement (DEIS), the No-Action is Alternative 1. Other alternatives are also considered and evaluated, according to the guidelines in the NFMA.

The DEIS explains the need for change; the proposed action; the issues and concerns; the alternatives considered during the decision making process; the consequences of implementing the alternatives; and the preferred alternative.

The proposed action and preferred alternative in this DEIS is 3-Modified (3-M). More discussion about its selection can be found in Chapter II.

DECISIONS MADE IN A FOREST PLAN REVISION

The Forest Plan Revision carries out the actions of the preferred alternative. It provides key decisions for the long-term management of the Forest. These decisions include:

- Forestwide multiple-use goals and objectives, including a description of the Desired Future Condition (DFC) for the Forest.
- Forestwide standards and guidelines.
- Direction and prescriptions.
- Land suitable for Resource Use and Production.
- Monitoring and evaluation requirements.
- Recommendations to Congress for Wilderness and Wild/Scenic and Recreational River Designations.

BACKGROUND ON THE 1985 CURRENT FOREST PLAN

The first and current Targhee Forest Plan was started in 1980, but was not finalized until 1985 due to national requirements by Congress in 1982 for reevaluations of roadless areas in forest plans. The 1985 Forest Plan remains the guiding document for the Forest until a Final EIS and plan are completed in 1996.

The Forest is 60% lodgepole pine, a fire-dependent, short-lived tree species with a mature "old-growth" lifespan of 100-160 years. It regenerates rapidly after most disturbances, allowing it to dominate forest composition. As forest succession advances, lodgepole pine tends to be gradually replaced by more shade adapted tree species in the absence of further disturbances. Beginning in the 50's and continuing to the early 1980's, an extensive mountain pine beetle infestation attacked 90% of the lodgepole pine forest. The natural beetle infestation was not outside the natural range of variation for such forests, nor were the subsequent large fires in the late 1980's. Mountain pine beetle epidemics and large fire events are characteristic of lodgepole pine forests. Hence these forests are subject to rapid changes in forest structures and vegetation patterns.

Because clearcutting can approximate the role of fire in the regeneration process of fire-dependent lodgepole, the final 1985 Forest Plan emphasized the continued cutting of lodgepole and regeneration in the clearcut areas. The plan also predicted an abrupt decline of a high level of lodgepole supply within the next decade.

REASONS FOR REVISING THE FOREST PLAN (Need for Change)

In 1992, in preparation for the 10-year required revision of the forest plan, the public and employees verified that resource and management conditions have changed significantly, pointing out the need for a revision. Significant triggers for the Revision are

- The advent of Ecosystem Management as a new concept, a new way of doing business, requiring that the Forest be managed for sustainability of all ecologic components for the present and the future. How to do this is still in its infancy, but the need for moving towards implementing this concept should start now.
- The need to review and incorporate new knowledge and techniques in wildlife habitat management. For example, recent studies indicate that road density plays a more crucial role in habitat management for elk and grizzly bears than was assumed earlier. Based on recent studies, standards are being developed for nesting and foraging habitat for goshawks and other raptors on the Forest. Results of studies analyzing fish habitat in the Upper Columbia River Basin are pointing out new ways of managing fisheries. None of these findings were taken into account in the 1985 Forest Plan.
- Results of the Forest monitoring data, signaled the fact that the Forest was not completely meeting all the 1985 plan goals for improving elk habitat; reducing human activities in grizzly bear habitat, improving the condition of riparian areas, maintaining sensitive wildlife and plant species, managing human access to the Forest, and balancing timber harvest with the needs of wildlife.

PUBLIC'S ROLE IN SCOPING AND ISSUES

The public and Forest employees played an important role in determining the context of management for the Forest over the next 10-15 years. Public involvement has taken place at every stage of the Revision process. A Process Paper describes the public involvement that occurred.

HOW THE KEY FOREST ISSUES WERE SELECTED

The Forest's approach to defining the Key Issues was a six step process:

- Compile a list of issues and concerns from the public, resulting in an issue paper released in November, 1992, listing over 70 issues and concerns.

- Simultaneously develop a compatible list of "Issue Questions" that needed to be addressed in the EIS alternatives and in the Revision, this list was also released in November, 1992 and was tied to the Issues and Concerns.

- Categorize issues and concerns into "Issue Components" or "Issue Areas," a planning approach to help with the development and structure of the EIS and Plan.

- Choose the "Issue Indicators," which are units of measurement tied to the Issues and Concerns.

- Review the alternatives, determining which Issue Indicators have the greatest variables and which Issue Indicators remain relatively constant or the same.

- Choose the "Key Issues" as those issues and concerns having the greatest and most significant variation among the alternatives.

ISSUE COMPONENTS USED TO ORGANIZE EIS AND PLAN

"Issue Components" are an organizational planning approach used to group similar Issues and Concerns. Key Issues, alternatives, the rest of the EIS, and the Revision are consistently divided into the following Issue Components, in this order:

- Issue Component 1 = Ecological Processes and Patterns
- Issue Component 2 = Physical Elements
- Issue Component 3 = Biological Elements
- Issue Component 4 = Forest Use and Occupation
- Issue Component 5 = Production of Natural Resources

KEY ISSUES THAT DROVE THE ALTERNATIVES

Although there were over 70 issues and concerns identified by the public and Forest employees, seven Key Issues were the ultimate driving force for deciding between the alternatives and for the recommended direction of the Forest Plan Revision. The Key Issues had the most significance as *variables between the alternatives and are points of conflict.*

WHAT IS AN ISSUE INDICATOR?

Each key issue received an "Issue Indicator," a unit of measurement that showed how the issue was addressed in each alternative. The leadership team, consisting of the Forest Supervisor and District Rangers studied the issues and selected one major indicator for each issue that best reflected the variability for that issue between the alternatives.

SUMMARY OF KEY ISSUES AND KEY INDICATORS

Key Issue 1. Sustainability, fire, natural disturbances
(Ecological Processes and Patterns Component)

Key Indicator. Percent of the Forest with limitations on the size of created openings or patches

Key Issue 2: Riparian
(Biological/Physical Component)

Key Indicator. Acres not meeting the Desired Vegetative Condition (DVC). DVC = riparian vegetation such as deep rooted grasses, shrubs and trees that maintain streambank stability

Key Issue 3: Security for Elk
(Biological Component)

Key Indicator. Percent of Forest meeting Elk Vulnerability Goals measured by the number of miles of open roads and open motorized trails

Key Issue 4 Grizzly Bear Management
(Biological Component)

Key Indicator. Open Road & Open Motorized Trail Route Density, measured in miles per square mile (for Bear Management Units)

Key Issue 5. Access
(Forest Use & Occupation Component)

Key Indicator. Roads/Trails open to motorized use

Key Issue 6. Management of Roadless Areas
(Forest Use & Occupation Component)

Key Indicator. Number of Acres Recommended for Wilderness

Key Issue 7: Timber Harvest
(Production of Natural Resources Component)

Key Indicator : Allowable Sale Quantity (ASQ)

KEY ISSUES

KEY ISSUE 1: Sustainability, Fire, and Natural Disturbances (Issue Component: Ecological Processes and Patterns)

Issue Discussion: An Ecosystem is a large complex, integrated system of living and nonliving components that interact and change continually. Healthy ecosystems are those that retain all of their parts and functions for future generations even though vegetative patterns, human uses, or other conditions may change. Understanding ecological processes (fire and other natural disturbances) and how these processes shaped vegetative patterns over time in a landscape are important steps towards implementing ecosystem management.

Ecosystem management is a new philosophy of management for the Forest Service, and different interpretations and approaches are possible in working towards implementation. The Targhee National Forest is the first forest in the Greater Yellowstone Area that is revising its Forest Plan and incorporating the Ecosystem Management principles in the Revision. Although many activities and projects are being studied towards the application and implementation of Ecosystem Management, their new information and conclusions lag far behind the need to meet the timeline for the revision of the Forest Plan.

The most pressing and debated questions are, 'What is the Forest's desired natural condition?' and 'How do we achieve sustainability incorporating fire and natural disturbances, to achieve that state?' As one Forest specialist noted about Ecosystem Management on the Forest, "We almost know enough to know what we don't know." While the reality exists that new Forest Plan direction is needed soon, the struggle continues over defining Ecosystem Management, sustainability, and a healthy ecosystem; collecting and monitoring data; and determining the range of variability.

For more discussion of the ecosystem management issue, refer to the Targhee National Forest process paper titled "Implementing Ecosystem Management in Forest Plan Revisions," September 23, 1994

Sustainability, Fire and Natural Disturbances Key Issue Indicator: Of all the indicators of ecosystem health, Patch Size Limit (in acres) was selected as the Key Issue Indicator for the Forest. Patch Size Limit was selected because the forest has gathered some general information about the subject from old historical photos and maps. Natural patch sizes relate to and are an indication of historic ecological processes (fire, insects, and disease) and resulting vegetation patterns which historically occurred in an area.

A patch is defined as an area of vegetation that is structurally and/or compositionally different from what surrounds it.

Managing within the range of variability for Patch Size Limits is important because it helps maintain conditions under which plants and animals evolved and is assumed to provide for ecosystem sustainability. Changes in patch sizes from what existed historically, particularly as it relates to fire and other natural disturbances, may affect individual species or ecosystem sustainability. Even though Patch Size Limits are the best general historical source of information to the Forest as an indicator for ecosystem management, the nature and magnitude of the

acreage limits are unknown at this time. As our knowledge increases about Patch Size Limits, the Forest may be constrained by National Forest Management Act's harvest unit size limit or other species or resource considerations. In addition, the Forest does not know how historical changes in vegetation patch sizes equates to other changes such as changes in animal populations. It is possible that some species may be more or less abundant today than they were historically.

KEY ISSUE 2: Riparian (Issue Component: Biological/Physical Elements)

Issue Discussion: Riparian areas lie adjacent to water and are composed of vegetation communities dependent upon or tolerant to the presence of free or unbound water near the ground surface. Riparian areas are associated with lakes, reservoirs, potholes, springs, bogs, wet meadows, and ephemeral, intermittent or perennial streams. Although riparian areas constitute less than 5 percent of the total land base, they are the most productive areas in terms of plant and animal species diversity and consumptive use.

Riparian areas are essential breeding, rearing and feeding grounds for many species of wildlife and all fish. They serve people as important sources for water and flood control and for recreational purposes such as camping, fishing, floating, and aesthetics. A healthy riparian area indicates that the physical, aquatic, water and soil components are also healthy. Because of the myriad of competing uses for these highly valuable pieces of land, the variability between the alternatives was considered significant.

Riparian Key Issue Indicator: The key indicator showing the differences between the alternatives for riparian areas is Desired Vegetation Condition (DVC). The riparian area's health is indicated by the amounts and types of vegetation along the banks, with highest preference to deep-rooted grasses, shrubs and trees that maintain streambank stability and that have a high rate of recovery. Riparian areas meeting Desired Vegetation Condition are currently meeting the Forest Plan Revision objective to maintain or enhance riparian vegetation, aquatic habitat, and water quality.

KEY ISSUE 3: Security for Elk (Issue Component: Biological Element)

Issue Discussion: Although the Forest provides habitat for a number of species (61 mammals, 156 birds, 8 reptiles and amphibians), there were no significant differences in the management of their habitat. For many of these species there was no information, or the best data and analysis existed for elk security, which had the highest wildlife variance amongst the alternatives. Security for elk was chosen as a key issue relating to future hunting conditions and opportunities and cooperative relations with Fish and Game Departments. Observations and studies by the Idaho Fish and Game Department, University of Idaho, and Forest Service scientists have determined that as motorized road and trail densities increase, elk security declines. Portions of the Forest have high densities of trails and roads open to motorized use due to the extensive road building associated with the salvage activity of removing the dead lodgepole. Now that the salvage activity is in decline and new knowledge about impacts of road densities upon wildlife are available, the Revision examines the range of management alternatives related to security for elk.

Security for Elk Key Issue Indicator: The best indicator for showing the differences between alternatives for elk security is "The percentage of the Forest meeting State Fish and Game Vulnerability thresholds for Elk." The primary effect that the Forest Service has control over related to elk vulnerability analysis is the density of open motorized roads and trails and the amount of area open to cross-country, off-highway vehicle travel.

Elk Vulnerability is defined as a measure of elk susceptibility to being killed during the hunting season. Elk Vulnerability models help managers predict elk mortality rates. As cross country off-highway vehicle travel and motorized road and trail densities (measured in miles per square mile on a watershed basis) increase, the security for elk decreases and the mortality rate increases

KEY ISSUE 4: Grizzly Bear Management Units (Issue Component: Biological Element)

Issue Discussion: Portions of the Forest are within the Yellowstone Grizzly Bear Ecosystem which has been divided into Bear Management Units (BMU's). Portions of the Forest are within three BMU's and feature grizzly bear recovery. As with all Threatened and Endangered Species, all alternatives must meet the stringent guidelines of the Endangered Species Act. The importance of managing motorized access is one of the most influential parameters affecting grizzly bear habitat security.

New information accumulated over the last ten years provides better insight and direction regarding effective management of roads, timber and human activities in grizzly bear habitat. The one variation between alternatives that makes the BMU issue significant is the density of open motorized roads and trails in BMU's. Which roads will be closed in BMU's, how many miles, and in what manner?

Grizzly Bear Key Issue Indicator: The Key Issue Indicator for BMU's is Open Road and Open Motorized Trail Route Density (OROMTRD). Studies are showing that the importance of managing access is one of the most influential components affecting habitat security for grizzly bears. By managing motorized access, the Forest can minimize human interaction and potential grizzly bear mortality; minimize displacement from important habitats; and minimize habituation to humans.

KEY ISSUE 5: Access (Issue Component: Forest Use and Occupation)

Issue Discussion: The Forest currently has 1,367 miles of open system road and 1,021 miles of open nonsystem roads; 433 miles of open system trail and 199 miles of open nonsystem trail. "Open" means road and trail miles without restrictions on motorized use. There are currently road and trail miles with restrictions on motorized use as follows: 633 miles of restricted system road (61 miles with seasonal restrictions and 572 miles with yearlong restrictions), 201 miles of restricted nonsystem road (24 miles with seasonal restrictions and 177 miles with yearlong restrictions); 597 miles of restricted system trail; 102 miles of restricted nonsystem trail.

Recreational motorized use has increased over the last decade. The current plan allows cross-country motorized travel across much of the Forest and does not establish road density standards. Access to the Forest during nonsnow months is a significant variable among the alternatives. Comments in the early planning stages were supportive of more or fewer road and trail closures depending on a variety of factors. Those supporting road and trail closures want more protection and fewer impacts upon wildlife, threatened, endangered, and sensitive species, soils and water, and fisheries; less visual, garbage and noise pollution; reduced maintenance and law enforcement costs and more opportunity for escape and solitude. Those supporting continued or more road and trail access want them for hunting, fishing, berry-picking, camping, hiking and other recreational pursuits, and increased opportunities for sight-seeing and challenging cross-country travel for off-highway vehicles. Motorized access is considered a key element for enjoyment and use of the Forest by persons with disabilities and the elderly. For more information on this issue, refer to Process Paper E.

Access Key Issue Indicator: The indicator that best shows differences between alternatives is the Number of Miles of Road/Trails Open to Summer Motorized Use. The greater the number of miles of roads and trails open to motorized use, the greater the increased recreational benefits and hunting/fishing access to users of motorized vehicles including persons with disabilities.

KEY ISSUE 6: Management of Roadless Areas (Issue Component: Forest Use and Occupation)

Issue Discussion: The Forest has sixteen areas which qualify as roadless, totaling 841,000 acres. The Wyoming portion of the Palisades Roadless Area was designated by Congress as a Wilderness Study Area in the Wyoming Wilderness Bill of 1984. Portions of 3 roadless areas in Idaho were recommended as Wilderness in the current Forest Plan, but no legislative action has been taken to resolve the roadless area question in Idaho. During the last planning period, some roadless areas were roaded as part of the salvage program. As motorized recreation demands increase, pressure increases to maintain the roadless character of the remaining roadless areas. The significant difference between alternatives in the management of roadless areas is in the amounts of acres recommended for Wilderness. Those arguing for more acres of Congressionally designated Wilderness want the assurance of preservation of biological diversity, protection from resource uses and national recognition of Wilderness character. Those opposed to more acres in Wilderness want roadless areas to be left as roadless or to be developed to allow motorized access for recreation and for oil and gas, timber and other industries requiring access.

Management of Roadless Areas Key Issue Indicator: The indicator best showing differences between alternatives related to the management of roadless areas is the number of acres Recommended for Wilderness. Once a roadless area is designated as Wilderness by Congress, it is managed in perpetuity for nonmotorized, scientific, dispersed recreational purposes. Roadless areas not recommended as Wilderness may be managed as roadless areas or for some other use during each planning cycle.

KEY ISSUE 7: Timber Harvest (Issue Component: Production of Natural Resources)

Issue Discussion: The three major timber species available for harvest on the Forest are aspen (15% forested area), Douglas fir (15% forested area), and lodgepole pine (60% forested area). Previously, large scale salvage of dead and dying timber was conducted under legal direction for temporary departure from sustained yield management. Since the goals of harvest of dead timber have largely been met, the Forest must now operate within sustained yield for the future.

Two local mills, once dependable bidders for salvage and other wood harvest, are now closed but local demand remains high. The Endangered Species Act; Grizzly Bear Recovery Plan and Guidelines, Ecosystem Management Principles, demise of availability of dead lodgepole, increased knowledge about the impacts of motorized use of roads and trails upon the Forest's resources, and other factors resulted in a greatly reduced availability of timber harvest, called the allowable sale quantity (ASQ). The issue of timber harvest does not include firewood, since the amount of firewood quantity does not vary between the alternatives. Some people desiring a greater harvest of timber from the Forest often cite the effects upon the local economy. Others have expressed a concern over the reduction in payments to local governments (25% of Forest receipts go to county treasuries) associated with the reduced harvest levels. They also want to maximize harvest of the remaining dead or mature wood. Some argue that small harvests in the fire dependent lodgepole are contrary to historic based ecosystem management principles. Those supporting a greater reduction in timber harvest are concerned about motorized trail and road uses that impact wildlife, reductions in the amount and distribution of late successional forest, fisheries, riparian areas, soils and water, aesthetics, and other resources.

Timber Harvest Key Indicator: The key indicator for timber harvest that portrays the differences between alternatives is the ASQ. The ASQ does not include firewood. The ASQ is defined as the quantity of timber that may be sold from the area of suitable land for a time period specified in a Forest Plan. This quantity is usually expressed on an annual basis as an "average" ASQ.

WHERE ARE ALL THE OTHER ISSUES AND INDICATORS?

Although most of Chapters I and II of the EIS are focused on the Key Issues and Key Indicators, most of the effects and consequences in Chapters III and IV and the Standards and Guidelines in the Forest Plan Revision address the remaining issues and indicators. For example, firewood availability is an issue. Although not a key issue, firewood is addressed in the Revision and the effects and consequences remains the same in all the alternatives.

Another confusion may exist over the noninclusion of significant resources such as water and soils as key issues. Why aren't these considered "Key Issues"? All the alternatives comply with state and federal quality standards, there was only a slight range of variability and the condition of soil and water is interconnected with the condition of riparian areas. The Key Issue of Riparian Areas became the symbol and captured the essence of the significance of differences for soil & water resources.

The selection of the 7 key issues has to do with the selection of the Preferred Alternative and the Forest Plan Revision. It does not mean that the other issues are not addressed or that they are not important. The table at the end of Chapter II lists most of the issue components and indicators. A Process Paper about public involvement refers to the complete list of issues published in the Analysis of the Management Situation document, November, 1992.

DESIRED FUTURE CONDITION FOR THE YEAR 2010

After issues are identified, one of the first steps in the revision process is to develop goals for the "desired" future condition of the Forest by the year 2010 and beyond.

Based on public and employee comments between 1991-1994, a set of goal statements emerged that collectively represent a new general management direction for the Forest. The goal statements were tied to the key issues driving the plan, evolving into a new Desired Future Condition (DFC) for the Forest. More specific DFC's for particular portions of the Forest are outlined in the Draft Forest Plan Revision, a separate companion document to this DEIS.

The DFC is described in terms of the Five Components: Ecological Processes and Patterns, Physical Elements, Biological Elements, Forest Use and Occupation, and Production of Natural Resources. The Biological and Physical are combined because of their interconnectivity. The DFC is broader than the 7 Key Issues that are driving the alternatives and the decisions. The DFC is where the Forest would ideally like to be someday and is described as:

Ecological Processes and Patterns Desired Future Condition:

A mosaic of age classes and types of vegetation are sustained through time and exist across the landscape. Natural disturbances such as insects, disease and fires continue their natural roles in the ecosystem. The Forest remains an integral part of the Greater Yellowstone Ecosystem as well as adjacent systems, sustaining habitat and conditions necessary for free movement of wildlife.

Biological/Physical Desired Future Condition:

Riparian zones are healthy and productive. Aquatic systems are allowed to function naturally while protecting flows for downstream consumptive uses. Riparian area integrity contributes to productive fisheries and excellent water quality. Native plant and animal species are favored over undesirable nonnative species and sustained populations of all native and desirable species thrive. Habitat conditions contribute toward the recovery of Threatened, Endangered and Sensitive Species.

Forest Use and Occupation Desired Future Condition:

Growing and diverse recreational, cultural, visual, historical and prehistoric management, interpretive, and spiritual needs are accommodated based on the capability of the ecosystem to sustain these uses. Recreation use is managed to minimize conflicts between incompatible uses and provides high levels of satisfaction. Year-round human access is managed to provide both motorized and nonmotorized opportunities. A system of trails and support facilities exist which are compatible with resource capabilities. Roadless characteristics are preserved in the proposed wilderness areas and in existing Wildernesses

Production of Natural Resources Desired Future Condition:

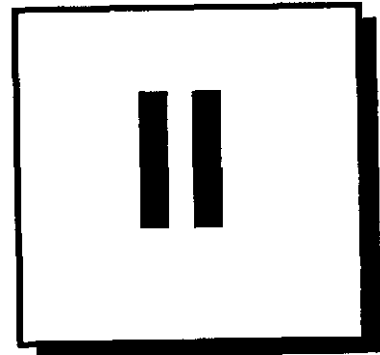
Commodity production, such as timber; firewood; mining; livestock forage; or outfitting and guide services are conducted at sustainable levels and maintain the capability of the land to produce an even flow and variety of goods and services for present and future generations. Timber harvest, prescribed fires and livestock grazing are used as tools to achieve desired ecological vegetation conditions. Forest products are provided to sustain social and economic values and needs of the local communities within limits which maintain ecosystem health.

THE PREFERRED ALTERNATIVE**Alternative 3-M**

The purpose of Alternative 3-M is to resolve the needs for change by providing sustainable management with a balanced program among, wildlife habitat, timber harvest, recreation, and other uses and resources of the Forest. Alternative 3-M also provides increased emphasis for wildlife habitat management and allocates more core areas for grizzly bear. Motorized access, timber harvest levels and livestock grazing are all reduced from levels allowed in the current Forest Plan. Riparian areas with cutthroat trout are further protected with increased vegetation and reduced livestock grazing. Cross-country, summer, motorized vehicle use is restricted to specific areas. Lionhead, Palisades and Italian Peaks, plus the Idaho roadless portion adjacent to the Winegar Hole Wilderness are recommended to Congress for wilderness designation; until Congress acts on the recommendation, their roadless characteristics are maintained.

All the alternatives respond to and incorporate the resource objectives set forth in the Recommended 1990 RPA Program. Alternative 3-M has been selected as the RPA Alternative because it represents the Forest's best attempt to simultaneously implement multiple-use management, ensure resource sustainability, emphasize the quality of resource outputs, and to provide for the economic well-being of rural communities.

Chapter



Alternatives Including the Proposed Programmatic Action (Preferred Alternative)



CHAPTER II

ALTERNATIVES INCLUDING THE PROPOSED PROGRAMMATIC ACTION (PREFERRED ALTERNATIVE)

READER'S GUIDE - In this chapter you will find:

- How the Alternatives Were Formulated
- Explanation about Issues That Are Treated the Same or Vary Slightly in All Alternatives
- The Alternative Continuum
- Descriptions of the Seven Alternatives
- Comparison Chart of the Key Issue Indicators of the Alternatives
- Alternatives Considered But Eliminated From Detailed Study
- A Table Comparing the Environmental Effects Depicted by Issue Indicators

HOW THE ALTERNATIVES WERE FORMULATED

In Chapter I, we discussed the issues, issue indicators, reasons for the need for change, and the Desired Future Condition. This chapter will explain how the alternatives were formulated and how each alternative addressed the issues.

Forestwide Standards and Guidelines specify management requirements that apply throughout the Forest. Management prescriptions say how different portions of the Forest will be managed differently from one another.

The lands of the Targhee meet many different needs. Some of these needs are mutually exclusive - a wilderness area is not set up to provide developed recreation sites for motorized users, e.g. It is more commonly the case though, that many uses coexist on the same land. A single piece of land may provide habitat for grizzly bear, security cover for elk, grazing for livestock, timber for harvesting and so on. This multiplicity of uses is built into the prescriptions. Land that provides crucial winter range for elk may address that need whether the land is placed in a Winter Range prescription, in a Recommended Wilderness prescription, or even in a Range Management prescription.

For purposes of managing the Forest though, people need to have ready access to the management direction that applies to any particularly piece of land. That would not be possible if they had to look up separate management prescriptions for grizzly bear habitat, elk security cover, livestock grazing, and timber harvesting and then face the question of which to apply.

The convention the Forest has adopted is that any single piece of land has only one prescription applied to it in any given alternative. That simplifies management, but it also means that people cannot just look at a given prescription acreage total and assume that it contains all the acreage on the Forest that could possibly fit there. For instance, there is more Elk and Deer Winter Range on the Forest than is allocated to that prescription.

For the most part, when there was a question as to which management prescription should be applied, that prescription was assigned which best described the area's intended future management. As an example, when an eligible wild scenic river was identified in an area recommended for wilderness, the river corridor was assigned an Eligible Wild River prescription, the surrounding recommended wilderness was assigned a Recommended Wilderness prescription.

Alternatives can be formulated simply by specifying a different mix of management prescriptions for a given area of the Forest. For instance, a given portion of the Forest could be designated for a Timber Management, Grizzly Bear Habitat, or Recommended Wilderness prescription.

The alternatives reflected a range of options open to management that responded to the issues, the desired future condition, and the need for change. The interdisciplinary team evaluated the significant physical, biological, economic and social effects of each alternative that was considered in detail. The evaluation included aggregate effects of social and economic impacts, outputs of goods and services, and overall protection and enhancement of environmental resources.

The Forest analyzed in detail seven alternatives. The Forest Supervisor and Leadership Team recommended Alternative 3-Modified to the Regional Forester and the public for review.

Consequences for nonkey issues are not included in Chapter II discussions, since many of them are addressed the same or with slight variation in every alternative. As an example, local communities are noticeably interested in firewood availability. Regardless of the alternative, a constant 3.8 million board feet will be available each year in some remaining dead lodgepole and aspen areas. Although discussed in Chapters III and IV, firewood was not a key issue and did not drive the selection of the preferred alternative. Therefore firewood is not discussed in the alternative summaries of Chapter II.

ISSUE INDICATORS THAT ARE THE SAME OR VARY SLIGHTLY IN ALL ALTERNATIVES

As the Interdisciplinary Team developed the alternatives with the public and Forest Service employees, certain needs for change had the same consequences or varied slightly in all alternatives. The following summarizes the issue indicators with consequences and effects that are the same or vary slightly in all alternatives. Details can be found in process papers.

Wild and Scenic Rivers Recommendations and Research Natural Areas
Water Quality, Visual Quality
Developed Recreation, nonmotorized
Archaeology/historical
Cave Management
Predator Control
Noxious Weeds
Outfitter and Guides
Summer Homes & Other Special Use Permits
Management of Existing Wilderness and Wilderness Study Areas

Firewood - All alternatives offer 3.8 MMBF
Bald Eagle - Forestwide Standards and Guides are the same in all alternatives
Peregrine Falcon - Forestwide Standards and Guides are the same in all alternatives

Sensitive Species (These include Three-Toed Woodpecker, Flammulated Owl, Boreal Owl, Great Gray Owl, Goshawk, Trumpeter Swan, Spotted Frog Habitat, Common Loon, Harlequin Duck) - Forestwide Standards and Guides are the same in all alternatives.

Sensitive Species (These include Wolverines, Lynx, Fisher) - Small variation in habitat quality or quantity (generally in the realm of 1-3% change from existing conditions).

THE ALTERNATIVE CONTINUUM

The numbering scheme for alternatives ranges from 1-6, with alternative 3-Modified being the preferred and Alternative 1 being the No-Action or continue the Current Forest Plan Alternative. As the numbers increase from Alternatives 2 to 6, they move consistently towards:

- *Greater protection of wildlife habitat
- *Greater protection of riparian areas
- *More protection for Bear Management Units
- *More security for elk
- *Nonmotorized, dispersed recreation opportunities
- *More recommended wilderness
- *Less cross-country motorized use
- *Fewer open roads and trails
- *Reduced livestock grazing and timber harvest
- *Less lasting visual impacts from management activities

ISSUE INDICATORS THAT ARE NOT "KEY"

In Chapter 1, Key Issues and Indicators were discussed in great detail. At that time, it was acknowledged that there were other issues and issue indicators important to the planning process. When the Forest was designing the alternatives around the issues, a number of issue indicators were created. Specialists analyzed the consequences for all the different alternatives. It soon became clear that most of the consequence indicators were either the same in all alternatives or had minor variations, making them less significant than the "Key Issue Indicators." Much of the discussion in Chapters III and IV discuss these issues, issue indicators and consequences in more detail. Most of the other indicators are listed in Table II-1.

DESCRIPTION OF ALTERNATIVES

All the alternatives comply with State and Federal law.

ALTERNATIVE 1 = Continue the Current Forest Plan (No Action)

The purpose of Alternative 1 is to continue management of the Forest under the current Forest Plan, finalized in 1985, and updated with amendments; litigious concessions for the grizzly bear, and changes for new listings of sensitive wildlife species over the last ten years. Timber harvest occurs at the highest levels possible within the management constraints required for threatened and sensitive wildlife species like grizzly bears and goshawks. Vehicle access is slightly reduced over current levels due to the implementation of the interagency grizzly bear guidelines and better road management across the Forest. Cross-country, motorized access in summer and winter would continue close to current levels. Riparian, wildlife and recreation values are emphasized in specific areas of the Forest. Alternative 1 recommends portions of the Lionhead, Italian Peaks and Winegar Hole roadless areas for wilderness designation. Their roadless characteristics are maintained until Congress acts on the recommendation.

How the Key Issues and Key Indicators are addressed in Alternative 1

1. Sustainability, Fire, and Natural Disturbances. Key Indicator Percent of the Forest with limitations on the size of created openings or patches.

Alternative 1 would limit size of patches to 40 acres or less on approximately 3% of the forest, or about 47,000 acres.

2. Riparian. Key Indicator. Acres not meeting DVC.

Approximately 342,000 aquatic influence zone (AIZ) acres would be managed to maintain or enhance riparian vegetation aquatic habitat, and water quality. At the end of the first decade, about 4,000 acres would not meet the DVC Fisheries habitat quality would continue at a moderate level. Live-stock grazing would occur at current levels. A mosaic of different species and size classes of vegetation would be provided. Season long, deferred rotation and rest rotation grazing systems would continue to be used on all allotments. There would be a slight increase in cattle AUM's. Timber harvest would be allowed within limits, and would contribute to the ASQ

3. Security for Elk. Key Indicator Percent of Forest meeting state elk vulnerability thresholds, measured by miles of open roads and open motorized trails.

In Alternative 1, 58% of the Forest (1,075,000 acres) would meet the state elk vulnerability thresholds. The greatest factors under control of the Forest Service that influence elk security are the miles of open roads and open motorized trails. Alternative 1 would reduce the number of open system roads by 47 miles (-3%) and open nonsystem roads by 457 miles (-45%). About 16 more miles (+4%) of system trail would be open to motorized use, but there would be a reduction of open nonsystem trails by 76 miles (-38%). The 58% of the Forest meeting state elk vulnerability standards is a 16 percentage points increase over the existing level of 42%, probably resulting in a potential for a slightly lower proportion of bulls to be harvested during the general hunting season.

4. Grizzly Bear Management (within the BMU's). Key Indicator Open road and open motorized trail route density (miles per square mile).

The reduction in the average open road and motorized trail densities to an average ranging from 0.45 to 0.87 miles per square mile, in the bear management units (BMU's) would improve grizzly bear habitat. Off-highway vehicle (OHV) use would continue at current levels of use. Alternative 1 has no restrictions on cross-country snowmachine use, except on a small portion of the Plateau BMU. Sheep and cattle allotment grazing would continue at current levels. Timber harvest could occur with constraints and would contribute to the ASQ

5. Access. Key Indicator: Roads and trails per mile open to motorized use.

Alternative 1 would reduce the number of open system roads by 47 miles (-3%) and open nonsystem roads by 457 miles (-45%). About 16 more miles (+4%) of system trail would be open to motorized use, but there would be a reduction of open nonsystem trails by 76 miles (-38%). This alternative would allow the most camping, berry-picking, hunting, and sight-seeing activities that conventionally use road access. The decrease in numbers of open roads and trails would provide increased wildlife security, especially for elk and grizzly bears and protect other resources from damage. Acres available for summer OHV would also be the highest of the alternatives, allowing OHV use on approximately 960,000 acres, about a 15% reduction over the current 1,126,000 acres open to OHV use

6. Roadless Area Management. Key Indicator: Number of acres recommended for Wilderness

Alternative 1 would recommend 65,000 acres to Congress for Wilderness designation. These are the roadless areas recommended in the current forest plan (Italian Peak, Lionhead and Winegar Hole), although no Congressional action has been taken. This recommendation is about 7% of the total acres which presently qualify as roadless

7. Timber Harvest. Key Indicator: ASQ.

Alternative 1 would harvest timber at a sustainable level of a maximum 51 million board feet (MMBF) for the decade (approximately 5.1 MMBF per year) on an estimated 14,774 acres.

ALTERNATIVE 2

The purpose of Alternative 2 is to resolve the needs for change by emphasizing cross-country, winter access and timber production, while adding more restrictions to summer, cross-country access. Timber harvest occurs at the highest levels within the management constraints required for maintaining threatened, endangered and sensitive species habitat. Grazing continues at current levels. Vehicle access is slightly reduced to meet requirements of the interagency grizzly bear guidelines. Riparian, wildlife and heritage resource values are emphasized in specific areas of the Forest. Alternative 2 makes no recommendations to Congress for Wilderness designation

How the Key Issues and Key Indicators are addressed in Alternative 2

1. Sustainability, Fire, and Natural Disturbances. Key Indicator: Percent of the Forest with limitations on the size of created openings or patches.

Alternative 2 would limit size of patches to 40 acres or less on approximately 1% of the forest, or about 25,000 acres.

2. Riparian. Key Indicator: Acres not meeting DVC.

Approximately 325,000 AIZ acres would be managed to restore and maintain the health of aquatic influence zones in ways that also produce desired resource values, products, protection and enhancement of these areas. At the end of the first decade, about 2,500 acres would not meet the DVC.. Livestock grazing would occur at slightly reduced levels. Fisheries habitat quality would remain at a moderate level.

3. Security for Elk. Key Indicator: Percent of Forest meeting state elk vulnerability thresholds, measured by miles of open roads and open motorized trails.

In Alternative 2, 72% of the Forest (1,296,000 acres) would meet the state elk vulnerability thresholds. The greatest factors under control of the Forest Service that influence elk security are the miles of open system roads and open motorized trails. Alternative 2 would increase the number of open system roads by 44 miles (+3%), but reduce the open nonsystem roads by 586 miles (-56%). There would be a reduction in open system trails by 76 miles (-18%) and open nonsystem trails by 86 miles (-43%). The 72% of the Forest meeting state elk vulnerability standards is a 30 percentage points increase over the existing level of 42%, probably resulting in a potential for a slightly lower proportion of bulls to be harvested during the general hunting season.

4. Grizzly Bear Management (within the BMU's). Key Indicator. Open road and open motorized trail route density (miles per square mile)

Alternative 2's reduction in the average open road and motorized trail densities to an average ranging from 0.37 to 1.03 miles per square mile in the BMU's would improve grizzly bear habitat. Cross-country snowmobile use would be restricted from December 15 to April 1 in all BMU's. Acres of summer cross-country, motorized access is significantly reduced from Alternative 1. Sheep and cattle allotment grazing would continue at current levels. Timber harvest that might occur to achieve grizzly bear habitat objectives would contribute to the ASQ.

5. Access. Key Indicator: Roads and trails per mile open to motorized use

Alternative 2 would increase the number of open system roads by 44 miles (+3%), but reduce the open nonsystem roads by 586 miles (-56%). There would be a reduction in open system trails by 76 miles (-18%) and open nonsystem trails by 86 miles (-43%). This alternative would allow more opportunities for dispersed camping, berry-picking, sight-seeing, and other activities that conventionally use road access. The decrease in numbers of open roads and trails is needed to meet guidelines for increased wildlife security, especially for elk and grizzly bears. Acres available for OHV would also be reduced over recent levels. Alternative 2 would allow OHV use on approximately 761,000 acres, about a 68% reduction over the current 1,126,000 acres open to OHV use. Winter OHV access would be increased, with an additional 210 miles of groomed trails for snowmobiles, for a total of 666 miles.

6. Roadless Area Management. Key Indicator: Number of acres recommended for Wilderness

Alternative 2 would not recommend any areas to Congress for Wilderness designation

7. Timber Harvest. Key Indicator: ASQ.

Alternative 2 would harvest timber at a sustainable level of a maximum 60 MMBF for the decade (approximately 6.0 MMBF per year) on an estimated 16,940 acres.

ALTERNATIVE 3

The purpose of Alternative 3 is to resolve the needs for change by emphasizing management of wildlife habitat and sustaining timber harvest levels within wildlife constraints. Grizzly bear recovery is enhanced with a reduction in motorized use allowed in each BMU. Grazing allotments continue at current levels and larger percentage of riparian areas meet the Desired Vegetation Condition. Cross-country, summer, motorized vehicle use is restricted to specific areas. Lionhead, Palisades and Italian Peaks, plus the Idaho roadless portion adjacent to the Winegar Hole Wilderness are recommended to Congress for wilderness designation, until Congress acts on the recommendation, their roadless characteristics are maintained

How the Key Issues and Key indicators are addressed in Alternative 3:

1. Sustainability, Fire, and Natural Disturbances. Key Indicator: Percent of the Forest with limitations on the size of created openings or patches.

Alternative 3 would limit size of patches to 40 acres or less on approximately 5% of the forest, or about 82,000 acres..

2. Riparian. Key Indicator Acres not meeting DVC.

Alternative 3 would promote the health and function of riparian, wetland and aquatic ecosystems on approximately 448,000 AIZ acres. At the end of the first decade, about 2,500 acres would not meet the DVC. Fisheries habitat quality would be moderately high. Livestock grazing would be slightly reduced. Timber harvest could occur in riparian areas to attain the desired vegetation characteristics, but is not scheduled and would not contribute to the ASQ

3. Security for Elk. Key Indicator: Percent of Forest meeting state elk vulnerability thresholds, measured by miles of open roads and open motorized trails.

In Alternative 3, about 83% of the Forest (1,526,000 acres) would meet the state elk vulnerability thresholds. The greatest factors under the control of the Forest Service and influencing this are the miles of open roads and open motorized trails. Alternative 3 would reduce the number of open system roads by 146 miles (-11%) and open nonsystem roads by 653 miles (-64%). There would be a reduction in open system trails by 96 miles (-22%) and open nonsystem trails by 101 miles (-51%) The 83% of the Forest meeting state elk vulnerability standards is almost twice the existing level of 42%, thereby greatly improving elk security and allowing a higher potential for a lower proportion of bulls to be harvested during the general hunting season.

4. Grizzly Bear Management (within the BMU's). Key Indicator: Open road and open motorized trail route density (miles per square mile).

The reduction in the open road and motorized trail densities to an average ranging from 0.38 to 0.65 miles per square mile in the BMU's, would improve grizzly bear habitat. Almost no summer cross-country, motorized travel would be permitted in the BMU's. Snowmachine use is allowed on designated routes throughout the snow season. In 96% of the Henry's Lake BMU - Subunit 2, 20% of the Plateau BMU, and 3% Bechler/Teton BMU, cross-country snowmachine use is allowed only from December 15 to April 1. Some timber harvest could occur to improve bear habitat. Sheep and cattle allotment grazing would continue at existing levels.

5. Access. Key Indicator: Roads and trails per mile open to motorized use.

Alternative 3 would reduce the number of open system roads by 146 miles (-11%) and open nonsystem roads by 653 miles (-64%). There would be a reduction in open system trails by 96 miles (-22%) and open nonsystem trails by 101 miles (-51%). This would restrict dispersed camping, berry-picking, firewood gathering, sight-seeing, and other activities that conventionally use road access and it would concentrate these uses on the remaining open roads and trails. The decrease in numbers of open roads and trails would better meet goals for increased wildlife security, especially for elk and grizzly bears. Acres available for summer OHV use would also be reduced over current levels. Alternative 3 would allow OHV use on approximately 368,000 acres, about a 67% reduction from the current 1,126,000 acres open to OHV use. Besides providing wildlife security, summer OHV reductions would prevent other resource damages from OHV use.

6. Roadless Area Management. Key Indicator. Number of acres recommended for Wilderness.

Alternative 3 would recommend 125,000 acres to Congress for Wilderness designation. The 125,000 acres would include the 65,000 acres recommended by the current Plan in Italian Peak, Lionhead and Winegar Hole roadless areas, plus additional roadless acres in each of these areas and the Palisades. This recommended 125,000 acres is 15% of the total acres which presently qualify as roadless on the Forest.

7. Timber Harvest. Key Indicator. ASQ.

Alternative 3 would harvest timber at a sustainable level of a maximum 50 MMBF for the decade (approximately 5.0 MMBF per year) on an estimated 14,230 acres.

ALTERNATIVE 3-M = Alternative 3 Modified (Also the Proposed Programmatic Action and Preferred Alternative)

The purpose of Alternative 3-M is to resolve the needs for change by emphasizing wildlife habitat management and allocating more core areas for grizzly bear. Motorized access, timber harvest levels and livestock grazing are all reduced from levels allowed in the current Forest Plan. Riparian areas with cutthroat trout are further protected with increased vegetation and reduced livestock grazing. Cross-country, summer, motorized vehicle use is restricted to specific areas. Lionhead, Palisades and Italian Peaks, plus the Idaho roadless portion adjacent to the Winegar Hole Wilderness are recommended to Congress for wilderness designation; until Congress acts on the recommendation, their roadless characteristics are maintained.

All the alternatives respond to and incorporate the tentative resource objectives set forth in the Recommended 1990 RPA Program. Alternative 3-M has been selected as the RPA Alternative because it represents the Forest's best attempt to simultaneously implement multiple-use management, ensure resource sustainability, emphasize the quality of resource outputs, and to provide for the economic well-being of rural communities.

How the Key Issues and Key Indicators are addressed in Alternative 3-M:

1. Sustainability, Fire, and Natural Disturbances. Key Indicator: Percent of the Forest with limitations on the size of created openings or patches.

Alternative 3-M would limit size of patches to 40 acres or less on approximately 14% of the forest, or about 259,000 acres.

2. Riparian. Key Indicator: Acres not meeting DVC.

Approximately 512,000 AIZ acres would be managed to promote the health and function of riparian, wetland and aquatic ecosystems under Alternative 3-M. At the end of the first decade, about 2,500 acres would not meet the DVC. Fisheries habitat quality would be moderately high, compared to the current moderate quality rating. There would be a moderately rapid rate of recovery of degraded habitats. Livestock grazing would be reduced more with this alternative than with Alternatives 1, 2, or 3. Timber harvest could occur in riparian areas to attain the desired vegetation characteristics, but is not scheduled and would not contribute to the ASQ.

3. Security for Elk. Key Indicator: Percent of Forest meeting state elk vulnerability thresholds, measured by miles of open roads and open motorized trails.

Over 91% of the Forest (1,673,000 acres) would meet the state elk vulnerability thresholds. The greatest factors under the control of the Forest Service and influencing this are the miles of open roads and open motorized trails. Alternative 3-M would reduce the number of open system roads by 170 miles (-12%) and open nonsystem roads by 658 miles (-64%). There would be a reduction in open system trails by 93 miles (-22%) and open nonsystem trails by 101 miles (-51%). The 91% of the Forest meeting state elk vulnerability standards is more than twice the existing level of 42%, thereby greatly improving elk security. This means the potential would be for a lower proportion of bulls to be harvested during the general hunting season.

4. Grizzly Bear Management (within the BMU's). Key Indicator: Open road and open motorized trail route density (miles per square mile).

The reduction in the open road and motorized trail densities ranging from 0.29 to 0.56 miles per square mile in the BMU's, would improve grizzly bear habitat. Additional access restrictions to improve habitat security would be no summer cross country motorized vehicle use in any of the BMU's, except a small portion in the Bechler BMU. Domestic sheep grazing would be phased out over time. No timber harvest would be scheduled in the "core" or "secure" areas. Snowmachine use is allowed on designated routes throughout the snow season. Cross-country snowmachine use is allowed only from December 15 to April 1.

5. Access. Key Indicator: Roads and trails per mile open to motorized use.

Alternative 3-M would reduce the number of open system roads by 170 miles (-12%) and open nonsystem roads by 658 miles (-64%). There would be a reduction in open system trails by 93 miles (-22%) and open nonsystem trails by 101 miles (-51%). This would restrict dispersed camping, berry-picking, firewood gathering, sight-seeing, and other activities that conventionally use road access and it would concentrate these uses on the remaining open roads and trails. The increase in road closures and restrictions would provide increased wildlife security, especially for elk and grizzly bears, and would provide additional protection from other resource damage. Acres available for summer OHV use would be reduced allowing OHV use on approximately 121,000 acres, almost a 90% reduction from the current 1,126,000 acres open to OHV use.

6. Roadless Area Management. Key Indicator: Number of acres recommended for Wilderness

Alternative 3-M would recommend 125,000 acres to Congress for Wilderness designation. The 125,000 acres would include the 65,000 acres recommended by the current Plan in Italian Peak, Lionhead and Winegar Hole roadless areas, plus additional roadless acres in each of these areas and the Palisades. This recommended 125,000 acres is 15% of the total acres which presently qualify as roadless on the Forest.

7. Timber Harvest. Key Indicator: ASQ.

Alternative 3-M would harvest timber at a sustainable level of a maximum 37 MMBF for the decade (approximately 3.7 MMBF per year) on an estimated 11,430 acres.

ALTERNATIVE 4

Alternative 4 emphasizes watershed and wildlife habitat improvement and a reduction in timber harvest. Riparian areas receive increased emphasis. Motorized access is restricted to designated routes and more roads are closed in some BMU's than in previous alternatives. Lionhead, Palisades and Italian Peaks, plus the Idaho roadless portion adjacent to the Winegar Hole Wilderness and another 14,000 acres of roadless areas are recommended to Congress for wilderness designation; until Congress acts on the recommendation, their roadless characteristics are maintained.

How the Key Issues and Key Indicators are addressed in Alternative 4:

1. Sustainability, Fire, and Natural Disturbances. Key Indicator: Percent of the Forest with limitations on the size of created openings or patches

Alternative 4 would limit size of patches to 40 acres or less on approximately 17% of the forest, or about 310,000 acres.

2. Riparian. Key Indicator: Acres not meeting DVC.

Approximately 533,000 AIZ acres would be managed to promote the health and function of riparian, wetland and aquatic ecosystems. At the end of the first decade, about 1,700 acres would not meet the DVC. Fisheries habitat quality would be high, compared to the current moderate quality rating. Degraded habitats would recover rapidly. Livestock grazing would be reduced by about 8,000 cattle AUM's. Timber harvest could occur in riparian areas to attain the desired vegetation characteristics, but is not scheduled and would not contribute to the ASQ.

3. Security for Elk. Key Indicator. Percent of Forest meeting state elk vulnerability thresholds, measured by miles of open roads and open motorized trails

About 89% of the Forest (1,640,000 acres) would meet the state elk vulnerability thresholds. The greatest factors under the control of the Forest Service and influencing this are the miles of open roads and open motorized trails. Alternative 4 would reduce the number of open system roads by 295 miles (-22%) and open nonsystem roads by 722 miles (-71%). There would be a reduction in open system trails by 113 miles (-26%) and open nonsystem trails by 98 miles (-49%). The 89% of the Forest meeting state elk vulnerability standards is more than twice the existing level of 42%, thereby greatly improving elk security. This means the potential would be for a lower proportion of bulls to be harvested during the general hunting season.

4. Grizzly Bear Management (within the BMU's). Key Indicator: Open road and open motorized trail route density (miles per square mile).

The reduction in the open road and motorized trail densities to an average ranging from 0.33 to 0.50 miles per square mile in the BMU's, would improve grizzly bear habitat. Additional access restrictions to improve habitat security would be no cross-country motorized vehicle use in any of the BMU's, except a small portion of the Plateau and Bechler BMU's. Snowmachine use is allowed on designated routes throughout the snow season. Cross-country snowmachine use is allowed only from December 15 to April 1. Sheep grazing would be phased out.

5. Access. Key Indicator Roads and trails per mile open to motorized use.

Alternative 4 would reduce the number of open system roads by 295 miles (-22%) and open nonsystem roads by 722 miles (-71%). There would be a reduction in open system trails by 113 miles (-26%) and open nonsystem trails by 98 miles (-49%). This would restrict dispersed camping, berry-picking, firewood gathering, sight-seeing, and other activities that conventionally use road access and it would concentrate these uses on the remaining open roads and trails. The increase in closures and restrictions would provide increased wildlife security, especially for elk and grizzly bears, and protect other resources from damage. Alternative 4 would allow OHV use on approximately 79,000 acres, over a 90% reduction from the current 1,126,000 acres currently open to OHV use.

6. Roadless Area Management. Key Indicator: Number of acres recommended for Wilderness.

Alternative 4 would recommend 139,000 acres to Congress for Wilderness designation. These acres more than double the 65,000 acres recommended by the current Plan in Italian Peak, Lionhead and Winegar Hole roadless areas, plus additional roadless acres in each of these areas and the Palisades. This recommended 139,000 acres is 18% of the total acres which presently qualify as roadless on the Forest.

7. Timber Harvest. Key Indicator: ASQ.

Alternative 4 would harvest timber at a sustainable level of 25 MMBF for the decade (approximately 2.5 MMBF per year) on an estimated 7,510 acres.

ALTERNATIVE 5

The purpose of Alternative 5 is to meet the needs for change that reduce focus on human management and human disturbances of wildlife and riparian habitat. Motorized access is restricted to designated routes and more roads are closed in BMU's. Lionhead, Palisades and Italian Peaks, plus the Idaho roadless portion adjacent to the Winegar Hole Wilderness and another 100,000 acres of presently roadless areas are recommended to Congress for wilderness designation; until Congress acts on the recommendation, their roadless characteristics are maintained.

How the Key Issues and Key Indicators are addressed in Alternative 5:

1. Sustainability, Fire, and Natural Disturbances. Key Indicator: Percent of the Forest with limitations on the size of created openings or patches.

Alternative 5 would limit size of patches to 40 acres or less on approximately 18% of the forest, or about 333,000 acres.

2. Riparian. Key Indicator: Acres not meeting DVC.

Approximately 590,000 AIZ acres would be managed to promote the health and function of riparian, wetland and aquatic ecosystems under this alternative. At the end of the first decade, about 1,700 acres would not meet the DVC. Fisheries habitat quality would be high, compared to the current moderate quality rating. Degraded habitats would recover rapidly. Livestock grazing would be reduced by about 8,000 cattle AUM's.

3. Security for Elk. Key Indicator. Percent of Forest meeting state elk vulnerability thresholds, measured by miles of open roads and open motorized trails.

In Alternative 5, about 98% of the Forest (1,802,000 acres) would meet the state elk vulnerability thresholds. The greatest factors under the control of the Forest Service and influencing this are the miles of open roads and open motorized trails. Alternative 5 would reduce the number of open system roads by 395 miles (-29%) and open nonsystem roads by 740 miles (-73%). There would be a reduction in open system trails by 262 miles (-61%) and open nonsystem trails by 138 miles (-69%). The 98% of the Forest meeting state elk vulnerability standards is more than twice the existing level of 42%, thereby greatly improving elk security. This means the potential would be for a lower proportion of bulls to be harvested during the general hunting season.

4. Grizzly Bear Management (within the BMU's). Key Indicator: Open road and open motorized trail route density (miles per square mile).

The reduction in the open road and motorized trail densities to an average ranging from 0.37 to 0.49 miles per square mile in the BMU's, would improve grizzly bear habitat. Additional access restrictions to improve habitat security would be no cross country motorized vehicle use in any of the BMU's, a small portion of the Plateau and Bechler BMU's. Snowmachine use is allowed on designated routes throughout the snow season. Cross-country snowmachine use is allowed only from December 15 to April 1. Sheep grazing would cease.

5. Access. Key Indicator: Roads and trails per mile open to motorized use.

Alternative 5 would reduce the number of open system roads by 395 miles (-29%) and open nonsystem roads by 740 miles (-73%). There would be a reduction in open system trails by 262 miles (-61%) and open nonsystem trails by 138 miles (-69%). This would restrict dispersed camping, berry-picking, firewood gathering, sight-seeing, and other activities that conventionally use road access and it would concentrate these uses on the remaining open roads and trails. The increase in closures and restrictions would provide increased wildlife security, especially for elk and grizzly bears and protect other resources from damage. Alternative 5 would allow OHV use on approximately 50,000 acres, over a 95% reduction from the current 1,126,000 acres open to OHV use.

6. Roadless Area Management. Key Indicator. Number of acres recommended for Wilderness

Alternative 5 would recommend 226,000 acres to Congress for Wilderness designation. These acres more than triple the 65,000 acres recommended by the current Plan in Italian Peak, Lionhead and Winegar Hole roadless areas, plus additional roadless acres in each of these areas and the Palisades. This recommended 139,000 acres is 28% of the total acres which presently qualify as roadless on the Forest.

7. Timber Harvest. Key Indicator: ASQ.

Alternative 5 would harvest timber at a sustainable level of 15 MMBF for the decade (approximately 1.5 MMBF per year) on an estimated 4,730 acres.

ALTERNATIVE 6

The purpose of Alternative 6 is to meet the needs for change by de-emphasizing human management and human disturbance of wildlife and riparian habitat to the lowest level in all the alternatives. Timber harvest is not scheduled. All access is strongly restricted to designated routes and more roads are closed to reduce human disturbance than in any other alternative. Lionhead, Palisades and Italian Peaks, plus the Idaho roadless portion adjacent to the Winegar Hole Wilderness and another 340,000 acres of presently roadless areas are recommended to Congress for wilderness designation. Almost all the roadless areas retain their roadless characteristics.

How the Key Issues and Key Indicators are addressed in Alternative 6.

1. Sustainability, Fire, and Natural Disturbances. Key Indicator: Percent of the Forest with limitations on the size of created openings or patches.

Alternative 6 would limit size of patches to 40 acres or less on approximately 18% of the forest, or about 330,000 acres.

2. Riparian. Key Indicator: Acres not meeting DVC.

Approximately 793,000 AIZ acres would be managed to promote the health and function of riparian, wetland and aquatic ecosystems under this alternative. At the end of the first decade, about 1,700 acres would not meet the DVC. Fisheries habitat quality would be high, compared to the current moderate quality rating. Degraded habitats would recover rapidly. Livestock grazing would be reduced the same as Alternative 5.

3. Security for Elk. Key Indicator: Percent of Forest meeting state elk vulnerability thresholds, measured by miles of open roads and open motorized trails.

About 98% of the Forest (1,802,000 acres) would meet the state elk vulnerability thresholds. The greatest factors under the control of the Forest Service and influencing this are the miles of open roads and open motorized trails. Alternative 6 would reduce the number of open system roads by 406 miles (-30%) and open nonsystem roads by 753 miles (-74%). There would be a reduction in open system trails by 405 miles (-94%) and open nonsystem trails by 145 miles (-73%). The 98% of the Forest meeting state elk vulnerability standards is more than twice the existing level of 42%, thereby greatly improving elk security. This means the potential would be for a lower proportion of bulls to be harvested during the general hunting season.

4. Grizzly Bear Management (within the BMU's). Key Indicator: Open road and open motorized trail route density (miles per square mile).

The reduction in the open road and motorized trail densities to an average ranging from 0.28 to 0.56 miles per square mile in the BMU's, would improve grizzly bear habitat. Additional access restrictions to improve habitat security would be no cross country motorized vehicle use in any of the BMU's, except in a small portion of the Plateau and Bechler BMU's. Snowmachine use is allowed on designated routes throughout the snow season. Cross-country snowmachine use is allowed only from December 15 to April 1. All domestic sheep grazing would be stopped immediately.

5. Access. Key Indicator: Roads and trails per mile open to motorized use

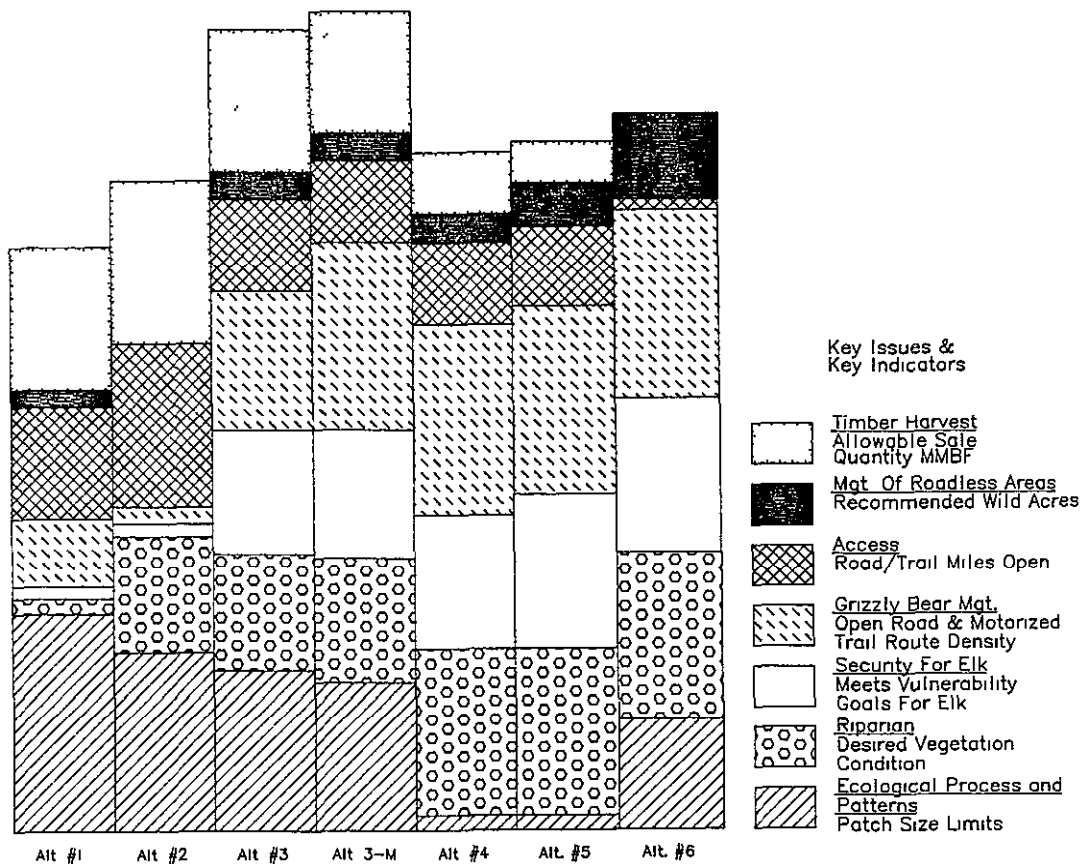
Alternative 6 would reduce the number of open system roads by 406 miles (-30%) and open nonsystem roads by 753 miles (-74%). There would be a reduction in open system trails by 405 miles (-94%) and open nonsystem trails by 145 miles (-73%). This would restrict dispersed camping, berry-picking, firewood gathering, sight-seeing, and other activities that conventionally use road access and it would concentrate these uses on the remaining open roads and trails. The increase of road closures and restrictions would provide increased wildlife security, especially for elk and grizzly bears, and protect other resources from damage. Acres available for OHV use would also be reduced over current levels. Alternative 6 would allow OHV use on approximately 34,000 acres, a 97% reduction from the current 1,126,000 acres open to OHV use. This approach is consistent with the minimum maintenance level of management emphasized in this alternative.

6. Roadless Area Management. Key Indicator: Number of acres recommended for Wilderness.

Alternative 6 would recommend 465,000 acres to Congress for Wilderness designation, more than seven times the 65,000 acres recommended by the current Plan in Italian Peak, Lionhead and *Winegar Hole* roadless areas, plus additional roadless acres in each of these areas and the *Pali-sades*. This recommended 465,000 acres is 55% of the total acres which presently qualify as roadless on the Forest.

7. Timber Harvest. Key Indicator: ASQ.

Alternative 6 would not have a scheduled timber harvest. A limited harvest might occur, but not much, given the minimum level of human disturbance emphasis of this alternative.



Alternatives Comparison Chart

Figure II-1

Figure II-1 shows how the alternatives compared, or stacked up against each other when the Key Issue Indicators' differences were analyzed. The differences are determined by the alternative with the most advantages. For grizzly bear management, the alternative with the fewest number of open roads and motorized route density receives the highest rating. For the access issue, the alternative with the most numbers of trails and roads open per mile received the highest rating.

All alternatives meet baseline State and Federal Standards; Grizzly Bear Recovery Plan Goals for Greater Yellowstone Ecosystem; Endangered Species Act, Wilderness Act; Wild and Scenic Rivers Act; National Historical Act, NFMA; Native Americans Act; etc.

ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY

Several alternatives were considered but eliminated from detailed study and more information about these can be found in the process papers. These additional alternatives were not fully developed because they closely resembled alternatives that were considered in detail, they did not meet the needs for change; they were missing practical implementation components; or they were inappropriate for other reasons as follows:

Maximum Commodity Production and Motorized Access

This alternative called for more Forest land devoted to scheduled timber production than Alternative 1. It provided more designated open motorized routes, allowed less cross-country OHV access; recommended no wilderness designation; proposed elimination of the Palisades Wilderness Study Area; and recommended that eligibility determinations under the Wild and Scenic Rivers Act not be made.

Some portions of this proposal were incorporated into Alternative 2. Suggestions that could not be implemented without Congressional action (like those regarding the Palisades Wilderness Study Area and eligibility under the Wild and Scenic Rivers Act) were not included in any alternative. Because large portions of this proposal became part of Alternative 2, further detailed analysis did not occur.

Maximum Wilderness

During public involvement activities it was proposed that all of the Forest's inventoried roadless areas be recommended for wilderness designation. Alternative 6 was developed in response to the desire for additional recommended wilderness. After analysis, some inventoried roadless areas were not proposed for wilderness in any alternative because some areas did not exhibit sufficient wilderness qualities to warrant their inclusion into the wilderness system at this time. *The all-wilderness alternative was dropped.*

Range of Variability

Many members of the public and several Forest Service employees advocated the development of an alternative that would move the forest into its "range of variability." This would involve learning what ecological conditions existed on the Forest historically and managing for those same conditions. This was not developed as a separate alternative because the current information on the range of variability for the Forest is insufficient to formulate an alternative. Even with this information, ecological variability may be so broad as to provide inadequate direction for an alternative at this time. Finally, this type of alternative would not meet the National Forest Management Act Direction to formulate alternatives that incorporate social and economic conditions along with the ecological situation.

Original Forest Plan as Written

Alternative 1 reflects current management of the Forest and how it would continue in the future. It differs from the original 1985 Plan in some respects.

Some people have asked for an alternative that comes closer to the letter of the existing Forest Plan. The differences between Alternative 1 (which is modeled consistent with the intent of the 1985 Plan) and a strict reading of the 1985 Plan are summarized below. They could have been used to shape a separate alternative.

- The 1985 Plan called for the harvesting of timber from suitable lands at rates that could not be sustained. Because most of this material has already been logged or is no longer merchantable, and because some of it could not be logged because of other resource protection needs, the nonsustainable harvest schedule was not used.

- As a part of the Revision process, the Forest reassessed the eligibility of river segments for study as wild, scenic, or recreational rivers. That eligibility determination was made; and the Forest has moved to protect the outstandingly remarkable values of the eligible segments in all the alternatives. Some people have asked that an alternative be developed which does not include that protection. We did not do so because Forest Service policy is to protect the outstandingly remarkable values once eligibility is established

- The provisions of the Endangered Species Act (ESA) have not changed since the Forest Plan was put into effect in 1985. However, the understanding of the habitat needs of those species has changed substantially. Meeting the needs of these species, in particular the grizzly bear, has substantially changed management on a large portion of the Forest. We did not use the previously acceptable approaches for providing grizzly bear habitat because they are not generally accepted in today's scientific community.

- The Forest Service has greatly expanded its own list of sensitive species. In response to that expanded list, the Forest has had to change management practices to increase habitat protection. We have continued this level of protection because it is designed to prevent these species from being listed as threatened or endangered.

COMPARISON OF ALTERNATIVES

A summary of the environmental impacts and effects (called Indicators) for each alternative is provided in Table II-1. Due to the complexity of the consequences displayed in this table, cumulative impacts are not presented here. For a detailed discussion of the effects, consult Chapter IV, "Environmental Consequences."

**TABLE II-1
COMPARISON OF ENVIRONMENTAL EFFECTS**

The following pages contain a summary of the environmental effects of the alternatives. This summary is drawn from information in Chapter III and IV of the DEIS. The reader is referred to those Chapters for additional information.

The key issue indicators are displayed first for the components outlined in Chapter 1. Due to the complexity of the issues, there are other indicators that need to be evaluated to adequately address the environmental effects, and those are listed below the key indicators. Acronyms and abbreviations are defined at the end of this Table.

ECOLOGICAL PROCESSES AND PATTERNS

	Exist Level	Alt #1	Alt #2	Alt #3	Alt #3-M	Alt #4	Alt #5	Alt #6
Key Indicator - Sustainability and Patch Size Issue								
- M Acres restricted to openings < Range of Variability	NA	47	25	82	259	310	333	330

In addition to patch size, there are other ecosystem processes and patterns that we analyzed that contribute to ecologically sustainable ecosystems.

All alternatives were evaluated on the ability to use management practices such as prescribed fire and timber harvest to manipulate ecosystems. Aquatic connectivity was determined to be a good indicator of ecosystem patterns and opportunities to maintain or improve current connectivity were addressed.

Other Ecosystem Management Indicators

- M Acres where prescribed fire is allowed	1,282	1,282	1,401	1,302	1,232	1,223	1,202	1,256
- M Acres with less restrictions on timber harvest	0	262	275	132	132	0	0	0
- M Acres aquatic zones where connectivity is maintained	342	342	325	448	512	533	590	793

PHYSICAL

Most forest management activities impact the soil resource to some extent. These activities (recreation, timber harvesting, road building, grazing) were evaluated to determine what environmental effect they will have on the soil resource.

The only issue indicators used to evaluate physical elements are related to minerals and the ability to locate, or enter areas on the Forest.

Other Physical Component Indicators

- M Acres open to locatable and mineral entry	1,722	1,383	1,414	1,324	1,277	1,340	1,197	968
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BIOLOGICAL								
	Exist Level	Alt #1	Alt #2	Alt #3	Alt #3-M	Alt #4	Alt #5	Alt #6
Key Indicator - Riparian Health Issue								
- Riparian M Acres meeting DVC 1/	187	188	200	200	200	211	211	211
- moving toward DVC 1/	53	49	52	52	52	49	49	49
-not meeting DVC 1/	37	40	25	25	25	17	17	17
<p>Many biological elements can be evaluated determining what effect proposed management activities can have Water and associated riparian areas can be impacted by activities The other indicators used to assess impacts are related to roading, timber, and grazing activities</p> <p>1/ Only includes riparian acres open to grazing (about 79% of the Forest) Does not include acres closed to grazing prior to 1995 Source - FSRAMIS Database</p>								
Other Riparian and Water Indicators								
- # stream crossings	5,680	3,461	3,056	2,724	2,724	2,121	1,721	1,204
- M Acres roaded in AIZ	202	95	85	76	76	64	54	47
- M Acres impacted by recreation sites in AIZ		10	10	11	11	10	11	10
- M Acres of timber harvest in headwater areas	216	36	41	36	29	19	14	0
- M Acres of timber harvest prescriptions in AIZ	100	283	45.9	29.3	0	0	0	0
- Mi cutthroat streams w/min 6" stubble at the HGL	97	97	79	97	83	379	379	379
- Mi fish-bearing streams w/min 4" stubble at the HGL	323	323	323	2,863	2,863	2,863	2,863	2,863
Key Indicators - Elk Security Issue								
- Elk Vulnerability (EV) - M Acres mtg state thresholds	774	1,075	1,296	1,526	1,673	1,640	1,802	1,802
- % of Forest meeting State EV thresholds	42	58	72	83	91	89	98	98

Elk habitat and winter range were evaluated because these are important biological elements that contribute to healthy, sustainable ecosystems

	Existing	1	2	3	3-M	4	5	6
Other Wildlife and Vegetation Indicators								
- Elk habitat effectiveness weighted average	0.56	0.60	0.62	0.63	0.64	0.66	0.69	0.70
- % of winter range acres meeting DVC	78	81	82	82	82	84	84	84

Forested Ecosystems and wildlife species associated with these ecosystems were examined in addition to water, as part of the Biological component of ecosystems. Specifically, the percent of the Forested ecosystem that is in a mature age class and percent of Aspen in mature age class

- Percent of Forested acres in Mature Age Class	79.6	78.4	78.2	78.5	78.7	79.0	79.2	79.6
- Percent of Aspen in Mature Age Class	92.3	89.2	87.0	88.7	89.2	90.9	91.6	92.3
- Upland M Acres - meeting DVC 1/	1028.4	1065.8	1083.3	1083.3	1083.3	1105.8	1105.9	1105.9
- moving toward DVC 1/	176.1	162.2	160.6	160.6	160.6	154.7	156.1	156.1
-not meeting DVC 1/	153.0	129.5	113.6	113.6	113.6	97.0	95.5	95.5

1/ Only includes upland acres open to grazing (about 79% of the Forest). Does not include acres closed to grazing prior to 1995. Source - FSRAMIS Database

Key Indicator - Grizzly Bear Management Issue (within the BMU's)								
- OROMTRD 1/ (mi/sq mi) - Henry's BMU, Sub 1	1 52	0 60	0 52	0 55	0 40	0 35	0 41	0 43
- Henry's BMU, Sub 2	0 98	0 45	0 37	0 38	0 29	0 33	0 37	0 28
- Plateau BMU, Sub 1&2	1 29	0 87	1 03	0 65	0 56	0 50	0 49	0 56
- Bechler BMU	0 77	0 58	0 59	0 53	0 48	0 39	0 39	0 39
<p>Many indicators can be used to evaluate effects management activities have on Grizzly Bears. In addition to open motorized roads and trails, total access, the percent of the BMU that is in a core area, and an overall habitat effectiveness/value are used.</p>								
Other Grizzly Bear Management Indicators (within the BMU's)								
- TMARD 2/ (mi /sq mi) - Henry's BMU, Sub 1	2 05	0 99	0 77	0 91	0 63	0 51	0 48	0 47
- Henry's BMU, Sub 2	1 26	0 66	0 48	0 48	0 47	0 44	0 47	0 38
- Plateau BMU, Sub 1&2	2 97	1 74	1 53	1 21	0 86	0 70	0 71	0 76
- Bechler BMU	1 59	1 10	0 91	0 67	0 63	0 53	0 50	0 49
- % BMU in Core -Henry's, Sub. 1	32	66	66	76	0 68	83	78	78
- Henry's, Sub 2	45	75	78	77	0 92	91	77	92
- Plateau, Sub 1&2	0	51	33	61	0 61	71	71	65
- Bechler	48	48	58	59	0 62	70	71	71
- Grizzly CEM (Annual HE/HV index) -Henry's, Sub 1	0 60	0 65	0 67	0 66	0 69	0 68	0 69	0 70
- Henry's, Sub 2	0 54	0 52	0 60	0 59	0 59	0 60	0 59	0 62
- Plateau, Sub 1&2	0 47	0 49	0 56	0 59	0 64	0 64	0 65	0 65
- Bechler	0 58	0 59	0 64	0 67	0 68	0 70	0 71	0 70
<p>1/ OROMTRD = Open Road and Open Motorized Trail Route Density 2/ TMARD = Total Motorized Access Route Density</p>								

FOREST USE AND OCCUPATION								
	Existing	1	2	3	3-M	4	5	6
Key Indicators - Access Issues								
Miles of open system roads	1,367	1,320	1,411	1,221	1,197	1,072	972	961
Miles of open nonsystem roads	1,021	564	453	368	363	299	281	268
Miles of open system trails	433	449	357	337	340	320	171	28
Miles of open nonsystem trails	199	123	113	98	98	101	61	54
Other indicators within the Forest Use and Occupation Issue Component were used to evaluate the seven alternatives Winter access, along with dispersed camping are examples used to complement the access issue								
Other Access Indicators								
- Mi road construction 4/	NA	19	23	19	14	1	06	0
- Mi of seasonally restricted system roads	61	177	92	80	86	75	24	53
- Mi of yearlong restricted system roads	572	390	211	251	155	142	129	122
- Mi of seasonally restricted nonsystem roads	24	32	39	36	34	33	38	26
- Mi of yearlong restricted nonsystem roads	177	64	31	69	61	56	73	55
- Mi of reclaimed system roads	-	113	286	448	562	711	875	864
- Mi of reclaimed nonsystem roads	-	562	699	749	764	834	830	873
- Mi restricted system trails	597	581	673	693	690	710	859	1,002
- Mi restricted nonsystem trails	102	178	188	203	203	200	240	247
- Mi groomed trail for snowmachines	450	456	666	658	658	615	477	355
- M Acres (and percent of forest) open to winter x-country OHV	1,511 (84%)	1,511 (84%)	1,590 (88%)	1,532 (85%)	1,532 (85%)	1,513 (84%)	1,392 (77%)	1,107 (61%)
- M Acres (and percent of forest) open to summer x-country OHV	1,126 (62%)	960 (53%)	761 (42%)	368 (20%)	121 (7%)	79 (4%)	50 (3%)	34 (2%)
Key Indicator - Roadless Management Issue								
- M Acres recommend wilderness	65	65	0	125	125	139	226	465
4/ New road construction per year does not include temporary roads Estimate is based on 38 miles of road construction per MMBF of scheduled timber harvest Figures shown are annual miles of new road construction for the first decade								

Other Wilderness and Recreation Indicators								
	Existing	1	2	3	3-M	4	5	6
- M Acres roadless 3/	841	763	731	768	772	776	797	839
- M Acres roadless closed to summer OHV	243	243	203	275	273	289	378	614
- M Acres Preservation VQO	NA	258	193	327	317	349	419	657
- M Acres Reten - P R VQO	NA	705	617	578	742	909	946	764
- M Acres Reten - Mod VQO	NA	524	481	560	718	439	339	328
- M Acres P.R - Max Mod VQO	NA	288	482	313	11	49	15	15
- M Acres allocated to dispersed camping	NA	13	29	28	28	2.8	15	15
- # of jobs	2,069	2,136	2,138	2,132	2,113	2,106	2,100	2,091
- employee compensation MM\$	393	402	404	401	400	398	397	395
- 25% return-local govt.M\$/yr	311	113	119	111	98	89	81	70
- Pay-in-lieu of Taxes M\$/yr	877	905	905	905	905	905	905	905
- Annual Forest budget (excluding LE&FFF - MM\$/yr)	12.8	11.9	12.1	12.2	12.0	11.9	11.7	11.0
- Annual Forest budget includes LE&FFF - MM\$/yr	14.0	13.2	13.4	13.7	13.5	13.4	13.3	12.7
3/ M Acres roadless includes wilderness study area and recommended wilderness								

PRODUCTION OF NATURAL RESOURCES

Key Indicator - Timber Harvest Issue

- ASQ volume (MMBF per year)		51	60	50	37	25	15	0
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Other Production Indicators

- Firewood and products volume (MMBF per year)	54	3.8	38	38	38	38	38	38
- M Ac by harvest type Clearcut/other (per year)		1 1/47	1 2/5	98/44	780/36	52/.23	28/19	0/0
- M AUM's	148	144	139	139	**129	**121	121	121
- M Ac C/H-S/G allotment -open	1,498	1,400	1,400	1,400	**1,228	**1,228	1,228	1,228
-closed	391	489	489	489	**661	**661	661	661

** These figures include implementation of the "phase out" as described in the narrative

Acronyms and Abbreviations Used in Table II-1.

AIZ	Aquatic Influence Zone
ASQ	Allowable Sale Quantity
BMU	Bear Management Unit
Sub.	Subunit of a Bear Management Unit
C/H	Cattle/Horse
CEM	Cumulative Effects Model
DVC	Desired Vegetative Condition
FSRAMIS	Forest Service Range Analysis Management Information System
HE	Habitat Effectiveness
HE/HV Index	Percent of Annual Habitat Value
HGL	Hydric Greenline
HV	Habitat Value
FFF	Forest Fire Fighting
LE	Law Enforcement
M Acres	Thousand Acres
M AUM's	Thousand Animal Unit Months
M\$	Thousand Dollars
MM\$	Million Dollars
MMBF	Million Board Feet
Max. Mod.	Maximum Modification
Mod.	Modification
OHV	Off Highway Vehicle
P.R.	Partial Retention
Reten	Retention
S/G	Sheep/Goat
VQO	Visual Quality Objective

CHAPTER III AFFECTED ENVIRONMENT

READER'S GUIDE - In this chapter you will find:

A description of the following components of the Forest and Key Issues.

Ecological Processes and Patterns and Key Issue of Patch Sizes;
Physical Elements,
Biological Elements Component and Key Issues of Riparian Health, Elk Vulnerability and Grizzly Bear Habitat;
Forest Use and Occupation Component and Key Issues of Access Management and Wilderness,
Production of Natural Resources Component and the Key Issue of Timber Volume

This chapter describes the existing environment that will be affected by implementation of any of the alternatives. It describes the existing physical, biological and social environment of the Forest and the surrounding area. Information contained in this section appears in the same order as the key issues outlined in Chapter 1.

There were many other issues raised by publics and forest employees that were determined not to drive the development of alternatives. The Analysis of the Management Situation (USDA Forest Service, Targhee N.F., 1992) and process papers listed in section six in this document provide additional information about these issues (i.e. infrastructure, outfitter/guides).

I. ECOLOGICAL PROCESSES AND PATTERNS

INTRODUCTION

In recent years the Forest Service has embraced the concept of ecosystem management. This is an approach to natural resource management that strives to ensure healthy, productive, sustainable ecosystems by blending the needs of people and environmental values on a given area such as the Targhee National Forest. An ecosystem is a complex system of living and nonliving components that interact and change continually. Healthy ecosystems are those that retain all of their parts and functions for future generations even though vegetation patterns, human uses, or other conditions may change. Understanding ecological processes (fire and other natural disturbances) and how these processes shaped vegetative patterns over time in a landscape are important steps towards implementing ecosystem management.

An additional principle of ecosystem management is the quest for and application of new knowledge regarding ecosystems. Our understanding of ecosystems and the effects of various management activities is subject to change as new information becomes available. In order to accommodate and react to such change, the Forest Service has adopted an adaptive management approach. In adaptive management, monitoring and evaluation are used to assess the effects of management decisions and identify new information. Resource management may then be changed to reflect new understandings.

Another important ecosystem management principle is that different issues, components or effects may require description at different scales or levels. For example, economic issues are described at the county level, but fisheries are discussed by hydrologic unit. For economic and social issues political boundaries are more meaningful, while ecological units are used for resource discussions. In this document, we have addressed issues at many different scales and levels of specificity, depending on which is most relevant to the decisions being made.

Many resources are described in this chapter using the ecological units known as subsections (referred to as management areas in Chapter II). These units exhibit unique patterns in soils, landform, topography and potential natural vegetation, among other characteristics. The Forest encompasses part or all of seven subsections (Figure III-1).

- Lemhi/Medicine Lodge
- Centennial Mountains
- Island Park
- Madison Plateau
- Teton Range
- Big Hole/Palisades Mountains
- Caribou

To get a better understanding of each of the seven subsections that are being evaluated in this chapter, a brief description of each follows. Additional information on the subsections is available throughout this document, and in process papers or planning records.

Lemhi/Medicine Lodge - This subsection includes the Lemhi Mountains and the Medicine Lodge/Beaverhead Mountains. A variety of vegetation exists with dominant communities of mostly Douglas-fir and limber pine. Sagebrush/bunchgrass and mountain mahogany communities are common on the lower elevation and strong southerly exposures. Limber pine communities and alpine meadows exist at the high elevations. This subsection is rich in mining history with old mining sites and remnants of town sites. Located in the Birch Creek Valley are four preserved brick adobe Charcoal Kilns. Sixteen were originally built to furnish charcoal to the Nicholia Mine. This area also has a National Scenic Trail, a recommended wilderness (Italian Peaks) and most big game species.

Centennial Mountains - This subsection covers the Centennial Mountains between the east fork of Irving Creek and Reas Pass to the east. The Centennials, which form part of the Continental Divide, are a scenic mountain range with high mountain meadows scattered through spruce/fir and Douglas-fir forests. At lower elevations sagebrush/grasslands grade into Douglas-fir and lodgepole pine forests. Lionhead, in the northeast portion of the subsection, is a recommended wilderness in Montana. The major travel corridors are Highways 20 and 87, and a portion of Interstate 15. The Yale-Kilgore road is a secondary travel route connecting Island Park to Kilgore and Dubois. In the northeast portion of the subsection is Henry's Lake, a world renowned fishery. The western part is the Red Conglomerate range, home to at least one endemic sensitive plant species.

Island Park - This subsection includes the west half of Island Park, Ashton, and the northwest portion of Teton Basin Ranger Districts. The landscape of this subsection features a large caldera. Highway 20 is the only major highway that travels through this subsection. Among the many scenic attractions are Upper and Lower Mesa Falls, the last major undisturbed falls on the Columbia River system. The Mesa Falls Scenic Byway, established in 1989, provides motorists with a breathtaking view of the Teton Mountain Range and accesses the two falls. The Island Park subsection offers excellent trout fishing at Island Park Reservoir and along the Henry's Fork, Buffalo River, Warm River, Fall River and Bitch Creek. The Island Park subsection is also known for its snowmachine trails and cross-country ski trails and summer home concentrations. The area shows signs of large scale timber harvesting due to the mountain pine beetle epidemics in 1960's and 1970's. Harriman State Park lies in the heart of the Harriman Wildlife Refuge, with 16,000 acres of forest, meadows, lakes and streams.

Madison Plateau - The largest portion of the Madison Plateau Subsection is actually in Yellowstone National Park. The section on the Forest falls within the Island Park and Ashton Districts next to Yellowstone National Park. The Jedediah Smith and Winegar Hole Wildernesses lie within this subsection, as does the recommended Idaho wilderness portion of Winegar Hole. The Ashton-Flagg Ranch Road and Fish Creek Road are the major access routes in this area. Grassy Lake is a 320-acre lake created when a dam was built by the Bureau of Reclamation in 1937-1939. Grassy Lake as well as other lakes and

Subsection Overlay on the Targhee National Forest and the Surrounding Area

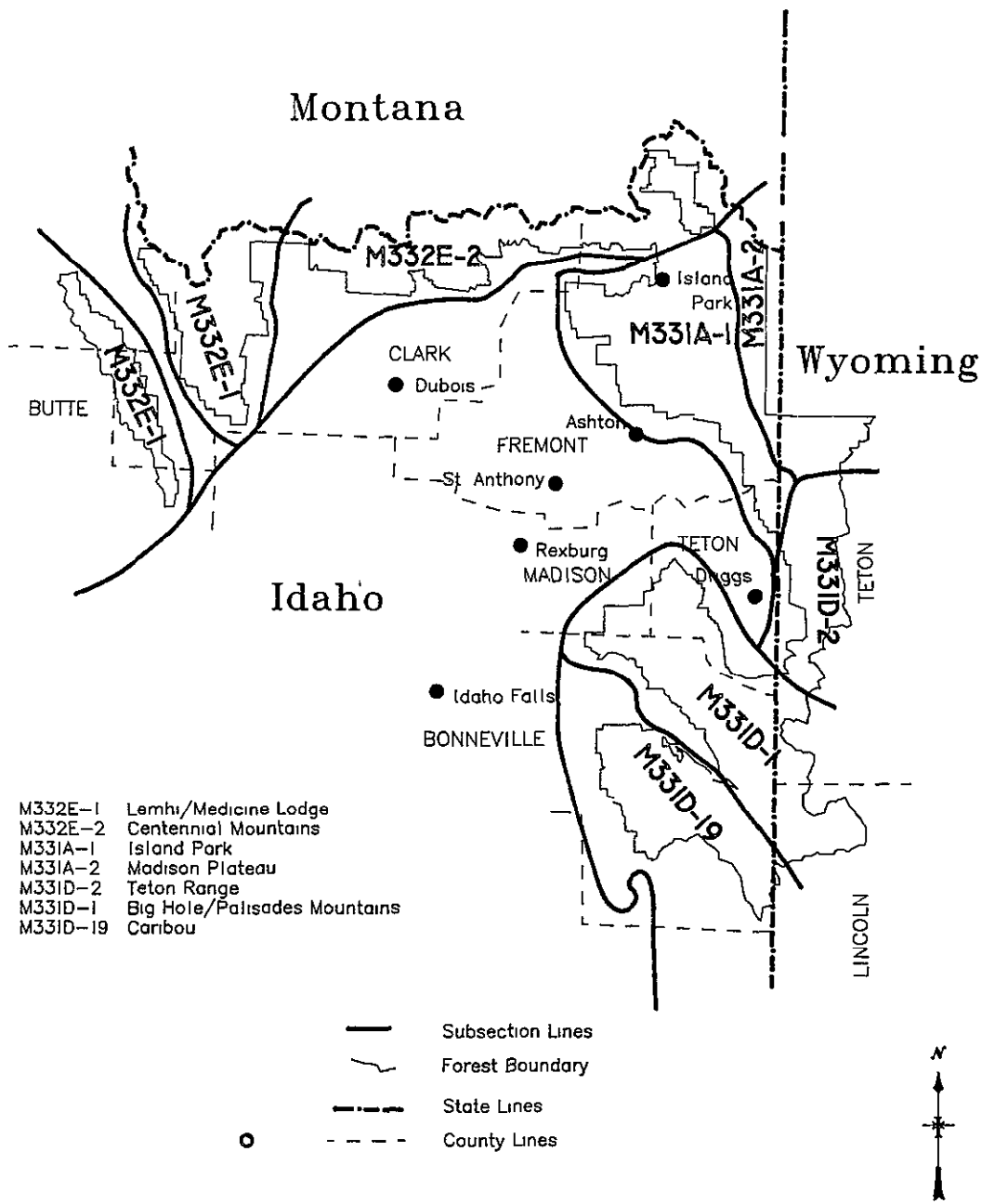


Figure III-1

streams in the area are popular fishing areas and are accessed by the Flagg Ranch road. Several organized youth camps exist throughout this subsection. The Cave Falls road is the only motorized access to the southwest portion of Yellowstone Park.

Teton Range - This area encompasses the west slope of the Teton Mountains. The Teton Range is a spectacular line of high peaks rising abruptly along the west side of Jackson Hole. The vegetation is a diverse mix of forested and nonforested plant communities. The Jedediah Smith Wilderness traverses the upper portions of the west slopes of the Teton Mountains. The Grand Targhee Ski Resort is a major tourist attraction within the subsection. Two organized youth camps are present. This area is known for its many backcountry trails which are accessible by horse or foot.

Big Hole/Palisades Mountains - This subsection takes in all National Forest lands between Highway 33 in Idaho and Highway 22 in Wyoming on the north and the South Fork of the Snake River to the south. Several major highways provide access: Idaho Highways 26, 31 and 33, and Highway 22 in Wyoming. Highway 31 is a State Scenic Byway over Pine Creek Pass. Vegetation consists of mountain brush, grass/forb openings, aspen, and forests of Douglas-fir and lodgepole pine. The area has a variety of recreational opportunities including Kelly Canyon Ski Resort and backcountry hiking. Palisades Reservoir and the South Fork of the Snake River are used by water sports enthusiasts.

Caribou - This subsection is the portion of the Caribou National Forest administered by the Forest. It lies south of the South Fork of the Snake River. Steep mountain slopes and canyons dominate the landscape. The Palisades Reservoir is shared by this subsection and the Big Hole/Palisades Subsection. Vegetation in this subsection forms a patchwork of tall sage/grass openings, aspen, and mixed Douglas-fir/lodgepole pine forests. Recreation use is very similar to the Big Hole/Palisades Subsection with high trail and backcountry use as well as hunting, fishing and water sports both on the reservoir and the Snake River. This area has several summer home divisions and two organizational camps.

RANGE OF VARIABILITY

The phrase "range of variability" refers to the composition, structure and dynamics of ecosystems through time. By understanding how ecosystems have functioned in the past and successfully maintained themselves, we may gain insight into how to keep the systems healthy and resilient into the future. The range of variability provides information, usually through analysis of vegetation patterns, about conditions under which plant and animal species evolved. Sustaining healthy plant and aquatic systems is an important part of ensuring that all ecosystem components, from wildlife and fish to microbes and fungi, are maintained.

The Forest is in the process of analyzing historical maps, photographs and literature to better understand the range of variability, both natural and human-caused, for the Forest. In addition, a cooperative project between the Forest, the Gallatin National Forest, and Montana State University is underway to increase our understanding of historical vegetation patterns and watershed function.

Information is limited, especially prior to 1900, but we do have some knowledge of how the Forest has changed over recent history. We expect to have more complete and quantifiable information available for the Final Environmental Impact Statement.

Both ecosystem processes, and the patterns created by those processes, have a range of variability. The next two sections discuss our current understanding of the range of variability for the disturbance regimes (processes) and landscape patterns of the Forest.

ECOLOGICAL PROCESSES AND DISTURBANCES

Ecosystems constantly change across both time and space. Change is brought about by many different processes and disturbances that occur over varying time frames and spatial scales. For example, fire is a disturbance process that can burn thousands of acres of forestland within a matter of hours. On the other hand, it may take millions of years for a stream to carve a canyon through the process of erosion. Some disturbances are relatively predictable, while others happen in utterly unpredictable, random ways. Humans can have a great impact on some of these processes, as discussed below. Ecosystem processes and disturbances are never independent from one another. Any given process will change resource conditions, which then sets the stage for some other agent to act.

While there are innumerable processes occurring in an ecosystem, we have focused on only a few that are most likely to be affected by the alternative management schemes being analyzed in this DEIS. This section will only examine "natural" disturbances, not those associated with human activities such as grazing, timber harvest and roading.

Succession - Scale: Community Type

Succession is the process by which plant communities change through time if they are undisturbed. This process usually begins with pioneer species invading bare ground. These early successional plants change the environment by their presence to the point where other more shade-tolerant plants can take over the site. These plants then modify conditions further by their leaf litter and shade, making the site more hospitable to yet another set of plant species which replaces them. The gradual progression from early to late successional communities continues unless interrupted by a disturbance such as wind or fire.

Due to the control of fire on the Forest since the early 1900's, succession has become a dominant ecosystem process in the unharvested portions of the Forest. Late successional communities are prevalent in herbaceous/shrub ecosystems as well as in most forest types.

Herbaceous/Shrub Communities - The process of succession in these areas generally begins following fire and is characterized by open grassland interspersed with a few shrub species. Mountain big sagebrush and other shrubs begin to dominate after five to ten years. As they compete with the grasses for water, the grasses lose vigor and die out. Sagebrush provides shade for Douglas-fir seedlings, which may take over the site as a dominant community type until fire sets it back to grassland. In the absence of a Douglas-fir seed source, the area may become a sagebrush-dominated community.

Fire suppression on the Forest has allowed a significant acreage of the herbaceous and shrub communities to convert to Douglas-fir or dense sagebrush. This varies from historical conditions where mosaics of different-aged sagebrush/grassland stands existed, and where stands dominated by herbaceous species were more common. Some high mountain meadows are also being reduced in size by conifers encroaching in from the edges.

Forest Communities - Succession can vary a great deal depending on climate and soils in forested systems, but it generally begins with early successional species such as aspen and lodgepole pine, then progresses to shade-tolerant climax species. Aspen is a relatively short-lived tree which may give way to lodgepole pine or Douglas-fir communities after approximately 100 years. The mountain pine beetle commonly attacks lodgepole pine after 80 to 120 years, allowing more shade tolerant species to take over. Douglas-fir will likely then dominate on warmer, drier sites, while subalpine fir and Engelmann spruce dominate in colder areas. Douglas-fir, subalpine fir or Engelmann spruce generally form long-lived climax communities until a disturbance occurs.

Much of the aspen acreage that was present historically on the Forest has been converted to Douglas-fir through the succession process. In addition, aspen stands are overwhelmingly in the mature or older age classes. These conditions have resulted from fire suppression. Succession at higher elevation sites has resulted in subalpine fir and Engelmann spruce becoming intermixed with whitebark pine. With continued absence of fire, the whitebark pine will likely give way to the spruce and fir.

Currently 79.6 percent of the forested land is in the mature age class. This is primarily a result of fire suppression. Historically fire produced a greater variety of age classes over the landscape. Mature age classes provide important wildlife habitat for some species. They are also more susceptible to stand-replacing fires and mortality from insects than most early-successional communities.

Fire - Scale: Vegetative Community and Subsection

Historically fire has played a significant role in the Greater Yellowstone Area. Some plants have evolved with fire and have adapted to it in various ways. Fires occurred naturally at certain average time intervals, which varied by vegetation and climatic conditions. Fires were also set by humans on a fairly regular basis, particularly in the sagebrush/grass and aspen communities. These fires created mosaic patterns of different successional stages of vegetation across the landscape.

In the early 1900's public concern for protecting the forests from fire ushered in a period of aggressive fire suppression which has continued to the present. With these suppression strategies and the lack of a prescribed fire program, the fire intervals which occurred historically have been altered. Due to the absence of fire, much of the forest vegetation has reached the mature age class and herbaceous/shrub types are in the later stages of succession. The mosaic patterns in the landscape are not as prevalent as before. These conditions increase the potential for fires of higher intensity which may be detrimental to species that evolved with frequent, low intensity burns.

There are no approved fire management plans on the Forest. All previous fire management plans were suspended as a result of the 1988 Yellowstone fires.

Fire frequency intervals and behavior vary widely among the different vegetation communities, so each is described separately in the following discussion.

Douglas-fir Fire Regimes - It appears that Douglas-fir forests in this area historically had a fire interval of 20-50 years. These fires were generally low ground fires which tended to thin the stands, favoring large, older Douglas-fir trees with thick bark. Fire suppression has led to conditions on the Forest where most Douglas-fir stands have multiple stores and dense stocking (many trees per acre). Trees of various heights provide a "ladder" for fire, allowing it to reach the tree crowns. Absence of frequent ground fires can cause dead fuels to build up over time. Fires which start under these conditions are much more severe than ground fires and tend to replace the Douglas-fir with earlier successional species such as aspen or lodgepole pine. (Bradley et al. 1992)

Lodgepole Pine Fire Regimes - In this area between the years 1200 and 1700, major fires occurred in the lodgepole pine component approximately every 100 years. Stand-replacement fires in lodgepole pine are closely tied to epidemics of the mountain pine beetle. Tree mortality caused by the beetle creates massive amounts of fuel. Fires which start under such conditions are likely to be severe. This cycle of beetles, fire and stand replacement is part of lodgepole pine's evolutionary history in the Rocky Mountains. We witnessed this cycle on the Forest beginning with beetle epidemics in the 1960's and ending with huge fires such as the North Fork Fire in 1988. Conditions for these large fires still exist in much of the Forest's mature lodgepole pine.

Most lodgepole pine, with the exception of that on cool moist sites, historically also experienced low intensity fires every 40-60 years. Fire suppression has interrupted this portion of the lodgepole fire cycle on the Forest. The effects of this are likely not too serious, since conditions created by the mountain

pine beetle are similar to those created by light ground fires (stands are thinned and regeneration may fill in the understory). (Personal comm., Brown 1993; Bradley et al. 1992; USDI National Parks Service 1993; Management of Lodgepole Pine Ecosystems 1973)

Aspen Fire Regimes - The average fire-free period historically was 40 years or longer for pure aspen stands. Fire in aspen has been reduced in size and frequency throughout the West due to fire control and the cessation of intentional burning. On the Forest fire suppression has resulted in many aspen stands that are now mixed with, or almost overtaken by, conifers such as Douglas-fir or lodgepole pine. If left undisturbed for long periods of time, conifers can change the soil characteristics so that aspen is less likely to survive (Cryer & Murray 1992) Mixed conifer/aspen stands are conducive to large stand-replacing fires. If such fires were allowed to occur, they would likely lead to pure aspen regeneration providing the fires weren't so severe as to destroy the aspen root systems. Moderate severity fires result in better aspen sprouting than either high or low severity fires (Bradley et al. 1992)

Subalpine Fir Fire Regimes - Subalpine fir forests generally occupy cool, moist habitats and are therefore common at higher elevations. Because of this fire is relatively infrequent in this type, occurring every 50-350 years depending on aspect, elevation and other factors. Large fires generally occur only during drought conditions and periods of high winds. Ladder fuels are common in this type, so fires can spread easily between tree crowns and burn large acreages. (Bradley et al. 1992)

Sagebrush/Grassland Fire Regimes - Historically, fires likely occurred every 10 to 25 years in the Forest's sagebrush communities (Clark and Starkey 1990, Houston 1973, Winward 1987). These fires created a mosaic of vegetation conditions across the landscape. In the absence of fire, these communities tend to progress toward stands of Douglas-fir or dense sagebrush. Dense sagebrush stands are less diverse than sagebrush/grasslands, and more susceptible to soil erosion, because the herbaceous vegetation is lacking. Much of the sagebrush/grassland on the Forest and throughout the west is in advanced successional stages due to the absence of fire (Winward 1992).

Whitebark Pine Fire Regimes - Fires are important to the survival and regeneration of whitebark pine. This species can survive surface fires which kill other tree species that compete with it. Since whitebark pine reproduces on fire-prepared sites, stand-replacing fires help perpetuate the species. Historically, fire occurred in whitebark pine communities every 30-300 years. Suppression of fires has favored subalpine fir and Engelmann spruce over whitebark pine. Other disturbance agents affecting whitebark pine are white pine blister rust and mountain pine beetle, which are discussed in the insect and disease section. (Morgan et al. 1994)

Fire Risks

The Forest has experienced large fires in five of the past twenty years; three of those were within the last eight years. Two fires have exceeded 5,000 acres. One was a prescribed natural fire that was allowed to burn until it exceeded the prescription parameters of the High Country Fire Plan. That fire was the Gallagher Peak Fire of 1979. The other was the North Fork Fire, one of the Greater Yellowstone Fires of 1988. Approximately 17,691 acres of the 507,580-acre North Fork Fire burned on the Forest. The size or scale of historic fires on the Forest is unknown at this time, but it is likely that the North Fork Fire emulated the size of fires that historically occurred in the lodgepole pine types.

Development of private lands adjacent to the Forest has made a significant increase in the wildland/urban interface. To deal with the threat of a wildland fire within or adjacent to these areas Emergency Evacuation Plans are being developed such as the one for the North Fire Zone in Island Park. All wildland fires, including natural ignitions, receive the appropriate suppression response of contain, confine or control. The following section briefly summarizes fuels and other conditions which contribute to fire hazard.

Lemhi/Medicine Lodge and Centennial Mountains - These subsections are dominated by sagebrush/grasslands and Douglas-fir communities. The Centennial Mountain Subsection has had substantial timber management activities, which have reduced fuels on some areas. Also in the Centennial Mountains the wildland/urban interface has significantly increased due to the development of the private lands within the Forest protection boundary. This increases the risk of a fire spreading between the Forest and private lands.

Island Park - The vegetation in this subsection is primarily lodgepole pine. This area also has heavy recreation use during all seasons, which can increase the likelihood of human-caused fires. Timber management activities have reduced much of the natural fuel loadings, but there are still some lodgepole pine stands with heavy accumulations of dead material. These stands are generally isolated by the surrounding young stands from timber harvest activities. This subsection has seen an increase in the wildland/urban interface with the development of private land. Areas with high summer home densities also present fire risks in this subsection.

Madison Plateau - The dominant vegetation is lodgepole pine. Timber activities have been widespread, significantly reducing fuel loadings. There are still high concentrations of dead fuels in stands not treated, but these areas are generally adjacent to young stands created by clearcuts. This subsection includes 17,691 acres burned over by the North Fork Fire. The Winegar Hole Wilderness is located in the southern portion of this subsection. Natural and human ignited fires in this wilderness have been suppressed.

Teton Range - A large portion of this subsection is grass forb vegetation, with forests of Douglas-fir, lodgepole pine and mixed conifers also being common. The Jedediah Smith Wilderness covers a major portion of the subsection. Since 1988 natural and human caused fires have not been allowed to burn in the Wilderness.

Big Hole/Palisades - The primary vegetation types are mixed conifer and mountain brush. Most of this subsection is roadless and primarily used for grazing and recreation. The recreation use may increase the likelihood of human-caused fires.

Caribou - Mixed conifers and sagebrush/grass communities dominate the subsection. Some timber management has occurred in the Engelmann spruce/subalpine fir type, and subsequent fuel treatments have reduced fuel loading and rate of fire spread for the short-term. Recreation use here may increase the chance for human-ignited fires.

Insects & Diseases - Scale: Forestwide and Subsection

Insects and diseases play important roles in ecosystems, even those often considered "destructive." Many of these organisms serve as food sources for a variety of wildlife species, ranging from birds to grizzly bears. In addition they are change agents, causing death, decay or damage to vegetation. This latter function is closely intertwined with the processes of succession and fire. The change from one species community to another on a site is often brought about by insects and diseases, particularly when fire is absent. For example, aspen is eventually killed by fungal diseases which may then allow Douglas-fir to dominate. Insects can change forest structure by killing all trees of a particular size or species. *Insect-killed trees contribute to fuel conditions and thereby help determine the severity, size and patterns of fires in the landscape.*

Most native insects and diseases are opportunistic, taking their toll on weakened or aged individuals. However, under some conditions these organisms may build up high populations that also overwhelm healthy, young vegetation. Trees and plants are usually adapted to insects and diseases, having evolved with them. The exception to this is when damaging agents are introduced from another continent and the plants have not had time to adapt genetically. This can often lead to disastrous consequences for a tree species, such as the American chestnut which fell victim to an introduced fungus. A concern about

whitebark pine exists currently on the Forest and throughout the range of this tree. Whitebark pine is dying off at an alarming rate due to an introduced disease known as white pine blister rust. Although there is genetic resistance to this disease, the number of whitebark pine trees is expected to decrease significantly in the short term.

Native insects of importance on the Forest include the mountain pine beetle, Douglas-fir beetle, western balsam bark beetle and western spruce budworm. Mountain pine beetle populations have remained at low levels since 1983. Between 1981 and 1987 western spruce budworm was active in the Douglas-fir on the Forest. This insect stressed the trees to the extent that Douglas-fir beetles were able to kill many Douglas-fir between 1988 and 1992. Additional information on these insects may be found in the Analysis of the Management Situation for the Forest (USDA Forest Service, Targhee N.F. 1992). Stalactiform rust, gall rust and various root rots are common fungal diseases. Dwarf mistletoes (parasitic plants) are present on lodgepole pine across the Forest and Douglas-fir in more isolated pockets. Important existing insect and disease conditions for each subsection are briefly covered in the Vegetation section of forest ecosystems.

ECOLOGICAL PATTERNS

The ecosystem disturbances and processes discussed above contribute to patterns of vegetation across the landscape. Other factors such as climate, topography and soils also help determine vegetation patterns. The patterns themselves are important to other components of the ecosystem such as wildlife species and humans. Vegetation patterns have a range of variability which the Forest is seeking to more fully understand. We have chosen to analyze four measures of ecosystem patterns that we believe are most important on the Forest. A brief discussion of each follows.

Patch Sizes - Scale: Subsection

Natural and human disturbances tend to break up large tracts of similar forest habitat into smaller blocks separated by openings, different vegetation types, or different age classes. Patch sizes varied historically based on topography, soils and the scale of disturbances. On the Forest they are affected by all these factors, plus human activities such as roading and clearcutting. Patch size is important since some wildlife species are adapted to using extensive forested areas.

Current conditions on the Forest vary by subsection. The Caribou, Big Hole/Palisades and Lemhi/Medicine Lodge Subsections have historically exhibited small patch sizes due to their physiographic conditions. This continues to be the case. Clearcutting over the past decade in the Island Park and Madison Subsections has created smaller patch sizes than occurred historically. The Teton Range and Centennial Mountains Subsections are likely exhibiting larger patch sizes than they did historically due to fire suppression and the current predominance of forests in mature age classes.

Vegetation Types - Scale: Subsection

The distribution of community types and age classes by subsection is displayed in Table III-1. Studies to date show that the Forest's vegetation has changed in some significant ways over the past century. Preliminary analysis indicates that some vegetation conditions are different than what occurred historically on the Forest. These situations are discussed below.

In some subsections aspen has declined by up to 80%, while in others aspen acreage has increased in the past two decades due to clearcutting (USDA Forest Service, Targhee N.F. 1994). Aspen decline is most serious in the Lemhi/Medicine Lodge, Centennial Mountains, Big Hole/Palisades and Caribou Subsections.

The amount of whitebark pine has been reduced over the past 30 years as a result of mountain pine beetle, white pine blister rust and succession. The seeds of this tree are an important food source for grizzly bears, some birds and small mammals.

Table III-1 Existing Forested Conditions within Subsections								
Subsection	Community Type	Total Forested Acres	Percent Non-stock	Percent Seedling	Percent Sapling	Percent Pole	Percent Mature 1/	Percent Mature Prev Harv 2/
Lemhi/Medicine Lodge	Aspen	335	00	00	00	00	100 0	00
	Douglas-fir	93,450	00	06	00	00	99 4	00
	Lodgepole Pine	9,759	00	100 0	00	00	00	00
	Mixed LP/DF	343	00	00	00	00	100 0	00
	All Forested Acres	103,887	00	99	00	00	90 1	00
Centennial Mountains	Aspen	8,781	8 4	2 2	0 7	4 2	84 5	00
	Douglas-fir	114,154	09	09	00	00	83 4	14 8
	Limber Pine	114	00	00	00	00	100 0	00
	Lodgepole Pine	46,873	5 7	23 7	11 4	10 7	48 5	00
	Mixed LP/DF	30,376	08	1 6	0 2	00	97 4	00
	Other Mixed Conifer	21,626	1 2	4 2	1 0	0 6	93 0	00
	Spruce/Subalpine Fir	2,669	0 4	0 0	2 3	1 6	95 7	00
	All Forested Acres	225,012	2 2	6.1	2 6	2 5	79 2	7 5
Island Park	Aspen	7,616	7 7	20 9	5 1	4 7	61 6	00
	Douglas-fir	27,143	1 4	0 1	0 3	0 0	96 8	1 4
	Lodgepole Pine	192,653	9 3	25.3	11 6	5.7	48 1	00
	Mixed LP/DF	42,370	0 5	4 5	3 1	0 2	91 5	0 1
	Other Mixed Conifer	6,224	0 3	14 8	5 3	1 2	78 5	00
	Spruce/Subalpine Fir	368	0 0	0 0	0 0	0 0	100 0	00
	All Forested Acres	276,374	6 9	19 3	8 9	4 1	60 7	0 2
Madison Plateau	Aspen	4,697	8 6	20 3	5 3	0 8	65 0	00
	Douglas-fir	6,824	7.9	0 5	0 4	1 2	89 9	00
	Lodgepole Pine	145,260	9 6	18 6	10 9	6 1	54 8	00
	Mixed LP/DF	26,584	3 0	1 2	0 5	0 0	95 3	00
	Other Mixed Conifer	5,715	1 0	9 5	0 8	0 5	88 2	00
	Spruce/Subalpine Fir	1,035	0 0	0 1	0 0	2 9	96 9	00
	All Forested Acres	190,115	8 3	15 2	8 5	4 8	63 3	00
Teton Range	Aspen	9,330	00	00	5 4	1 4	93 1	00
	Douglas-fir	24,530	0 4	0 0	0 0	0 0	99 6	00
	Lodgepole Pine	19,180	1 1	0.1	0 0	100	88 8	00
	Mixed LP/DF	28,311	00	00	00	00	100 0	00
	Other Mixed Conifer	8,622	00	1 4	0 0	1 4	97 2	00
	Spruce/Subalpine Fir	2,169	00	00	00	00	100 0	00
	Whitebark Pine	40	00	00	00	00	100 0	00
	All Forested Acres	92,182	0 3	0 2	0 6	2 3	96 6	00
Big Hole/Pallsades	Aspen	37,673	00	1 5	0.1	00	98 3	00
	Douglas-fir	33,103	1 4	00	00	02	97 0	1 4
	Lodgepole Pine	34,550	13 3	4 7	3 7	2 4	75 9	00
	Mixed LP/DF	107,086	0 4	00	0.1	00	99 3	0 2
	Other Mixed Conifer	13,142	3 1	3 9	0 1	0 1	92 8	00
	Spruce/Subalpine Fir	1,662	4 2	3 6	0 2	00	92 0	00
	All Forested Acres	227,216	2 6	1 2	0 6	0 4	94 8	0 3
Caribou	Aspen	37,765	0 1	0 2	00	1 3	98 4	00
	Douglas-fir	14,999	00	00	00	00	99 9	0 1
	Lodgepole Pine	4,655	5 2	3 0	00	00	91 7	00
	Mixed LP/DF	57,151	08	00	00	00	99 2	00
	Other Mixed Conifer	7,132	00	00	00	00	100 0	00
	Spruce/Subalpine Fir	793	00	17 1	26 9	00	56 0	00
	All Forested Acres	122,495	0 6	0 3	0 2	0 4	98 5	00

1/ The mature category incorporates all older age classes, including noncommercial

2/ Includes acres of mature forest that have had harvest treatments such as commercial thinning or shelterwood seed tree cuts, but the harvest did not result in reclassifying the acres to a different age class

Shrublands and grasslands are less prevalent than in the past due to fire suppression. This indicates a habitat loss for species dependent on these communities and a habitat gain for species adapted to forested areas. The greatest changes have occurred in the Lemhi/Medicine Lodge, Centennial Mountains, Big Hole/Palisades and Caribou Subsections.

Stand structures, particularly in the Douglas-fir forests, have changed as a result of fire suppression. Compared to structures in the past, these stands are now denser and more multi-storied. This has increased the likelihood of severe fires, increased the susceptibility to insects and diseases, and altered the type of habitat provided by Douglas-fir forests. These conditions are common in all subsections.

The Forest currently has much more area in mature age classes than the historical record indicates. Of particular significance are the high percentages of mature or older mountain mahogany, mountain big sagebrush, aspen, cottonwood and Douglas-fir. Mosaics of different age classes were more common in the past.

Connectivity - Scale: Forestwide and Subsection

Connectivity between habitat areas involves the linkage of similar habitat patches such as water courses, natural openings, or as most commonly studied, vegetation. The maintenance of connectivity is needed to ensure proper levels of nutrient cycling, hydrologic function, and species survival. If the level of connectivity is maintained over time and space, then processes such as predation, dispersal, and gene exchange continue even though habitat areas may be separated from each other. Species differ in their need for corridors between blocks of habitat, with some moving freely through the landscape while others tend not to cross openings between habitat areas. Specific habitat linkage requirements for various species have not been determined. However, species evolved to function within certain limits of connectivity shaped by natural disturbances. Maintenance of vegetation patterns with which plant and animal species evolved is an accepted measure of ecosystem health

Connectivity is influenced by access routes and clearcuts, as well as by historic vegetation patterns. Connectivity in the Caribou, Big Hole/Palisades and Lemhi/Medicine Lodge Subsections is likely similar to what existed historically based solely on the vegetation patterns. However, human access routes may have reduced the ability of species to move between habitat blocks. Clearcutting and roading over the past decade in the Island Park and Madison Subsections have altered vegetation patterns and connectivity from what existed historically. Although leave strips have provided continuity of mature forest habitat, these links are much narrower and more randomly distributed across the landscape. Based on vegetation patterns alone, the Teton Range and Centennial Mountains Subsections are likely exhibiting similar or greater connectivity than historically due to fire suppression and the current predominance of forests in mature age classes. However, the presence of roads and trails in the subsections may have reduced some species ability to move between habitat blocks.

Connectivity is important in aquatic, as well as forested ecosystems. Natural disturbance forms patterns of habitat patches, which in turn control aquatic ecosystem processes and functions (see "aquatic ecosystem" section). Natural and human-induced disturbances affect the connectivity of riparian areas and the linkages between aquatic and forested ecosystems. Where road crossings and concentrated human activity exist in aquatic ecosystems, it can be assumed that some level of connectivity has been lost compared to what existed historically.

Adjacent Land Use Patterns - Scale: Forestwide

Lands adjacent to the Forest are part of the ecosystem. Uses of these lands affect the Forest, and management of the Forest likewise affects adjacent ownerships. This all plays into the larger social and ecological context in which the Forest is managed. Lands next to the Forest represent many different owners and management strategies. Adjacent entities include private landowners, Harriman State Park, Idaho Department of Lands, Yellowstone and Grand Teton National Parks, John D. Rockefeller

Memorial Parkway and the U.S. Sheep Experiment Station. In addition, several National Forests and Bureau of Land Management (BLM) Districts lie adjacent to the Forest.

Dominant land use patterns on adjacent private lands involve farming and ranching. These activities have occurred since the 1800's in this area. The past decade has brought a trend toward subdivision developments, particularly in Teton Valley, Island Park and Swan Valley. On lands administered by the Idaho Department of Lands, other National Forests and the BLM, management tends to be oriented toward use of resources, with timber harvest, livestock grazing and recreation being common activities. National Parks are governed by the principles of preservation and noninterference with natural processes, but have intensive recreation management in some areas.

The Adjacency Study contained in process papers shows how the Forest fits into the management of neighboring lands. For the most part there is a sense of continuity across the borders of the Forest into adjoining National Forest, BLM, and National Park Service (NPS) lands. Probably the single most visible discontinuity lies along Yellowstone National Park's western boundary where evidence of the Forest's intensive timber management can be seen in sharp contrast to the Park's unmanaged forest. That apparent discontinuity will continue until the young regeneration grows and blends with older surrounding vegetation.

There are other land management practices on the Forest which might appear to be incongruent to some people, and understandable to others. The Grand Targhee Ski Resort, an area of concentrated recreation development, shares much of its boundary with the congressionally-proclaimed Jedediah Smith Wilderness. The ski resort and the wilderness uses remain in effect in all the alternatives. Likewise, some people view the presence of a road alongside a wilderness as being incongruent. Others accept the fact that roads, as an exclusionary feature in a wilderness, will frequently end up being used to define its boundaries.

From the point of view of the Forest, management of adjacent lands seems to have more of an impact on Forest management than vice versa. As the human population of the area of influence has grown so has their use of the Forest - in particular their recreational use. The Forest has had to respond to those changes by hardening recreation sites to prevent damage to the resource.

II. PHYSICAL ELEMENTS OF THE ENVIRONMENT

Soils and Geology - Scale: Subsection

Lemhi/Medicine Lodge - This subsection consists of fault block mountains, which exhibit a northwest-southeast trend. The dominant rock types are limestone and sandstone. The landscape is dissected by parallel drainage systems.

Soils on these landscapes are greater than 60 inches to bedrock, having gravelly medium textured surface layers and extremely gravelly medium textured subsurface layers. These soils have a low to moderate inherent fertility, are droughty, are high in carbonates, and have a high erosion hazard.

Principal ecological concerns affecting soil quality in the subsection are as follows: the expansion of conifers into sagebrush/grass and riparian communities has changed some sites, the area's susceptibility to fires has increased the risk of losses in soil productivity associated with such events, and canopy density of sagebrush communities and subsequent loss of understory vegetation has led to declining watershed conditions.

The principal management activity affecting soil quality is roads and OHV use. Secondary management activities affecting soil quality include grazing concerns along incised drainages and water developments, and mining impacts which have not been reclaimed.

Centennial Mountains - This subsection consists of a fault block mountain range, which exhibits an east-west trend along the Continental Divide. The dominant rock types are rhyolite, sandstone and shale. The landscape is dissected by dendritic and parallel drainage systems.

Soils on these landscapes are greater than 60 inches to bedrock, having nongravelly to gravelly medium to medium-fine textured surface layers and gravelly to extremely stony medium to medium-fine subsurface layers. These soils have a moderate to moderately high inherent fertility, are susceptible to compaction and puddling, have a moderate to high erosion hazard, exhibit plant competition concerns, and demonstrate slumping hazards on mountain side-slopes and escarpments at higher elevations.

Principal ecological concerns affecting soil quality include conifers expanding into aspen, sagebrush/grass, riparian and mountain meadow communities causing site changes; increased risk of losses in soil productivity associated with fire events; canopy density of sagebrush communities and subsequent loss of understory vegetation which is causing declining watershed conditions; and slumping potentials. Principal management activities that are concerns affecting soil quality include roads and OHV use, dispersed recreation impacts, grazing concerns along drainages and water developments. Secondary management activities that are affecting soil quality include mining impacts which have not been reclaimed, past timber and firewood harvest which have resulted in roads, compaction, organic matter removal or displacement, and loss of woody residue.

Island Park - The Island Park Caldera was formed by the collapse of a large rhyolite shield volcano. After the collapsing of the caldera, volcanic activity continued, resulting in basalt flows covering much of the caldera floor. The entire subsection has been overlain by wind blown silts (loess). The dominant rock types are rhyolite and basalt. The landscape is dissected by dendritic and parallel drainage systems on the caldera rim and associated tablelands. The caldera floor has very little dissection.

Soils on these landscapes are greater than 60 inches to bedrock, having nongravelly to gravelly medium textured surface layers and medium fine to extremely cobbly medium textured subsurface layers. These soils have a moderately low to moderate inherent fertility. Soils on the caldera floor have plant competition concerns on deeper soils, reforestation concerns on shallower soils, and a moderate susceptibility to compaction. Soils on the caldera rim have a moderate susceptibility to compaction, moderate to high erosion hazard, low bearing strength, and plant competition concerns.

A principal ecological concern affecting soil quality (limited to the caldera rim) is the expansion of conifers into aspen, sagebrush/grass, riparian and mountain meadow communities and resulting site changes

Principal management activities affecting soil quality (caldera rim) are roads and OHV use, and extensive past timber and firewood harvest which have resulted in roads, compaction, organic matter removal or displacement, and loss of woody residue.

Principal management activities (caldera floor) are the same as for the rim, plus dispersed recreation, which is especially heavy near summer home areas, and grazing along certain riparian areas and meadow complexes.

Madison Plateau - This subsection consists of a large consolidated ash flow that came out of Yellowstone Park and overtopped the east rim of the Island Park Caldera. The landscape is dissected by dendritic and parallel drainage systems.

The soils in the northern part are greater than 60 inches to bedrock, having medium textured surface layers and stratified gravelly coarse textured to extremely gravelly coarse textured subsurface layers. The soils in the southern part are greater than 60 inches to bedrock, having gravelly medium textured surface layers and very gravelly to extremely cobbly medium textured subsurface layers. These soils have a moderately low inherent fertility, are droughty, and have windthrow hazards. They are highly erodible if the subsoil is exposed, as it is in the northern part of this subsection due to the North Fork Fire.

A principal ecological concern affecting soil quality (southern portion) is the susceptibility to fires, increasing the risk of losses in soil productivity associated with such events, including areas on the 1988 North Fork Burn that have not recovered yet.

Principal management activities affecting soil quality include roads and OHV use, dispersed recreation, effects associated with timber harvest which have resulted in roads, compaction, organic matter removal or displacement, and loss of woody residue.

Teton Range - The Teton Range is a north-south trending mountain range. The dominant rock types are granite, limestone, sandstone, dolomite, slate, gneiss and quartzite. The landscape is dissected by parallel drainage systems.

This subsection consists of two primary landscape settings. These include foothills on lower to mid elevations and mountain side-slopes at mid to high elevations. Soils on these landscapes are 40 to greater than 60 inches to bedrock, having nongravelly to very gravelly medium textured surface layers and gravelly to extremely stony medium textured subsurface layers. These soils have low to moderately low inherent fertility, low to moderate compaction hazard, moderate to high erosion hazard, reforestation concerns and low to high mass instability hazards.

Principal ecological concerns affecting soil quality in this subsection include conifer expansion into aspen, sagebrush/grass, riparian and mountain meadow communities causing site changes, and the area's susceptibility to fires with increased risk of losses in soil productivity associated with such events.

Principal management activities affecting soil quality include roads and OHV use, and dispersed recreation. Secondary management activities affecting soil quality include grazing along drainages, and the effects of timber harvest which have resulted in roads, compaction, organic matter removal or displacement, and loss of woody residue.

Big Hole/Palisades Mountains - This subsection consists of a mountain range of multiple, parallel overthrusts (faults) and benches of mixed rocks and eolian material that have been modified by thrust faulting.

Soils on these landscapes are greater than 60 inches to bedrock, having gravelly medium textured surface layers and very gravelly moderately coarse to moderately fine textured subsurface layers. These soils have a moderate to high inherent fertility, moderate compaction and rutting hazard, moderate to high erosion hazard, moderate to high slumping and earthflow hazard, plant competition concerns, and areas of low bearing strength.

Principal ecological concerns affecting soil quality include conifer expansion into aspen, sagebrush/grass, riparian and mountain meadow communities causing site changes, increased risk of losses in soil productivity associated with fire events, canopy density of sagebrush communities and subsequent declining watershed conditions, and slumping/earth flows.

Principal management activities affecting soil quality are roads and OHV use, dispersed recreation, and grazing along drainages. Secondary management activities affecting soil quality include erosion along sheep driveways, effects resulting from timber harvest in the Big Hole Mountains, and big game feeding areas along Rainey Creek.

Caribou - The Caribou Subsection is a southeast to northwest trending overthrust (multiple faults) mountain range. The northeast side of the range is moderate relief mountains on mixed sediments. The southwest side of the range is low relief foothills and basins on fine textured marine sediments. The dominant rock types are a mix of sedimentary materials with a loess influence. The landscape is dissected by dendritic drainage systems.

Soils on these landscapes are greater than 60 inches to bedrock, having medium textured surface layers and moderately-coarse to fine textured subsurface layers. These soils have a moderate to high inherent fertility, moderate compaction and rutting hazard, moderate to high erosion hazard, moderate to high slumping and earthflow hazard, plant competition concerns, and areas of low bearing strength.

Principal ecological concerns affecting soil quality include conifer expansion into aspen, sagebrush/grass, riparian and mountain meadow communities causing site changes, increased risk of losses in soil productivity associated with fire events, and canopy density of sagebrush communities and subsequent loss of understory vegetation resulting in a decline in watershed conditions and slumping/earthflows. Principal management activities affecting soil quality include roads and OHV use, dispersed recreation, and grazing along drainages. Secondary management activities affecting soil quality includes erosion along sheep driveways, and effects from timber harvest.

Air Quality - Scale: Forestwide

The United States Environmental Protection Agency (EPA), in conjunction with the states of Idaho and Wyoming, have established National Ambient Air Quality Standards for pollutants to protect the public health and welfare. These standards relate to PM10 particles, which are particles with an aerodynamic diameter of 10 microns or less.

National Ambient Air Quality Standards require that PM10 remain below 50 micrograms per cubic meter when averaged over a year. PM10 must generally remain below 150 micrograms per cubic meter averaged over a 24-hour period, however, this standard can be exceeded up to one time per year.

Class I airsheds have the highest air quality standards, and Class II have a moderate level of protection. The entire Forest, including the Jedediah Smith and Winegar Hole Wildernesses, is a Class II airshed. Yellowstone and Grand Teton National Parks, adjacent to the Forest's eastern boundary, are Class I airsheds. The Forest must ensure that its activities do not reduce air quality in these Class I airsheds.

In general, the area's air quality is very good. The primary sources of PM10 on the Forest are wildfire, prescribed fire, and dust generated from road traffic. The major source of PM10 from outside the Forest is dust generated by wind and agriculture. Agricultural burning and mechanical disturbance such as plowing, planting and harvesting crops reduce air quality.

Currently there are no air quality monitoring stations located on the Forest. The closest air quality monitoring station is located in Jackson, Wyoming. This station has measured PM10 since 1986. During the analysis period the highest 24-hour average PM10 reading recorded was 124 micrograms per cubic meter in 1992. This is 26 micrograms per cubic meter less than the allowable standard. One short term value of 248 micrograms per cubic meter was recorded in 1988 during the Yellowstone wildfire situation. Annual averages have ranged from a high of 39.8 micrograms per cubic meter in 1988 (Yellowstone Fire influenced) to a minimum of 25.5 grams per cubic meter in 1993.

Caves - Scale: Subsections

Caves are present primarily in two subsections on the Forest, as discussed below.

Lemhi/Medicine Lodge - This area contains numerous small caves in limestone cliffs. Many have been identified during heritage resource inventories. Large caves in this area contain evidence of Native American habitation in the form of pictographs and cave fills with stratified cultural deposits. Few caves in this area have sufficient depth to provide recreational opportunities.

Teton Range - The Teton Range has numerous caves but most are small and have little recreational interest to spelunkers. The Fossil Mountain Ice Cave and Wind Cave, however, have high recreational interest for exploration. Both caves are identified on Forest maps and have access trails and signs from Darby Canyon. These caves probably qualify as "significant caves" under the Federal Cave Resources Protection Act of 1988, but they have not yet been inventoried or nominated. A thorough inventory of caves in this area has not been completed, and new significant caves with high public interest may be discovered.

Lands - Scale: Forestwide and Subsections

The Lands program includes the adjustment of land ownership patterns, land acquisition, granting of rights-of-way, identification and resolution of trespasses, and property boundary management.

Land Ownership Adjustments

Land ownership within the administrative Forest boundary is displayed in Table III-2. Land ownership adjustments have enabled the Forest to acquire lands that meet specific needs, goals, and objectives. These are valuable for recreation, wildlife habitat, riparian areas, and historical resources. These also enabled us to consolidate land ownership to improve operating efficiency. Ownership adjustments reduce the miles of private/Forest Service property lines that need to be surveyed, posted and maintained. Adjustments can also reduce special use permit administration and resolve trespass and title claims.

The Congressionally mandated Land and Water Conservation Fund can be used to purchase land interests for the Federal Government. Although the Forest has submitted yearly requests for one to fifteen such purchases, the last funded project was in 1962.

Land adjustments may also occur through donation of land or partial land interest. Proponents in land transactions have been approached and encouraged to donate lands or interests in lands.

Land Exchanges have been the most effective tool in completing the objectives for land adjustments. Through eight land exchanges important wildlife and wetland habitats, scenic and historical sites, a needed gravel source, and six inholdings were acquired. Lands disposed of have been, for the most part, those that have lost their Forest characteristics, are difficult to manage, or consolidated Forest holdings. The Forest is presently pursuing five land exchange cases.

Land ownership adjustment on the Forest has emphasized the transfer of both surface and subsurface rights. This has resulted in very little reserved or outstanding mineral ownership. Currently nonfederal minerals consist of only about 5,000 acres out of a total of about 1.8 million Forest acres.

Ownership	Lemhi/ Medicine Lodge	Centennial Mountains	Island Park	Madison Plateau	Teton Range	Big Hole/ Palisades	Caribou	Totals*
NFS Land Acres	279,655	319,248	296,482	196,424	160,806	350,222	204,949	1,808,175
Private Acres	1,883	7,559	9,986	815	963	7,661	8,364	59,840
State Acres	637	5,886	15,060	637	0	0	0	
BLM Acres	0	0	389	0	0	0	0	389
Total Acres	282,175	332,693	321,917	197,876	161,769	357,883	213,313	1,868,015

* Figures in this column are the figures of record. Differences in sums of prior columns are due to measurement method.

Right-of-Way Acquisition

Right-of-way acquisition is driven by the need to provide land managers and the public access to National Forest System lands. With private lands changing hands, many roads that have been open to the public are now being closed. There is a need to gain legal access through the acquisition of rights-of-way. Eight right-of-way cases have been completed and 91 rights-of-way been identified for acquisition (see Table III-3).

Table III-3 Land Adjustments, 1985-1995 1/							
	Lemhi/ Medicine Lodge	Centennial Mountains	Island Park	Madison Plateau	Teton Range	Big Hole/ Paisades	Caribou
Purchased Acres							
Fee	2 40	-	2.76	160 59	-	-	-
Partial Land Interest	-	-	-	160 75	-	-	-
Donation Acres							
Fee	-	-	-	-	7 48	-	-
Land Exchanges Acres							
Acquired	-	640	511 65	-	-	319 94	6 5
Disposed	-	-	633 54	-	-	64 86	45
Right-of-Way Cases							
Acquired	-	1	1	-	1	2	3
Grants	-	1	-	1	1	13	4
1/ These figures are updated yearly. Current figures are on file at the Forest office.							

Minerals - Scale: Subsections

No specific proposals for mineral development have been addressed in this Revision. The role of the Forest Service is to manage the surface resources to minimize adverse environmental impacts, and to provide mitigation direction.

The issue of oil and gas development on the Forest is being addressed in a separate EIS. The current status of oil and gas production is included briefly here to give the reader an overall picture of the mineral, oil, gas and hard rock situation on the Forest.

Lemhi/Medicine Lodge - During the mid and late 1800's lead and copper, and to a lesser extent silver and gold, were mined extensively in this subsection. Since then there has been no activity and none is predicted. There are no oil and gas leases currently, although during the 1980's there were numerous leases generating rental income. In a recent study by the BLM the area has been rated as having a low potential for the discovery of oil and gas resources.

Centennial Mountains - During the late 1950's and early 1960's phosphate was mined near Mt. Taylor in the eastern Centennials from two of the three phosphate leases located in the area. Since then no mining has occurred, but the leases still remain. Should phosphate production resume, 50 percent of all revenues generated from leasing return to the State of origin for use as the legislature may direct.

Oil and gas leases blanketed the area in the mid 1980's, but none exist today. Even though the potential for discovery of oil and gas is rated low in this area, an exploration well was drilled in the late 1980's, but came up dry.

Northeast of Dubois, gold exploration is currently taking place and has been for several years. In the event of development and production the local communities would experience a boost in their economies.

Also, northeast of Dubois are several mining claims where the exploration, development and production of opal has been conducted for the past 30 years. One particular claim has exhibited most of this activity and has been patented (private ownership). The site is known as the Spencer Opal Mine and has operated commercially as a public digging site since 1968. Current activity on surrounding nonpatented claims consists mainly of exploration.

Island Park & Madison Plateau - Oil and gas and geothermal leases blanketed the area in the mid 1980's, but none exist today. The area is rated as having no potential for the discovery of oil and gas. Congress has effectively prohibited geothermal development in this area through legislation prohibiting the leasing of lands in the Island Park geothermal area (Geothermal Steam Leasing Amendments Act of 1988). There are no other mineral resources in this area of economic importance.

Teton Range - Oil and gas leases were scattered through the area in the mid-1980's, but none exist today. The area is rated as having no potential for the discovery of oil and gas. There are no other mineral resources of economic importance in this area.

Big Hole/Palisades - Oil and gas leases blanketed the area in the mid-1980's, generating rental income. Fifty percent of this money returned to the State of origin for use as the legislature directed. There are no oil and gas leases currently, pending the completion of an oil and gas EIS. A couple of exploratory wells were drilled during the 1980's, but were dry holes. The potential for discovery of oil and gas is rated as moderate in the north half of the subsection and high in the south.

Caribou - Oil and gas leases blanketed the area in the mid-1980's, generating rental income. Fifty percent of this money returned to the State of origin. There are no oil and gas leases currently, pending the completion of an oil and gas EIS. The potential for discovery of oil and gas is rated as moderate in this subsection.

There are four phosphate leases located in the northern part of the subsection, which are currently inactive. Last reported activity was in the 1960's and consisted primarily of exploration. Activity is not expected on these leases for the next three or four decades.

Travertine, a marble-like building stone product, is mined in the northern part of the area and is the only active mine of economic importance on the Forest.

In the southern portion of the subsection, McCoy Creek has long been the center for recreational placer gold dredging, sluicing and panning. Mining claim activity has also occurred with limited commercial success.

III. BIOLOGICAL ELEMENTS OF THE ENVIRONMENT

This section is divided into various types of ecosystems so that the relationships between biological elements within the same system can be better understood. Aquatic and riparian ecosystems, and terrestrial ecosystems (upland forested and upland nonforested) will be considered.

AQUATIC AND RIPARIAN ECOSYSTEMS

Riparian - Scale: Subsection

Riparian areas lie adjacent to water and are composed of vegetation communities influenced by water. Though riparian areas constitute only a fraction of the total land area, they are more productive in terms of both plant and animal species diversity and biomass per unit area than the remainder of the land base. Riparian areas are essential breeding, rearing and feeding grounds for many species of wildlife and they directly correlate to the quality of the aquatic habitat (fisheries). Often these key areas visibly reflect the quality and success of land management activities in tributary watersheds. Riparian areas are extremely important for flood control and hydrologic function. These systems are very important to the human environment from ecological, aesthetic, recreational and economic points of view.

Grazing is considered to have shifted the species composition on 8,988 (32%) acres of riparian communities across the forest. Under current range management 5,338 acres of these acres are moving toward higher ecological conditions with increasing plant biodiversity. Some 3,650 acres are remaining in less stable, lower ecological conditions, with lower plant biodiversity (Table III-4). Where grazing decreases the species diversity, shallow, fine rooted species such as Kentucky Bluegrass (*Poa pratensis*) become dominant and replace the deeper, thicker-rooted native herbaceous species, decreasing the potential of stream stability.

Biodiversity and sometimes stream stability are also affected by riparian community succession. Riparian areas with closed shrub canopies have little understory vegetation due to shading and may have low overall species diversity. This can negatively affect stream stability on some streams. Spruce forest riparian communities also have low species diversity due to shading, and low vegetative cover to protect streambanks from erosive events unless armored by large rock.

Additional information may be found in the water quality, fisheries and riparian wildlife sections. Table III-4 summarizes riparian conditions by subsection.

Lemhi/Medicine Lodge - The principal ecological concern affecting riparian quality in this subsection is that upland vegetation has expanded into riparian zones due to past over-utilization and/or a drop in the water table levels. A secondary ecological concern affecting riparian quality in this subsection is that within some riparian areas willows are dying out and are not being replaced by willow regeneration.

Principal management influences affecting riparian quality include past overuse by ungulates (domestic and wild), dispersed recreation and OHV use, and roads in or adjacent to riparian areas and associated stream crossings.

Centennial Mountains - Principal ecological concerns affecting riparian quality includes the expansion of upland vegetation into riparian zones due to past over-utilization and/or a drop in the water table levels, and some areas of fine textured subsoils which have a moderate to high slumping potential. A secondary ecological concern affecting riparian quality is that within some riparian areas willows are dying out and are not being replaced by willow regeneration.

Principal management concerns affecting riparian quality are overuse in some areas by ungulates (domestic and wild), dispersed recreation and OHV use, and roads in or adjacent to riparian areas and associated stream crossings. Secondary management concerns affecting riparian quality include past mining sites that have not been rehabilitated, past timber harvest that left inadequate buffers, and fuel wood gathering.

Table III-4 Aquatic and Riparian Conditions by Subsection							
Parameter	Lemhi/ Medicine Lodge	Centennia Mountain	Island Park	Madison Plateau	Teton Range	Big Holes/ Palisades	Caribou
Miles of Intermittent Streams	610	415	455	219	164	383	158
Miles of Fish-bearing Streams	203	580	254	307	287	664	533
Miles of Non Fish-bearing Streams	10	34	3	15	51	43	19
Acres of Lakes	24	91	479	972	195	167	32
Reservoirs, Ponds, and Wetlands greater than 1 acre	37	2,345	5,867	3,264	266	10,116	5,850
Areas less than one acre	0	6	10	10	2	2	0
Aquatic Habitat Condition 1/ Percent Pristine	5	15	50	56	Unkn	56	62
Percent Moderate	37	44	46	44	Unkn	44	37
Percent High Human Dist	58	41	4	0	Unkn	0	0
Aquatic Habitat Trend 1/ Percent Up	13	4	0	0	Unkn	11	12
Percent Stable	87	93	92	94	Unkn	78	88
Percent Down	0	3	8	6	Unkn	11	0
Vegetative Seral Stage Percent Potential Natural Comm	3	4	0	0	Unkn	0	0
Percent Late Seral	61	62	87	83	Unkn	11	12
Percent Mid Seral	34	35	12	11	Unkn	78	76
Percent Early Seral	3	1	0	6	Unkn	11	12
Vegetative Trend 2/ Percent Up	16	18	8	17	Unkn	11	12
Percent Stable	66	75	83	72	Unkn	89	88
Percent Down	18	7	8	11	Unkn	0	0
Riparian vegetation meeting DVC (acres) 3/	690	13,257	1,625	200	439	1,882	637
Riparian vegetation moving toward DVC (acres) 3/	890	3,575	131	41	83	363	255
Riparian vegetation not meeting DVC (acres) 3/ 4/	500	381	367	7	903	1,304	188
<p>1/ & 2/ Aquatic Habitat Condition and Trend I Perennial streams at least 14" deep (at low summer flow), with 40-60% pools II Perennial streams between 8" to 14" deep (at low summer flow), with 20-40% pools or 60-80% pools III Intermittent or ephemeral streams less than 8" deep (at low summer flow), with less than 20% pools or more than 80% pools Pristine = 90% of riparian acres near pristine conditions Moderate = 50-89% of riparian acres near pristine conditions High Human Disturbance = less than 50% of riparian acres near pristine conditions</p> <p>3/ Only includes acres open to grazing (79%) of the Forest. Does not include acres closed to grazing prior to 1995 Source FSRAMIS database</p> <p>4/ Includes acres of undetermined status DVC = Desired Vegetation Condition Desired Vegetation Condition is a plant community in satisfactory ecological condition Satisfactory ecological condition is defined as being in mid-seral stage or higher ecological status and having a stable or upward trend in soil and vegetation condition</p>							

Island Park - The principal ecological concern affecting riparian quality is that there are areas where willows are dying out and not being replaced by willow regeneration.

Principal management concerns affecting riparian quality include high use recreation areas (including summer home, dispersed and developed recreation areas), OHV use, roads in or adjacent to riparian areas and associated stream crossings, past timber harvest which left inadequate buffers, and fuel wood gathering. A secondary management concern affecting riparian quality is overuse in some areas by ungulates (domestic and wild).

Madison Plateau - The principal ecological concern affecting riparian quality is in the area of the North Fork Burn. Principal management concerns affecting riparian quality include dispersed recreation and OHV use, roads in or adjacent to riparian areas and associated stream crossings, past timber harvest which left inadequate buffers, and fuel wood gathering. A secondary management activity affecting riparian quality is overuse in some areas by ungulates (domestic and wild).

Teton Range - The principal ecological concern affecting riparian quality is mass wasting.

Principal management activities affecting riparian quality include high levels of dispersed recreation, horse use and OHV use, trails in close proximity to or within riparian areas and associated crossings, isolated areas of overuse by ungulates (domestic and wild), and roads in or adjacent to riparian areas and associated stream crossings. Secondary management activities affecting riparian quality include past timber harvest which left inadequate buffers, and fuel wood gathering.

Big Hole/Palisades - The principal ecological concern affecting riparian quality is mass wasting.

Principal management activities affecting riparian quality include high levels of dispersed recreation, horse use and OHV use, trails in close proximity to or within riparian areas and associated crossings, and areas of overuse by ungulates (domestic and wild). Secondary management activities affecting riparian quality include sheep driveways, past timber harvest which left inadequate buffers (Big Hole Mountains), fuelwood gathering (Big Holes Mountains), and Idaho Fish and Game Department feeding grounds in Lower Rainey Creek.

Caribou - The principal ecological concern affecting riparian quality is mass wasting.

Principal management activities affecting riparian quality include high levels of dispersed recreation and OHV use, trails in close proximity to or within riparian areas and associated crossings, areas of overuse by ungulates (domestic and wild), sheep driveways, and roads in and adjacent to riparian areas and associated crossings.

Water - Scale: Subsection

Subsection boundaries are used for analysis and description, although this means that some streams are split between two subsections. Channel stability information dates primarily from inventories completed in the mid-1970's to early 1980's. More current information does exist on some portions of the Dubois and Teton Basin Ranger Districts (1989-1993). It is important to determine which streams are naturally "unstable" (i.e., dynamic) due to landforms, bed and bank materials, etc., and which ones have instability induced by management practices. An attempt is made in the text to make this determination where possible. In discussions of channel stability the "good" and "fair" categories were further split into (+) and (-) to indicate better or poorer stability respectively.

Water Yield

Total water yield on the Forest is about 1.4 million acre-feet. Water is lost or used in many ways, including evaporation, infiltration, use by plants and animals, and diversion ditches from stream channels. Because of these factors and many others, the amount of water reaching the Forest boundary will be less than what is produced. Table III-5 shows water yield by subsection across the Forest.

Management activities have the potential to change the timing and amount of water delivered to stream channels. As an example, timber harvest, especially in headwater areas, may allow more snow to accumulate in created openings. This may result in higher flood peaks and possible impacts to streams. Currently there are approximately 22,000 acres in headwaters that have been altered by timber harvest (out of a total of approximately 239,000 headwater acres in those watersheds that have much harvest), which includes stands in seedling, sapling and unregenerated categories. While this is approximately 9 percent on a Forestwide basis, the amount of actual headwater harvest varies widely between subwatersheds.

Subsection	Annual Water Yield for Subsection (ac-ft)	Unit Water Yield (ac-ft per acre)
Lemhi/Med Lodge	96,400	0.34
Centennial Mountains	134,300	0.42
Island Park	125,600	0.42
Madison Plateau	186,400	0.95
Teton Range	405,300	2.52
Big Holes/ Palisades	299,100	0.85
Caribou	169,600	0.83

Water Quality

The biggest pollutant on the Forest is excess sediment, derived from within-channel erosion and upland erosion reaching stream channels. The main source of sediment is roads, specifically those segments within riparian areas, including stream crossings. Forest roads generally contribute an estimated 85 to 90 percent of the sediment reaching streams in disturbed Forest land (Burroughs, 1990). This is likely the case on the Forest, too. Currently there are 5,680 stream crossings and 670 miles of road in riparian areas. The amount of water meeting State water quality goals on the Forest is unknown. Idaho Code Section 39-3601 et seq. (effective July 1, 1995) approved adoption of new water quality standards. Streams targeted for the new regulations are those listed as "Water Quality Limited" under section 303(d) of the Clean Water Act. These are to receive priority for monitoring so they may be removed from the list if water quality is good. If it isn't, special BMP's and pollutant limits must be established.

Lemhi/Medicine Lodge - Major streams in this subsection are Medicine Lodge Creek and its tributaries. There are many perennial streams that have their headwaters in the Bitterroot and Beaverhead Ranges, that eventually flow through broad valleys. Their flows are mostly the result of snowmelt runoff and baseflow from groundwater sources. The rest of the streams in the subsection are mostly intermittent spring or snowmelt fed streams that eventually lose flow to deep sediments in valleys. The streams fed by snowmelt generally only flow for a few months of the year.

Channel stability ranges from fair (-) to good (+). This subsection has generally declining trends in channel stability, sometimes even where grazing has been excluded.

Idaho Division of Environmental Quality (DEQ) sampled sites on streams in this subsection to assess changes in water quality from management. On Irving, Edie, and Fritz Creeks water quality was similar on National Forest System lands and below where Forest Service management was occurring. All sites showed impacts from grazing at the time of the survey. Water Quality Limited streams here include Edie, Irving, Fritz, Warm, and Warm Springs Creeks. Monitoring of water quality on these streams was conducted during 1995. Nutrients were listed as a concern on all these streams. There are no standards for nutrients, nor any clear direction as to what forms of nitrogen and phosphorus are to be monitored, so recommendations from researchers were used. None of these streams directly enter lakes, so a recommended maximum phosphate level of 0.1 mg/l was used in lieu of a standard. All of the streams phosphate concentrations were lower than this value. Nitrate/nitrite recommendations vary widely, from 10mg/l for drinking water to 0.3 mg/l for prevention of algal growth. Fritz, Warm and Edie Creeks showed an increase in nitrate/nitrite in late July and early August, to a maximum of 0.43 on Fritz and 0.44 on Warm Creek. Divide Creek, a tributary to Warm Creek, was also sampled from July to early September, and showed nitrate/nitrite levels ranging from 0.49 to 0.73 mg/l. All levels dropped below 0.1 in September, except on Divide Creek. Temperature was listed as a concern on Fritz and Warm Creeks. Warm Creek is fed by a warm-water spring source, so temperature is an erroneous concern here. Temperature was not continually monitored on Fritz Creek, but spot measurements ranged from 20°F in June to 6°F in September. State Water Quality Standards state that, for cold water biota, temperatures are not to exceed 22°F, with a maximum daily average of no greater than 19°F, so Fritz Creek may have temperature concerns. More monitoring is needed to determine this.

Centennial Mountains - Streams having headwaters along the front of the Centennial Mountains generally flow south and their water comes from both snowmelt and spring sources. The influence of springs increases moving east, providing these streams with more constant streamflow through the year. Major streams in the western part of the subsection include Beaver, Camas, Sheridan, Icehouse, and Willow Creeks. Some streams in the western part of the subsection (e.g., Beaver and Camas Creeks) generally subside into deep valley sediments or areas of volcanic rock before they reach Mud Lake. The rest of the streams (Sheridan, Icehouse, Willow, etc.) flow through the meadows of Shotgun Valley and eventually add flow to Island Park Reservoir.

The eastern part of the subsection includes the headwaters of the Henry's Fork of the Snake River (Henry's Lake and the headwater streams) as well as the upper part of the Henry's Fork itself. It also includes Big Springs, a major tributary of the Henry's Fork that has a flow of approximately 180 cubic feet per second at its source year-round. Spring-controlled streams are prevalent here, having relatively low variation in flow throughout the year, but also having less ability to flush excess sediments than snowmelt streams.

Channel stability ratings generally range from fair (-) to good (+) with stable or declining trends throughout most of the subsection. The only standout is a poor rating on part of West Dry Creek, though there is no apparent management-related reason. Some portions of the Henry's Fork Headwaters rated as excellent. The most frequent management problems are livestock damage and roads. Specific locations of road and cow impacts are Disaster Creek, Kay Creek, Corral Creek, Dairy Creek, Long Creek, West Rattlesnake Creek, Sheep Creek, Middle and West Threemile Creek, and Jesse Creek. Other streams may also have these impacts, but comments were missing from survey forms. Sedimentation below clearcuts on Bear Gulch Creek and in-stream deflectors on Willow Creek are two other management impacts. The greatest impact from timber harvest in this area appears to be related to roads. Data is not available to assess cumulative effects to streamflows from tree removal.

Sampling at Big Springs in 1994 found water quality to be excellent and water temperatures consistently low. Monitoring by the State of Idaho in the Henry's Fork headwaters showed limited impacts to beneficial uses. Duck Creek has been found to be one of the major contributors of sediment and nutrients to Henry's Lake, however it has not been determined if the source is on private or public land. Targhee Creek was also found to be a major source of sediment and nutrients, but a survey of the Forest portion of the watershed could only find natural sources of sediments (old slumps, for example). DEQ has

determined that more than 60% of the phosphorus going into Henry's Lake is natural, and is from National Forest System lands. Bacterial levels were found to be high on Hope, Duck, Meadow, and lower Jesse Creeks downstream of National Forest System lands. Henry's Lake Outlet meets all water quality criteria, however there have been some instances of temperature exceeding State standards for salmonid spawning. Siltation and dewatering have been described as limiting factors. In general, it appears that while there is some degradation of water quality on the Forest, it does not appear to be significant as a result of management activities.

Island Park - Many streams here show a strong influence from groundwater, having relatively low variation in flow throughout the year. The major stream is the middle section of the Henry's Fork of the Snake River. Other drainages in the subsection are Fish, Robinson, Rock, Squirrel, Conant, Bitch, and South Badger Creeks. The portions of the Buffalo and Warm River in this subsection are low-gradient, spring-controlled streams that show little variation in flow. Fall River shows more snowmelt influence and flows through a narrow canyon, unlike the other streams. While the Henry's Fork is a spring-fed system, Island Park Dam controls its flow to a large extent, providing peak flows not just when Island Park Reservoir fills in spring, but also when irrigation and other downstream needs dictate. The western side of the subsection is fairly dry, with little surface runoff.

Channel stability ratings range from fair(-) to excellent. Management impacts stem from roads, livestock and recreation, which vary in significance in different places. The greatest impact from timber harvest in this area appears to be related to roads. No data are available to assess cumulative effects to streamflows from tree removal. Data are very scattered, but Conant Creek (upper and near the Forest boundary), one section of Buffalo River, and portions of Rock Creek were specific areas of concern while the Henry's Fork and most of Buffalo River were in good to excellent condition.

Zimmer (1981) reported occasional high levels of fecal coliform in Island Park Reservoir, probably due to inadequately treated sewage at local recreational facilities. Phosphorus levels in the reservoir were also reported to be high, especially in areas of groundwater discharge along the reservoir shoreline. The source of the phosphorus could not be identified. Nuisance levels of algal blooms have been reported in the Henry's Fork upstream of Osborne Bridge, possibly due to nutrient contributions from upstream developments. High stream temperatures have also been reported in this reach as this section of the stream is wide, shallow, and unshaded. The Buffalo River was sampled in the late 1970's, and water quality was found to be good. The Henry's Fork, from Buffalo River to Riverside, is listed as a Water Quality Limited segment.

Madison Plateau - Surface drainage here is not very well-developed, due to the underlying volcanic rocks which allow more water to percolate than to run off. These streams originate in or near Yellowstone National Park and exhibit strong groundwater influence. Major streams include the upper sections of tributaries to the Henry's Fork that were discussed under the Island Park Subsection. Main drainages within this subsection include Thirsty Creek, North Fork, Middle Fork and South Fork of Split Creek, and the upper reaches of Moose, Partridge, Snow, Conant and Boone Creeks. There are numerous small lakes in this subsection.

Channel stability ranges from fair(+) to excellent. The North Fork Fire in 1988 caused major changes in channel stability to Moose Creek. Road systems were a watershed concern in this area even before the fire. After the fire, erosion from uplands accelerated due to loss of vegetation and burning effects on soils, which caused more water to run off slopes. The result was a dramatic increase in the amount of sediment moving off slopes and into stream channels. Increases of fine material and channel scour were noted in the lower reaches of the stream after the fire. Since 1991, however, the cross-sectional area and substrate size distribution have come to more closely resemble pre-fire values. Standards and Guidelines will not be able to mitigate impacts to acceptable levels. Current conditions do not reflect watershed objectives. Logging, roads, livestock use and recreation impacts exist in this subsection.

The greatest impact from timber harvest appears to be associated with roads. No data are available to assess cumulative effects to streamflows from tree removal. Possible channel impacts in the Falls River subwatershed are due to dewatering by irrigation withdrawals.

Five of the streams in the subsection (Rock Creek, Robinson Creek, Fish Creek, Porcupine Creek, and Warm River) had been named by Idaho as Stream Segments of Concern before this designation was eliminated in 1995. Water quality has been generally good on these streams. The only variation from State standards has been in temperature on some of the streams which have experienced extremely low flows due to drought (Porcupine and Rock). Water temperatures on Moose Creek are consistently low. Turbidity increases, sometimes significantly, during and after rainstorms in the drainage. Hidden Lake, Loon Lake and Grassy Lake Reservoir were sampled as part of the Western Lakes Survey in 1985. All had good water quality, though Hidden Lake's total phosphorus was high.

Teton Range - Streams in this subsection originate along the west slope of the Teton Mountains. They are steep, dynamic and characterized by coarse substrate (up to boulders in size) due to the proximity of this material to the stream channel. Glaciation has been an important influence on stream systems here. Not only did glaciers shape the major valleys, they also brought the sediment and rock material in which stream channels subsequently developed. Present-day forces such as avalanches and various types of mass failure bring not just rock but also trees and other debris to the streams, causing them to adjust to accommodate the load. These streams respond to snowmelt, having high spring peak flows which drop to their low flow levels in late summer. Major streams here include Badger, Leigh, Teton, Darby, Fox, Game, Trail, and Moose Creeks

Channel stability ranges from fair(-) to good(+). Impacts to channels stem mostly from natural causes such as avalanche debris, unstable bank materials and failed beaver dams. Localized management effects are related to roads, recreation and livestock

Water quality sampling has been extremely limited in this subsection. Most of the available information is from the Alaska Basin Water Study conducted by the Teton Science School in 1989. The two lakes studied (Two Island Lake and Mirror Lake) were found to be slightly acidic. There was only one sample for alkalinity in each lake, and both were extremely low. This indicates a low ability to buffer changes to pH (e.g., changes from acid rain), probably due to the geology of the area. The Teton River (headwaters to Trail Creek) is listed as a Water Quality Limited segment.

Big Hole/Palisades - Streams here contribute to either the Teton River or the South Fork Snake River. They are generally confined within steep-sided valleys or canyons, and are high-energy systems, able to move a considerable amount of sediment. Snowmelt is important in these streams, so they have high spring peak flows which later drop to their late summer levels. Major streams in this subsection include Indian, Big Elk, Palisades, Rainey, Big Burns, Pine, Canyon, Moody, Horseshoe, Mahogany and Packsaddle Creeks. Packsaddle Lake, Upper and Lower Palisades Lakes, and the Palisades Reservoir are also important hydrological features in this subsection.

Channel stability ranges from poor to good(+). Impacts exist in most drainages from recreation use, especially trails along the streams and dispersed camping. Management impacts associated with cattle and roads are also very common. The Teton River subwatershed has impacts from mining (channel alteration) and loss of riparian vegetation due to lowering of water tables and channel incision. Problems in Rainey Creek are primarily associated with grazing by wildlife and cattle. In 1994, there was a fire in the headwaters of Palisades Creek, but it was generally a light burn and did not adversely affect water resources.

In-depth water quality sampling was conducted on Big Elk Creek in the late 1970's. Water temperatures were consistently good, and turbidity was consistently low. Little Elk Creek was sampled once, and had readings similar to Big Elk. Stream temperatures on Rainey and Palisades Creeks were measured on a regular basis in 1994, and all met State standards. Upper Palisades Lake was sampled during the

Western Lakes Survey in 1985, and was in very good condition. Canyon Creek was intensively sampled in the mid-1970's, and once in 1994, all samples met State standards. In general, it appears that stream channel stability is a concern in many places, but (based on available data) water quality impacts are not evident. Teton River (headwaters to Trail Creek), Packsaddle, and Horseshoe Creeks are listed as Water Quality Limited segments.

Caribou - Geology has played an important role in this subsection. The underlying geology of folded and faulted sedimentary rocks has produced perpendicular drainages, and the streams follow the weaknesses in the rocks. Valleys are bounded by steep slopes, with the width of the valleys varying depending on the distance that streams could laterally migrate. Snowmelt is important here, and streams have distinct flow peaks in spring. Water generally flows to the South Fork Snake River. Major streams include Fall, Pritchard, Bear, Beaver, Brockman, Indian, Corral and McCoy Creeks. The western portion of Palisades Lake falls within this subsection.

All reaches rated from fair(-) to good(+) in channel stability. Grazing, powerline clearing, roads in riparian areas, and heavy recreational use are all listed as problems in the Fall Creek drainage. Brockman Creek shows impacts from grazing (bank trampling). Antelope Creek is heavily impacted (both on private and on Forest lands) by roads, recreation, and bank trampling by cattle. Channel stability was lowest on Fall, Bear, Brockman, and Antelope Creeks, with almost all of Fall Creek in the "fair" category, as well as half the reaches on Bear. Most streams here have not been surveyed. Antelope, McCoy, Tex, Brockman, Corral, and Sawmill Creeks are listed as Water Quality Limited.

Idaho DEQ sampled several streams in 1994. Antelope, Sawmill, Lava, Hell, Willow, and Brockman Creeks. Conclusions cannot be drawn from their data, however.

Fisheries - Scale: Hydrologic Unit

Streams delineated as "fish-bearing" are those stream segments that are used by any fish species to satisfy all or a portion of their requirements such as spawning, rearing of young, adult feeding, and winter survival. Information on the miles of fish-bearing streams and acres of fish-bearing lakes and impoundments is broken out by subsection in Table III-4. Existing watershed, water quality, and riparian conditions are more fully described in the Riparian and Water sections of this chapter.

Fisheries resources and habitat conditions are best assessed by hydrologic unit, which is a portion of a watershed with common characteristics.

The land area immediately surrounding the various water types is referred to as the aquatic influence zone. These zones control the biological diversity and integrity of the aquatic environment. It is within these zones that the ecological functions and processes necessary for the maintenance of healthy fisheries habitat take place. Aquatic habitat conditions are expressed in terms of water quality, quantity, and timing of flow, conditions within the stream channel (pools, woody material, etc.), and health of associated plant communities. Since the hydrologic, geomorphic and ecological processes that shape the various water types differ by hydrologic unit, the sensitivity of fisheries habitat to disturbances also varies by hydrologic unit. Human-induced disturbances within the aquatic influence zone, including streamflow diversion, livestock grazing, road construction, timber harvesting, and recreation use, can disrupt natural processes and functions. Where these are intense or prolonged, fisheries distribution, abundance, and productivity may be impaired.

Yellowstone cutthroat trout (large-spotted form and fine-spotted form) is selected to represent the many species of fish occupying the Forest. This species requires high water quality and high habitat diversity for survival. Since these conditions are indicative of healthy aquatic ecosystems, with associated healthy riparian plant communities and functioning watersheds, it is assumed that by providing for these habitat needs, the habitat needs of all other aquatic life would be provided as well.

A complete list of the fish species by hydrologic unit is shown on Table III-6. Descriptions of the condition and trends of aquatic and riparian habitats are shown on Table III-4.

Birch, Medicine Lodge, and Beaver-Camas Hydrologic Units - These hydrologic units are assessed together because of similarities in fisheries resources and conditions. All drainages originate along the eastern aspect of the Lemhi Range or the southern aspect of the Beaverhead Mountains. As they flow onto the Upper Snake River Plain, these waters "sink" and flow underground. Recent studies document that these subterranean flows reach the lower Snake River at Thousand Springs, 48 miles away. Fish populations within the Birch, Crooked, Medicine Lodge and Beaver-Camas Creek systems are now physically and genetically isolated from the Snake River system and from each other.

Fish-bearing streams on National Forest System lands are small, steep to moderate-gradient, and fed by snowmelt runoff and baseflow from groundwater sources. The natural capabilities of this area to produce abundant or diverse fisheries resources is relatively limited.

Upper Henry's Hydrologic Unit - All drainages flow into Henry's Lake or the Henry's Fork of the Snake River above the confluence of Fall River. Spring creeks provide an environment capable of producing abundant aquatic insect and plant biomass. Where fisheries life history requirements are met, these streams are among the most productive trout fisheries in the world.

The primary natural disturbances shaping and controlling fisheries habitat are high intensity summer rains and fire. Natural processes of overland flow, slumping and tree windthrow bring organic matter, soil, rocks, and nutrients into streams.

Fisheries resources in this hydrologic area are very productive and varied. Duck and Targhee Creeks are important economically and scientifically as they provide key spawning habitats for the Henry's Lake native cutthroat trout fisheries and associated Idaho Department of Fish and Game (IDFG) managed hatchery.

Lower Henry's Hydrologic Unit - All drainages flow into the Henry's Fork of the Snake River near the confluence of Falls River. Many are similar to those of the Upper Henry's Hydrologic Unit but tend to be more strongly influenced by groundwater. Falls River is a medium to large, low-gradient system which is predominately spring-controlled.

The primary natural disturbances shaping and controlling fisheries habitat are high intensity summer rains and fire. Natural processes of overland flow, slumping and tree windthrow bring organic matter, soil, rocks, and nutrients into streams.

The fisheries resources of importance within this area are primarily small headwater streams and alpine lakes spread across a small portion of the landscape.

Teton Hydrologic Unit - This area drains the western aspect of the Teton Mountains and the northern aspect of the Big Hole Mountains. Fish-bearing streams originating in the Teton Mountains are steep, dynamic, and strewn with large boulders. Stream channels developed from the sediment and rock that was delivered through glaciation. Within the Big Hole Mountains, fish-bearing streams are relatively small, moderate-gradient, and fed by snowmelt runoff and baseflow from groundwater sources.

The primary natural disturbance shaping and controlling fisheries habitat in the Teton Mountains is rapid snowmelt. Natural processes of mass failure and avalanches recruit organic matter, large woody debris, soil, rock and nutrients into streams. In the Big Hole Mountains, rapid snowmelt initiates overland flow and slumping which contribute organic matter, soil, rock, and nutrients to fish habitats.

Palisades Hydrologic Unit - All drainages originate along the south aspect of the Big Hole Mountains and the north aspect of the Caribou Mountains and are tributary to the South Fork of the Snake River.

The primary natural disturbances shaping and controlling fisheries habitat are high intensity summer rains and fire. Natural processes of overland flow, slumping, and tree windthrow move organic matter, soil, rock and nutrients into streams.

The fisheries resources found here are very productive and varied. Many of the streams flowing into Palisades Reservoir, and Palisades and Rainey Creeks, provide key spawning and rearing habitats for the native cutthroat trout fisheries.

Fish Species	Hydrologic Unit						
	Birch	Medicine Lodge	Beaver - Camas	Upper Henry's	Lower Henry's	Teton	Palisades
Rainbow Trout 2/	X	X	X	X	X	X	X
Brown Trout 2/			X	X	X	X	X
Brook Trout 2/	X	X	X	X	X	X	X
Lake Trout 2/						X	X
Kokanee (Sockeye Salmon) 2/				X			X
Cutthroat Trout	X	X	X	X	X	X	X
Mountain Whitefish			X	X	X	X	X
Arctic Grayling				X			
Sculpin (all species)	X	X	X	X	X	X	X
Longnose Dace			X	X	X	X	X
Speckled Dace			X	X	X	X	X
Utah Sucker			X	X	X	X	X
Utah Chub			X	X	X	X	X
Redside Shiner					X	X	X

1/ Includes only fish species known to occur within Forest System Lands.
2/ Denotes nonindigenous species known to be introduced by European man

Cutthroat Trout

Cutthroat trout is a sensitive species and has been selected as a management indicator. Table III-7 illustrates cutthroat trout population status and distribution on the Forest by hydrologic unit.

The only indigenous trout within the Forest is the Yellowstone cutthroat (*Oncorhynchus clarki bouvieri*). Scientific information to date indicates that this subspecies consists of two forms the fine-spotted Snake River and the large-spotted. Scientists are continuing research to determine if the fine-spotted Snake River cutthroat trout is a separate subspecies (Behnke 1992).

The Forest Service in Regions 1 and 4 have prepared a draft Habitat Conservation Assessment (HCA) for Yellowstone cutthroat trout, including the big-spotted and the fine-spotted Snake River forms. The HCA is directed at defining habitat conditions necessary for the long term persistence of Yellowstone

cutthroat trout. In addition, the assessment correlates habitat conditions to population distribution and species management activities within the historic range of the species. Yellowstone cutthroat trout currently occupy 41% of their historic habitat. Within Idaho, approximately 45% of the historic habitat is presently occupied. German brown, rainbow, and brook trout have been stocked into many drainages and compete with cutthroat trout (see Table III-6). Rainbow trout have been introduced into every hydrologic unit on the Forest and are likely to hybridize with cutthroat trout, causing genetic contamination of cutthroat trout populations.

Table III-7 Population Status of Cutthroat Trout by Hydrologic Unit								
Population Status 1/	Hydrologic Unit							
	Birch	Medicine Lodge	Beaver - Camas	Upper Henrys	Lower Henrys	Teton	Paisades	Average
Large-spotted Cutthroat Trout								
% strong/healthy	0	9	0	0	0	74	54	20
% depressed at risk	6	23	10	19	37	26	37	23
% extinct	94	54	90	68	52	0	9	52
% status unknown	0	14	0	13	11	0	0	5
Fine-spotted Cutthroat Trout								
% strong/healthy	-	-	-	-	-	100	0	50
% depressed at risk	-	-	-	-	-	0	37	18
% extinct	-	-	-	-	-	0	63	32
% status unknown	-	-	-	-	-	0	0	0
<p>1/ These values represent the status of that portion of the population occupying Forest Service lands within each of seven Hydrologic Units. The population status categories were adapted from assessment protocol developed by the Upper Columbia River Basin Assessment Team.</p> <p>A "-" means the fine-spotted cutthroat trout was never present in the hydrologic unit.</p> <p>"Strong/healthy" denotes populations with the following characteristics: 1) all major life-history forms that historically occurred are still present, 2) numbers appear to be stable or increasing and the population is at least half of the historic number or density, and 3) the population within the watershed or within the larger metapopulation of which the population is a part, contains at least 5000 fish or 500 adults.</p> <p>"Depressed/at risk" denotes populations with at least one of the following characteristics: 1) a major life-history component has either been eliminated or is remnant, 2) the population within the sixth order watershed has a declining trend in abundance, or the population occurs in less than half of the habitat thought to historically support the species, or numbers are less than half of what the watershed supported historically; and 3) total abundance for the whole metapopulation of which this watershed is a part is lower than 5000 total fish or 500 adults.</p> <p>"Extinct" denotes the species is not present and there is evidence that the species was historically present or could conceivably have had natural access to a watershed even though landscape/habitat characteristics might be outside the range deemed suitable for supporting populations.</p> <p>"Status unknown" denotes that reliable information was not available by which to make a judgement about current presence or absence.</p>								

Wildlife Associated with Aquatic and Riparian Habitats

Wildlife management indicator species include bald eagles, trumpeter swans, spotted frogs, common loons, and harlequin ducks. Monitoring and analysis emphasizes habitat conditions to evaluate potential changes in the status or sustainability of these species. Table III-8 illustrates the distribution of these habitats by subsection. A brief overview of these species and habitats follows. Additional information is available in Process Paper D.

Table III-8 Distribution of Wildlife Management Indicator Species Associated with Riparian and Aquatic Habitats, Including Endangered, Threatened, Candidate, and Sensitive Wildlife Species on the Targhee National Forest within the Seven Subsections								
Management Indicators	Subsections 1/							
	Status 2/	Lemhi/ Medicine Lodge	Centennial Mountains	Island Park	Madison Plateau	Teton Range	Big Hole/ Palisades	Caribou
Riparian and Aquatic Habitats								
Bald Eagle Nesting Habitat	T	N	Y	Y	N	N	Y	Y
Trumpeter Swan Nesting Habitat	C2/S	N	N	Y	Y	N	N	S
Spotted Frog Habitat	C1/S	Y	Y	Y	Y	Y	S	S
Common Loon Habitat	S	N	N	Y	Y	N	Y	Y
Harlequin Duck Habitat	C2/S	N	N	N	N	Y	Y	Y

1/ Letters used for distributions among subsections are as follows
 Y = Species presence and/or suitable habitat has been documented on the Forest. For the grizzly bear, Y = areas within the recovery line
 N = Species presence has not been documented on the Forest, suitable habitat has not been documented
 U = Unverified but reliable sightings exist on the Forest, suitable habitat probably exists
 S = Suitable habitat probably exists, but there have been no documented nor unverified sightings on the Forest.

2/ Letters used for Status are as follows: E = endangered, T = Threatened, NE = Nonessential Experimental, C1 = Category 1 Candidate Species, C2 = Category 2 Candidate Species, S = Sensitive species, '-' = no formal status

Sources of information for this table include: Targhee National Forest AMS, 1992, Personal communication with K Johnson, Feb 8, 1995, B Aber, M Oechsner; B Alford, D Welch, R Newton

Bald Eagle Nesting Habitat - Scale Forestwide

This species has for some years been listed as endangered under the Endangered Species Act. In August of 1995 the U.S. Fish & Wildlife Service downlisted the bald eagle to the threatened status.

The data we have been able to compile on bald eagle nesting populations in SE Idaho dates back to 1972 (USDA Forest Service, Targhee N.F. AMS, 1992). In 1972, there was one recorded bald eagle nest along the South Fork of the Snake River, which was not on the Forest. The first recorded bald eagle nest on the Forest was noted in 1975, along Palisades Reservoir. From 1975 to 1995, the bald eagle nesting population on the Forest has increased to 17 nesting pairs. In addition to these nesting pairs on the Forest, there are 9 nesting pairs adjacent to the Forest with some portion of the nesting territory within the Forest. Depending upon food supply and tolerance of bald eagle pairs to nest in proximity to other pairs, the existing number of nesting pairs on the Forest may be near the habitat capacity.

Trumpeter Swan Nesting Habitat - Scale Forestwide

Trumpeter swans on the Forest are part of the Rocky Mountain Population (RMP) of trumpeter swans (Shea 1994). The RMP comprises the nonmigratory resident Tri-state (Idaho, Montana, Wyoming) flocks.

(which includes the Forest) and the migratory Canadian flocks. From less than 200 birds in 1930, the RMP increased to about 2,526 birds by 1994 (this includes about 275 Tri-state summer residents; 2,150 migratory birds from Canada, and about 100 birds transplanted to Oregon and Nevada). (Shea 1994) Process Paper D provides more information on the swan population.

For the period 1982 to 1994, 31 lakes and ponds on the Forest have been used at least during one or more summers; 17 of these 31 have had at least one nesting attempt, 11 of these 31 have successfully produced young during one or more years. Table III-8 shows the distribution of nesting habitat within subsections. Process Paper D provides more information on swan nesting habitat.

Spotted Frog Habitat - Scale Forestwide

Spotted frogs are most likely found near permanent water such as marshy edges of ponds or lakes, in algae-grown overflow pools of streams, or in wet areas with emergent vegetation (Gomez 1994) They may move considerable distances from permanent water after breeding, often frequenting mixed conifer and subalpine forests, grasslands, and brushlands of sage and rabbitbrush if puddles, seeps or other water is available. (Gomez 1994) Spotted frogs are thought to hibernate in holes near springs or other areas where water remains unfrozen and is constantly renewed. A muddy or soupy substrate in rivers or ponds is preferred by the spotted frog for hibernation. (Gomez 1994)

A spotted frog inventory/study has been in progress on the Forest for several years, at this time, spotted frogs have been documented in all subsections except the Big Hole/Palisades Subsection and the Caribou Subsection (Table III-8). A recent progress report stated the following:

"All frogs were always within two meters of water. None left riparian habitats and almost all were associated with ponds until September when they left the ponds for nearby streams. Ponds within 50 m of permanent streams were an important combination of habitat characteristics for them." (Bartelt and Peterson 1993)

Common Loon Habitat - Scale: Subsections

For nesting and brood rearing, common loons need lakes large enough to provide adequate runways for flight (greater than 9 acres in size), deep enough to sustain fish populations, and clear enough for them to see their prey (they rely on their sight for foraging). Loons avoid lakes with high levels of human activity, fluctuating water levels, turbid water, and no protected coves. Common loons have been observed on five subsections, as discussed below.

Centennial Mountains - Common loons have been observed on Henry's Lake, but no nesting or brood rearing has been documented

Island Park - Common loons have been observed on Island Park Reservoir, but no nesting or brood rearing has been documented. This reservoir probably does not provide suitable breeding habitat due to significant drawdowns during the summer months.

Madison Plateau - Common loons have been documented at Thompson Hole, Grassy Lake Reservoir, Lake of the Woods, Loon Lake, Moose Lake, Indian Lake and Bergman Reservoir (Atkinson 1991). Successful reproduction has been documented at Indian Lake, Thompson Hole and Bergman Reservoir.

Big Hole/Palisades and Caribou - Common loons have been observed in these subsections, but no nesting or brood rearing has been documented.

Harlequin Duck Habitat - Scale. Forestwide

For nesting and brood rearing, these ducks require relatively undisturbed, low-gradient, meandering mountain streams with dense, shrubby riparian areas, and woody debris for nesting and brood rearing. They also need log jams, and overhanging vegetation for cover and loafing areas. Specific habitat requirements include streams with gradients less than 3 degrees, greater than 50 percent streamside shrub cover, and at least 3 loafing sites (midstream boulders or log jams) per 33 feet of stream. Successful reproduction has been documented at only three locations: Big Elk Creek, Teton Creek, and Darby Creek. Sightings have been made at McCoy Creek, but these sightings have not indicated successful reproduction.

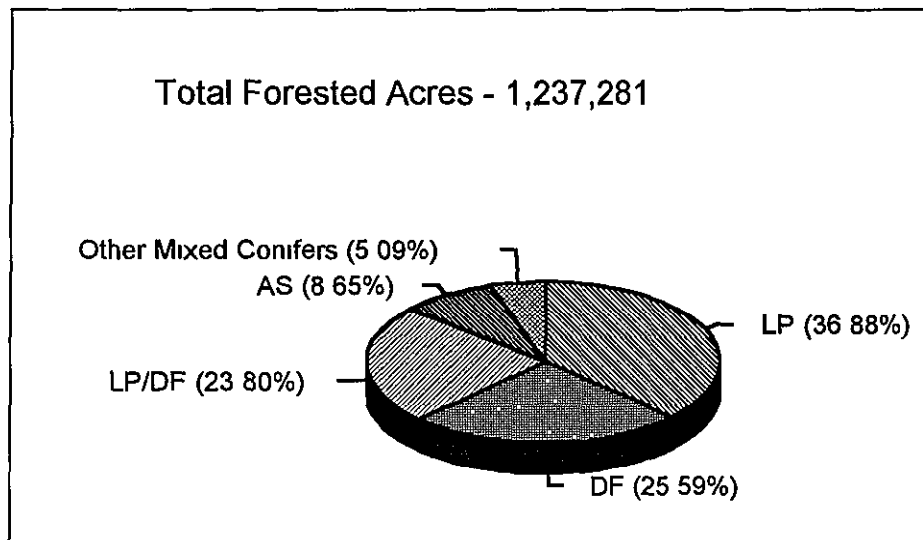
TERRESTRIAL ECOSYSTEMS

Upland Forested Ecosystems - Scale: Subsections

Sixty-eight forest community types currently occur on the Forest. One sensitive plant species, *Astragalus paysonii*, occurs in forest ecosystems and is a Federal Candidate species for listing as threatened or endangered. This plant is found within disturbed or open areas in lodgepole pine and mixed Douglas-fir/lodgepole pine communities. Fire suppression has been attributed to the decline of this species over its range (Fertig et al 1993).

The community types and age classes present on the Forest are displayed by subsection in Table III-1. Major community types are shown in Figure III-2. Minor community types include whitebark pine, limber pine, and Engelmann spruce/subalpine fir. Two community types of cottonwoods occur on the Forest, primarily on the Snake River and lower elevational portions of the Henry's Fork of the Snake River

Figure III-2
Major Forest Types on the Targhee National Forest



Lemhi/Medicine Lodge - Although only 37 percent of this subsection is forested, this is more forest land than occurred historically. Information from the early 1900's indicates that Douglas-fir has expanded onto lands that were formerly dominated by grasses and sagebrush. Some riparian communities also appear to have more conifers than they did historically.

Approximately 90 percent of the forested land is in the mature age class, indicating a lack of age class diversity in the subsection. With 90 percent of the forests in Douglas-fir there is also a lack of tree species diversity. Many of the Douglas-fir stands are densely stocked. The uniformity of tree species and age classes, as well as the dense stocking, make this area's forests more susceptible to ecosystem disturbances such as insects, diseases and large fires. An example of the latter was the Gallagher Peak Fire which burned 37,230 acres in 1979. This was the largest fire in the last twenty years on the Forest.

Limber pine occurs in the subsection, but is not differentiated as a community type since it occurs as a scattered tree in predominantly Douglas-fir stands. The intermingling of forestland with nonforested communities provides most of the vegetative diversity in this subsection.

Centennial Mountains - The landscape is dominated by forested communities which cover 71 percent of the subsection. Approximately 51 percent of the forested acres are Douglas-fir. Lodgepole pine (21%) is found in pockets on low-productivity soils. Mixed lodgepole pine/Douglas-fir (13%) and other mixed conifers (10%) are also well-represented. The presence of mixed stands indicates that species such as Douglas-fir and subalpine fir are becoming established as stands move toward mature stages through succession. Aspen comprises 4 percent of the forested acres, which is less than was historically present. Fire suppression has allowed conifers to take over areas that were previously aspen, through the process of succession. Some riparian and mountain meadow communities also appear to have more conifers than they did historically.

Mature forests cover 79 percent of the forested acres, indicating a lack of diversity in age classes. Decreasing diversity however is associated with the loss of aspen over time. Potential for severe fires, insects and diseases are concerns in this subsection, mainly because of the large component of mature forests. Western balsam bark beetle has been active in this area in recent years. Douglas-fir beetle caused losses in Douglas-fir from the late 1980's through 1992 and could again reach destructive levels. Pockets of root rot are common in the subsection, associated with partial cutting of Douglas-fir which occurred in the 1950's.

Past Douglas-fir shelterwood regeneration methods implemented on dry south and west slopes of the Centennials have failed, requiring planting to reforest the sites. Similar treatments on north-facing slopes have tended to regenerate naturally.

Island Park - The landscape is dominated by forested community types, which blanket 93 percent of the area. Forested areas are primarily lodgepole pine types (70%) that contain small pockets of aspen, sagebrush/grass, grass meadows and mountain brush. Douglas-fir (10%) and mixed lodgepole pine/Douglas-fir (15%) community types provide diversity in the area. Lodgepole pine occupies the floor of the Island Park Caldera and Douglas-fir cover types are concentrated on the Caldera rim. On the Caldera rim, aspen and sagebrush areas are evolving towards the Douglas-fir type through the process of succession.

Salvage harvesting has shifted 46 percent of the lodgepole pine into the nonstocked, seedling and sapling classes. Active management of aspen, as well as aspen sprouting in lodgepole pine clearcuts, has moved 34 percent of the aspen into these young classes. Other community types are concentrated in the mature age group.

Many lodgepole pine clearcuts in this subsection have not regenerated naturally and have required planting to restock the stands. The process of planting these sites is expected to continue through the year 2000.

Mature Douglas-fir on the caldera rim experienced outbreaks of spruce budworm and Douglas-fir beetle in the past decade. These problems have now subsided, but could easily recur given the mature condition of the Douglas-fir and the presence of multiple-storied stands. Due to fuel reductions and young age classes associated with harvest, fire is less of a concern here than in most other subsections.

Madison Plateau - The landscape is dominated by forests, which comprise 97 percent of the area. Lodgepole pine is the most common forested community type (76%), with mixed stands of lodgepole pine and Douglas-fir running a distant second place (14%). Relatively minor amounts of aspen and various mixed conifers provide some diversity. The southern portion of the subsection is unique in that there are many wet meadows and small lakes intermingled with the forests.

The 1988 North Fork Fire burned some 17,700 acres in the northern part of this subsection. Past timber harvesting also occurred primarily in the north half of the subsection. These two events have shifted 39 percent of the lodgepole pine into the nonstocked, seedling and sapling age classes. Active management of aspen has also provided some age class diversity.

Most areas of the North Fork Burn regenerated naturally following the fire. Approximately 1,360 acres are being planted in portions of the burn that did not reforest.

Due to fuel reductions and young age classes associated with past harvest and the North Fork Burn, fire is less of a concern here than in many areas. However, conditions in the southern portion of the Madison Subsection are presenting some fire risks as mixed aspen and lodgepole pine stands convert to Douglas-fir through succession. Mature subalpine fir and Douglas-fir in this southern area experienced outbreaks of western balsam bark beetle and Douglas-fir beetle in the past decade. These conditions have subsided, but could easily recur since vegetation conditions have not changed.

Teton Range - The landscape is a diverse mix of forested (57%) and open (43%) community types. Lodgepole pine occurs on poorer soils at lower to middle elevations. Lodgepole is mixed with Douglas-fir in 31 percent of the forested area, indicating that the pine is converting to Douglas-fir through succession. Open Douglas-fir forests, mountain brush, aspen, and sagebrush pockets are found predominately on south and west aspects. Aspen is becoming mixed with conifers as succession proceeds, and the amount of aspen has likely declined compared with historic levels due to fire suppression. Upper elevations are characterized by dense mixed conifer forests, open grass/forb meadows, and talus slopes. Conifers are moving into riparian areas and mountain meadows due to fire suppression over time.

Since much of the Teton Range Subsection is designated wilderness, timber harvest has been limited. Because of this and fire suppression, only one percent of the forested acres are in the nonstocked, seedling or sapling age classes. The large percentage of mature or older forests make this area ripe for insect infestations, diseases and large-scale fires. In recent years western balsam bark beetle has been active in the subalpine fir. Douglas-fir beetle has killed pockets of Douglas-fir in the past decade, but beetle populations have declined since 1992.

Big Hole/Palisades - The landscape is a combination of community types, with 65 percent of the landscape forested and 35 percent in nonforested. The most common forested community type by far is mixed lodgepole pine and Douglas-fir, comprising 47 percent of the forested acres. Aspen, pure Douglas-fir and pure lodgepole pine each account for roughly 15 percent of the forests. Mountain brush is common, consisting of mountain mahogany on south slopes and hawthorn, chokecherry, serviceberry, antelope bitterbrush and Rocky Mountain maple on various slopes depending on elevation. Grass/forb meadows and sagebrush are also present in significant amounts. The northwestern boundary of the subsection extends into the cottonwood type along the Snake River.

Only 4 percent of the forested stands are in the nonstocked, seedling or sapling age category. These are concentrated in the north end of the subsection where timber harvest has occurred. The Snake River cottonwood stands and most of the shrublands are also in late age classes. This creates hazards for large fires, insect infestations and disease problems. In the north end of the subsection Douglas-fir beetle and western balsam bark beetle caused damage in the late 1980's and early 1990's, but tapered off in 1994. Insect information is not available for the southern portion. Due to fire suppression and lack of disturbance over the years, conifers have taken over some sites that were historically nonforested. This has likely reduced overall vegetative diversity in the subsection.

In the Big Hole Mountains, natural regeneration has been difficult to obtain where Douglas-fir was harvested. In the Palisades area, harvest in both lodgepole pine and Douglas-fir have failed to reforest naturally. This has resulted in the need to plant most of these areas.

Caribou - The Caribou Subsection is similar to the Big Hole/Palisades in its overall vegetation characteristics. This subsection is 40 percent nonforested and 60 percent forested. The primary forest types are aspen (31%) and mixed lodgepole and Douglas-fir (47%). The interspersions of forests with sagebrush, grass/forb meadows and mountain brush provides for good diversity of plant species. The northeastern boundary area of the subsection includes cottonwood forests along the Snake River.

Age class diversity is limited, as in many other areas of the forest. Because virtually no vegetation management has taken place in this subsection and fires have been suppressed for many years, only one percent of the forests are in young age classes. Most of the shrublands are also in late age classes. Risks of large fires, insects and diseases are high due to these vegetative conditions. The insect situation in recent years has been similar to that in the Big Hole/Palisades Subsection. Douglas-fir is becoming more predominant as it mixes with stands of lodgepole pine, aspen or shrubs. It is likely that there is more Douglas-fir here now, and less aspen, lodgepole pine and shrubland, than existed historically. The Snake River cottonwood stands are also uniformly in the mature age class due to lack of disturbance which they need in order to regenerate.

Establishing natural regeneration of both Douglas-fir and lodgepole pine following harvest has been a problem in this subsection, and most sites have required planting.

Upland Nonforested Ecosystems - Scale: Subsections

Table III-9 illustrates the acres of nonforested community types by subsection throughout the Forest. Herbaceous and shrub ecosystems dominate the landscape in the Lemhi/Medicine Lodge Subsection and are significant in the Centennial, Big Hole/Palisades and Caribou Subsections.

Fire suppression has modified the historical 10-25 year frequency of fire in the low to mid elevation areas. Fire suppression coupled with grazing and drought cycles has increased shrub canopy cover and decreased herbaceous species composition within the sagebrush/grass and mountain brush community types. These communities are shifting from a low risk of stand-replacing fires to a high risk of stand-replacing fires over broad areas. A trend is also occurring whereby the historically high percentage of early and mid seral stages is moving toward a predominance of mid and late seral stages.

Table III-9 Acres of Nonforested Community Types by Subsection								
Herbaceous/Shrub Communities	Lemhi/Medicin Lodge	Centennial Mountains	Island Park	Madison Plateau	Teton Range	Big Holes/Palisade	Caribou	Forest Total
Herbaceous	11,610	13,626	4,180	2,472	45,902	35,711	9,330	122,831
Sagebrush/Grass	139,191	71,814	8,969	521	0	20,356	49,977	290,827
Mountain Brush	7,003	3,843	3,685	1,345	7,946	53,511	15,783	93,115
Aquatic	406	2,677	2,747	1,714	680	6,073	5,285	19,582
Rock/Barren/Talus	17,562	2,144	350	53	14,096	7,189	2,075	43,469
Undesignated	0	6	335	52	21	13	6	433
Total Acres	175,772	94,110	20,265	6,157	68,645	122,853	82,456	570,256
% of Subsection	63	29	7	3	43	35	40	32

HERBACEOUS- Includes grass, sedge/forb, and grass/forb communities on all landscapes from low elevations to alpine
SAGEBRUSH/GRASS- Low sagebrush, black sagebrush, Wyoming big sagebrush and mountain big sagebrush community types
MOUNTAIN BRUSH - Includes chokecherry, mountain lover, mountain big sagebrush, serviceberry, antelope bitterbrush, curl-leaf mountain mahogany, hawthorn, snowberry and snowbrush ceanothus in mixed communities
AQUATIC - Includes lake, river and riparian vegetation
ROCK/BARREN/TALUS - Includes rock outcrops, bare and rocky windswept ridges, talus slopes and boulder fields from lowlands to alpine
UNDESIGNATED - open areas of unknown composition

Fourteen sensitive plant species have been identified to occur or are suspected to occur on the Forest within a broad range of herbaceous and shrub habitats (Process Paper F). Nine of these species are Federal candidate species for listing as threatened or endangered. Thirty-one additional plant species are rare in Idaho and Wyoming and are indicators of biodiversity and unique habitats on the Forest (Process Paper G) Diversity of community types in a range of seral stages is important in maintaining these species on the Forest.

The nonforested vegetation on the Forest is grouped into two broad plant communities, riparian and upland vegetation Forestwide the ecological status of these communities occur in various seral stages that meet, move toward meeting or do not meet desired vegetation conditions (see Table III-4 for riparian conditions and Table III-10 for upland conditions). Desired vegetation condition is a plant community in satisfactory ecological condition. Satisfactory ecological condition is defined as being in mid-seral stage or higher ecological status and having a stable or upward trend in soil and vegetation condition.

High density of mountain big sagebrush (> 30% canopy cover), undesirable herbaceous plants in the understory and other indicators of downward trend in vegetation are characteristics of unhealthy rangeland in unsatisfactory ecological condition. For example, on the Dubois Ranger District, there are approximately 42,310 acres in less than satisfactory condition because of high density of mountain big sagebrush.

Table III-10 Acres of upland vegetation meeting, moving toward or not meeting desired vegetation conditions Existing situation by subsection 1/								
Plant Community 3/	Subsection							
	Lemhi/ Medicine Lodge	Centennial Mountains	Island Park	Madison Plateau	Teton Range	Big Hole/ Palisades	Caribou	Forest Total
Upland vegetation meeting DVC	228,284	187,027	196,721	22,939	49,499	230,399	113,520	1,028,389
Upland vegetation moving toward DVC	12,544	22,811	8,870	4,608	10,927	63,855	52,445	176,060
Upland vegetation not meeting DVC 2/	19,244	32,354	23,416	770	46,566	23,578	7,095	153,023
1/ Only includes acres open to grazing (79%) of the Forest Does not include acres closed to grazing prior to 1995 Source FSRAMIS database								
2/ Includes acres of undetermined status								
3/ DVC = Desired Vegetation Condition								

Noxious weeds are undesirable plants designated by federal or state law. They generally possess one or more of the following characteristics: aggressive and difficult to manage; parasitic; carrier or host of serious insects or diseases; nonnative, new to the United States, or common in the United States. Soil-disturbing activities encourage the establishment and spread of noxious weeds. They can be spread by the use of weed infested hay, routine road maintenance, and lack of weed control on adjacent lands. Introduction (seeding) and invasion of aggressive species such as timothy and smooth brome have further decreased biodiversity by out-competing native species along roadways and in riparian communities. Nine different species of noxious weeds occupy approximately 19,000 acres of forest and rangeland on the Forest (see Table III-11). The Forest uses biological, chemical, and mechanical treatments to control the spread of noxious weeds. Presently, the Forest does not apply chemical herbicides by aerial applications, and only ground application is approved for use on the Forest.

Table III-11 Noxious Weed Inventory							
SPECIES	TOTAL ACRES						
	LEMHI/ MEDICINE LODGE	CENTENNIAL MOUNTAINS	ISLAND PARK	MADISON PLATEAU	TETON RANGE	BIG HOLE/ PALISADES	CARIBOU
CANADA THISTLE	2580	5,489	567	235	8	33	6
DYERS WOAD	0	0	1	0	0	6	0
HENBANE	106	30	0	0	0	5	0
LEAFY SPURGE	40	1,694	2,405	275	2	51	8
MUSK THISTLE	10	105	22	1	2,712	1,025	38
PLUMELESS THISTLE	0	0	8	0	0	4	1
SPOTTED Knapweed	200	168	119	3	0	27	17
ST JOHN SWORT	0	0	16	0	0	0	0
YELLOW TOADFLAX	150	3	492	295	0	5	0
Total	3,086	7,489	3,630	809	2,722	1,156	70

Wildlife Associated with Terrestrial Habitats

Wildlife management indicator species are displayed in Table III-12. Monitoring and analysis emphasizes habitat conditions to evaluate potential changes in the status or sustainability of these species. A brief overview of these species and habitats follows. Additional information is available in Process Paper D.

Table III-12 Distribution of Wildlife Management Indicator Species Associated with Terrestrial Habitats Including Endangered, Threatened, Candidate, and Sensitive Wildlife Species on the Targhee National Forest within the Seven Subsections

Management Indicators	Subsections 1/							
	Status 2/	Lemhi/ Medicine Lodge	Centennial Mountains	Island Park	Madison Plateau	Teton Range	Big Hole/ Palisades	Caribou
General Forested & Nonforested Habitats								
Elk Habitat Effectiveness	-	Y	Y	Y	Y	Y	Y	Y
Elk Vulnerability	-	Y	Y	Y	Y	Y	Y	Y
Elk and Deer Winter Range	-	Y	Y	Y	N	Y	Y	Y
Gray Wolf	NE	U	U	U	U	U	U	U
Grizzly Bear Habitat	T	S	Y	Y	Y	Y	U	N
Forested Habitats								
Primary Cavity Nester Habitat 3/	-	Y	Y	Y	Y	Y	Y	Y
Three-toed Woodpecker	S	Y	Y	Y	Y	Y	Y	Y
Lewis's Woodpecker	-	Y	Y	Y	Y	Y	Y	Y
Red-napped Sapsucker	-	Y	Y	Y	Y	Y	Y	Y
Williamson's Sapsucker	-	Y	Y	Y	Y	Y	Y	Y
Downy Woodpecker	-	Y	Y	Y	Y	Y	Y	Y
Hairy Woodpecker	-	Y	Y	Y	Y	Y	Y	Y
Black-backed Woodpecker	-	Y	Y	Y	Y	Y	Y	Y
Northern Flicker	-	Y	Y	Y	Y	Y	Y	Y
Forest Owl Habitat								
Flammulated Owl	S	S	S	Y	S	Y	Y	Y
Boreal Owl	S	S	Y	Y	Y	Y	Y	Y
Great Gray Owl	S	Y	Y	Y	Y	Y	Y	Y
Furbearer Habitat								
Wolverine	C2/S	S	Y	Y	Y	Y	U	U
North American Lynx	C2/S	S	S	S	S	S	Y	S
Fisher	S	N	S	Y	S	Y	Y	N
American Marten	-	S	Y	Y	Y	Y	Y	Y
Northern Goshawk Habitat	C2/S	Y	Y	Y	Y	Y	Y	Y
Red Squirrel Habitat	-	Y	Y	Y	Y	Y	Y	Y
Nonforested Habitats								
Big Sagebrush/Grassland Habitat	-	Y	Y	Y	Y	Y	Y	Y
Special and Unique Habitats								
Peregrine Falcon	E	N	Y	Y	N	Y	Y	Y

1/ Letters used for distributions among subsections are as follows

Y = Species presence and/or suitable habitat has been documented on the Forest For the grizzly bear, Y = areas within the recovery line

N = Species presence has not been documented on the Forest, suitable habitat has not been documented

U = Unverified but reliable sightings exist on the Forest, suitable habitat probably exists

S = Suitable habitat probably exists, but there have been no documented nor unverified sightings on the Forest

2/ Letters used for Status are as follows. E = endangered, T = Threatened, NE = Nonessential Experimental, C1 = Category 1 Candidate Species, C2 = Category 2 Candidate Species, S = Sensitive species, '-' = no formal status

3/ It is generally assumed that since conifer and/or aspen and/or cottonwood habitats exist in every subsection of the Forest, then habitat for most of these cavity nesting species occurs in each subsection

Sources of information for this table include Targhee National Forest AMS, 1992, Personal communication with K Johnson, Feb 8, 1995, B Aber, M Oechsner, B Alford, D Welch, R Newton

Elk Vulnerability (EV) - Scale Principal Watershed

Elk Vulnerability (EV) is defined as a measure of elk susceptibility to being killed during the hunting season. (Lyon and Christensen 1992, IDFG letter May 12, 1995). EV models (Unsworth et al 1993) have been proposed as a predictive tool that managers can use to predict mortality rates and monitor elk vulnerability (IDFG letter May 12, 1995)

For the Idaho portion of the Forest, this EV analysis is used to predict percent mortality of bull elk during the general antlered elk rifle hunting season, which usually occurs in the month of October. For the Wyoming portion of the Forest, this EV analysis is used to predict percent mortality of bull elk during the general license any elk rifle hunting season, which usually occurs during the months of September and October.

Research conducted by the Idaho Department of Fish and Game and the University of Idaho provides the basis for this EV analysis (Unsworth et al, 1993) For the Forest Plan Revision, two parameters were determined to be most important for EV analysis.

1. Hunter-day densities (measured in total hunter-days per square mile on a watershed basis)
2. Motorized road and trail densities (measured in miles per square mile on a watershed basis).

EV is an important component of the State Fish and Game Departments' management goals and objectives. The following briefly describes the Idaho and Wyoming goals as related to EV.

Idaho Department of Fish and Game (IDFG)

Game Management Units 60, 61, 62, 62A, 64, 65, 66, 69 (Figure III-3). These game management units are known as "Ready Access Units." For these units, the IDFG goal for the post hunting season population is ≥ 15 bulls per 100 cows. This equates to a maximum of 60 percent bull elk mortality. (IDFG letter, May 12, 1995)

Game Management Units 58, 59, 59A, 67 (Figure III-3). These game management units are known as "Front Range Units." For these units, the IDFG goal for the post hunting season population is ≥ 20 bulls per 100 cows. This equates to maximum of 50 percent bull elk mortality (IDFG letter, May 12, 1995).

Wyoming Game and Fish Department (WGF):

Elk Hunt Areas 73 and 85 (Figure III-3): The WGF goal for the post hunting season population is ≥ 20 bulls per 100 cows. This equates to a maximum of 50 percent bull elk mortality

The mortality percentages indicate threshold levels, which if exceeded would likely require additional management actions to be initiated by the State Fish and Game Departments. (IDFG letter, May 12, 1995) These management actions could include such items as shorter hunting seasons, restrictions on the type and number of animals to be harvested, restrictions on the number of hunters, more controlled hunts and less opportunity for general hunts, etc. The estimated current bull elk mortality varies from a low of 23 percent mortality near Palisades Creek to 97 percent mortality in the Buffalo River watershed. At the present time, 42 percent of the Forest meets State Fish and Game thresholds for EV.

IDFG Game Management Units
WGF Elk Hunt Areas

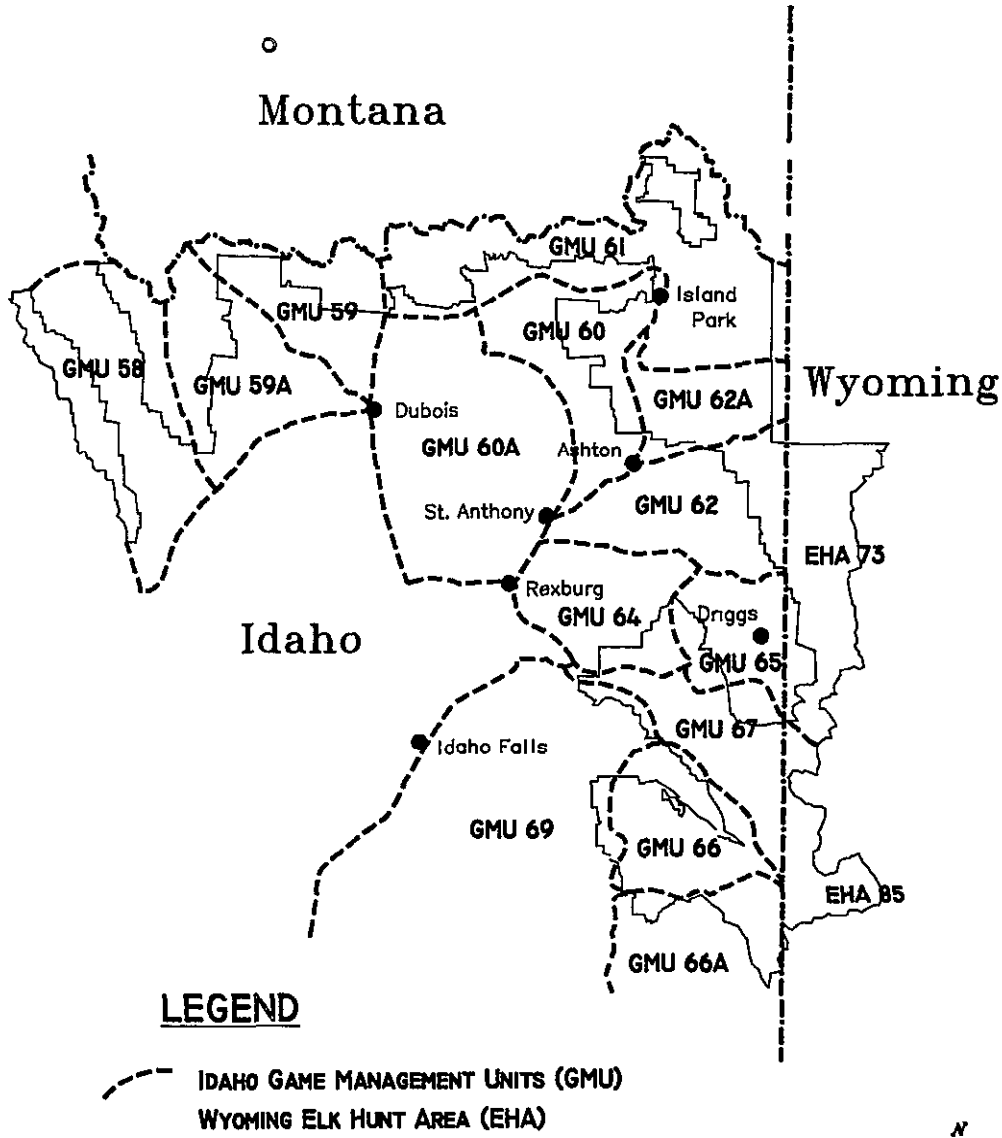


Figure III-3

Not To Scale

Elk Habitat Effectiveness (EHE) - Scale. Principal Watersheds

EHE is defined as the percentage of available habitat that is usable by elk outside the hunting season. (Lyon and Christensen 1992) For this EHE analysis, it is the spring, summer, and early fall habitat that is usable by elk outside the general elk rifle hunting seasons. EHE is not a measure of elk populations and it is not a measure of habitat carrying capacity. (Lyon and Christensen 1992) Two habitat parameters were determined to be most important for EHE analysis

1. Motorized road and trail densities (measured in miles per square mile on a watershed basis). As motorized road and trail densities increase, EHE declines. This relationship is based on research by Dr. L. Jack Lyon (Lyon 1983)

2. Elk hiding cover (measured as a percentage of a watershed in hiding cover) Hiding cover is defined as vegetation capable of hiding 90 percent of a standing adult elk from the view of a human at a distance equal to or less than 200 feet (Lyon and Christensen 1992) Optimum habitat exists when 50 to 60 percent of a watershed is in hiding cover; this is based on the judgement of professional biologists involved in elk workshops on the Forest

An EHE of 100% (usually displayed as 1.0) would require no motorized roads and trails within a watershed, and 50 to 60 percent of the watershed being in hiding cover. The existing values for EHE range from a low of 0.46 in the north end of the Big Hole Mountains to a high of 0.76 near the Fall River in Wyoming; an average forestwide EHE value is 0.56.

Elk & Deer Winter Range - Scale Forestwide

Generally, elk and deer winter range areas are those areas, usually at lower elevations with lower snow accumulations, used by elk and deer during the winter months (Lyon and Christensen 1992). Figure III-4 displays these winter ranges on the Forest.

The winter range areas on the Forest are the upper elevational limits of elk and deer winter ranges; more winter range acres exist at lower elevations on BLM, State, and private lands. Some elk and deer which summer on the Forest winter on ranges in Montana and Wyoming. The distribution and number of wintering deer and elk on the Forest depends on winter severity. Generally a higher proportion of deer and elk winter at lower elevations on BLM, State and private lands. Development on private lands is a concern as it can adversely affect areas historically used by wintering deer and elk

There are 321,264 acres of crucial mid-to-late elk and deer winter range on the Forest. These winter range areas on the Forest have a wide range of vegetation types, with some of the areas mostly in mature forest and some predominantly in tall sagebrush/grass habitats. Some winter range shrub communities (such as mountain mahogany) are in overmature or decadent condition due primarily to historical fire suppression

Currently, 12 percent of the winter range acres are closed to livestock grazing. On the winter range acres open to livestock grazing, there are 6,352 AUM's of domestic sheep grazing, and 26,423 AUM's of cattle grazing.

Currently, 78 percent of the winter range acres are meeting desired vegetation conditions (DVC's) for range condition, 13 percent of the winter range acres are improving and moving toward DVC's, and 9 percent of the winter range acres are not improving.

Targhee National Forest Elk & Deer Winter Range

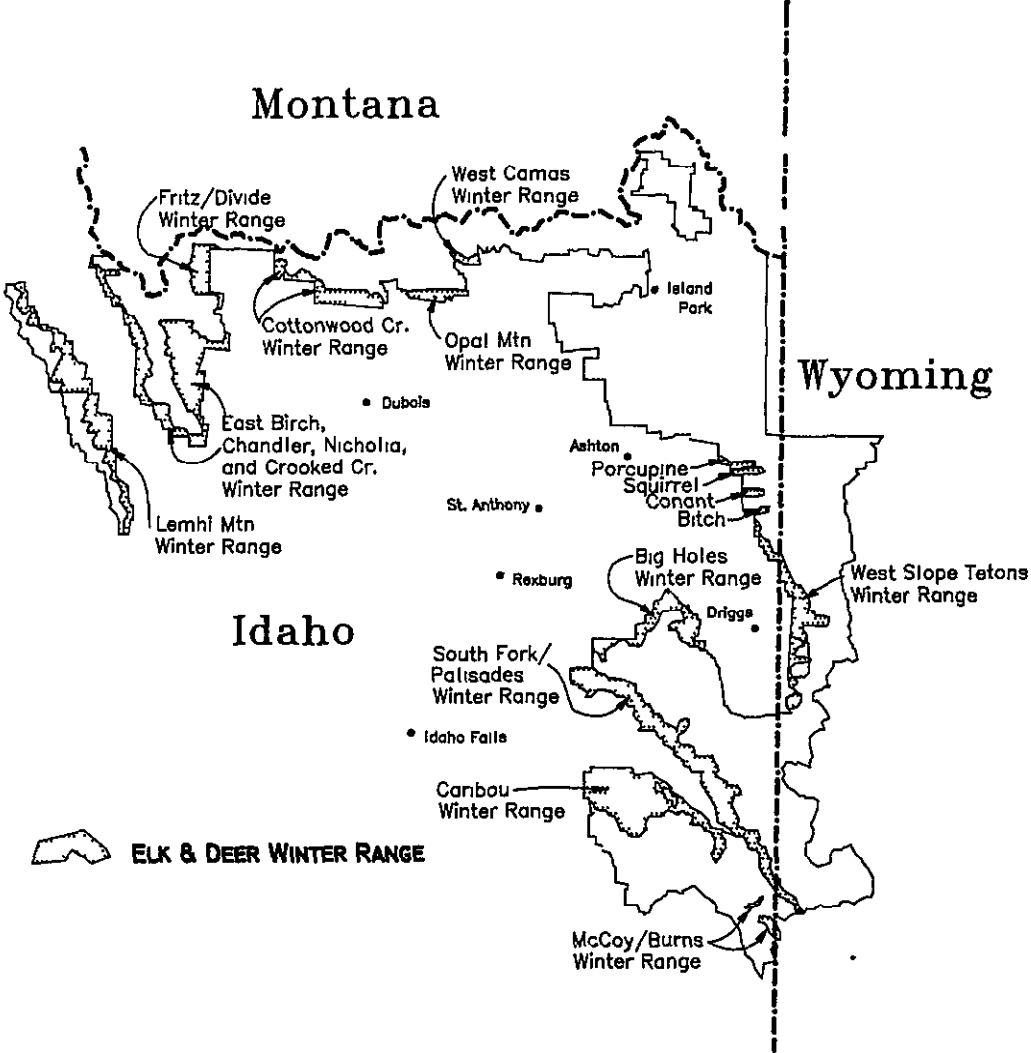


Figure III-4

About 38 percent of the winter range acres are capable of being used for cross-country snowmachine use (capable of being used for cross-country snowmachine use means slopes less than 50 percent and open vegetation conditions and types) Some winter range areas have been historically popular snow-machine use areas, and in these areas the Forest has implemented restrictions on cross-country snow-machine use. Currently 22 percent of the winter range acres are closed to cross-country snowmachine use.

Currently there is one feed ground for wintering deer and elk on the Forest, this is in Rainey Creek, within the South Fork/Palisades winter range area. The number of animals fed at this site varies each winter, primarily based on the severity of the winter. The following information from the IDF&G illustrates what has occurred from 1978 to 1995.

Winter Season	Number of Elk Fed	Number of Deer Fed
1978-79	<i>no recorded number</i>	<i>no recorded number</i>
1979-80	0	0
1980-81	0	0
1981-82	<i>no recorded number</i>	<i>no recorded number</i>
1982-83	0	0
1983-84	500	<i>no recorded number</i>
1984-85	200	400
1985-86	400	400
1986-87	300	400
1987-88	300	500
1988-89	200	300
1989-90	200	200
1990-91	400	100
1991-92	<i>no recorded number</i>	<i>no recorded number</i>
1992-93	<i>no recorded number</i>	<i>no recorded number</i>
1993-94	0	0
1994-95	400	250

Grizzly Bear - Scale Bear Management Unit

Portions of the Forest are within the Yellowstone Grizzly Bear Ecosystem (YGBE). The YGBE has been divided into Bear Management Units (BMU's). Portions of the Forest are within the following BMU's: Henry's Lake BMU (Subunits 1 and 2), Plateau BMU (Subunits 1 and 2), and Bechler/Teton BMU (Figure III-5).

Recovery goals for the YGBE are (U.S. Fish and Wildlife Service 1993):

"15 females with cubs over a running 6-year average both inside the recovery zone and within a 10-mile area immediately surrounding the recovery zone, 16 of 18 bear management units (BMU's) occupied by females with young from a running 6-year sum of observations, no two adjacent BMU's shall be unoccupied, and known, human-caused mortality not to exceed 4 percent of the population estimate based on the most recent 3-year sum of females with cubs. Furthermore, no more than 30 percent of this 4 percent mortality limit shall be females. These mortality limits cannot be exceeded during any two consecutive years for recovery to be achieved."

Targhee National Forest Bear Management Units

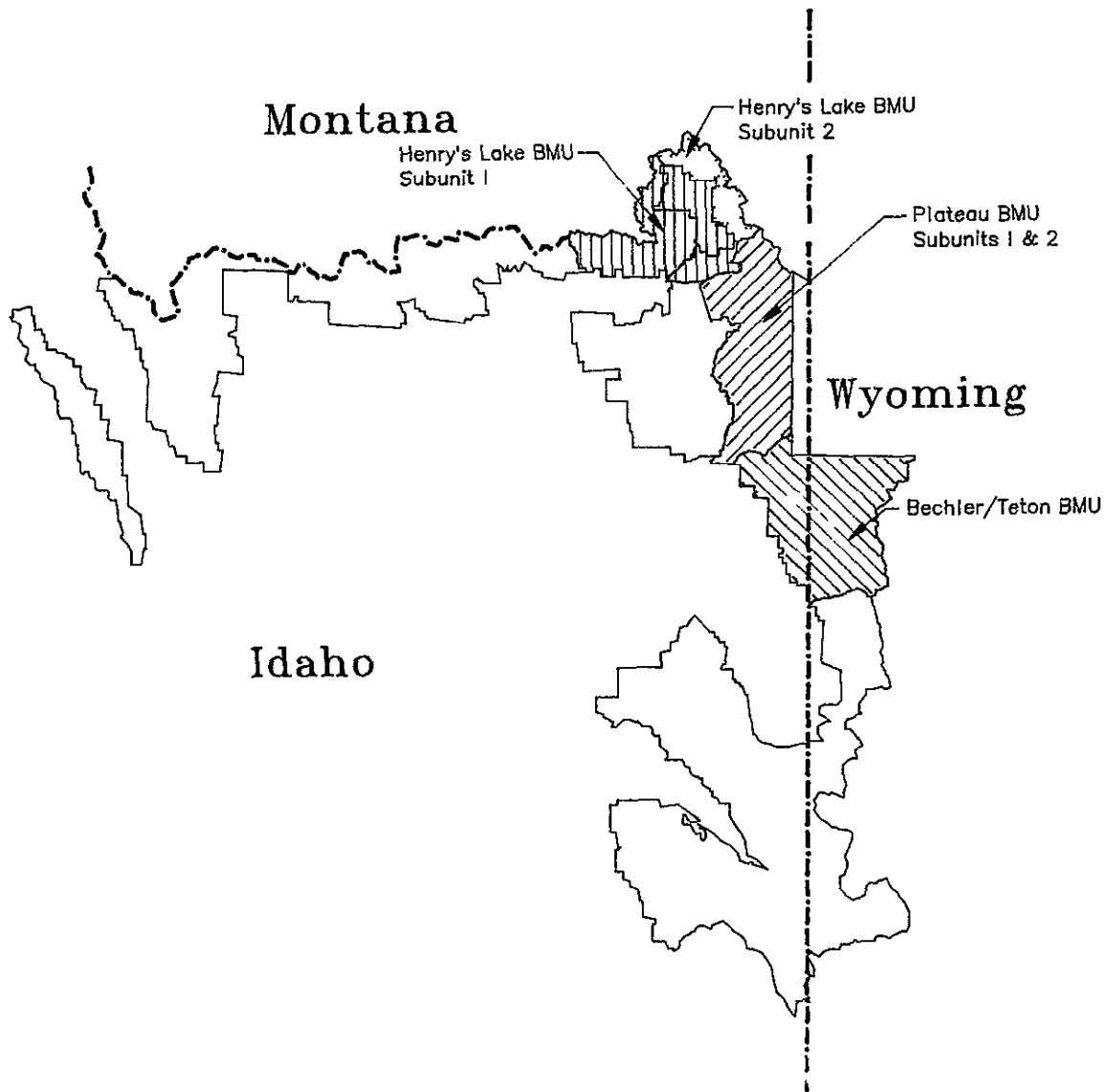


Figure III-5



Not To Scale

Table III-13 presents grizzly bear population data for the YGBE for the years 1987-1994 (from personal communication with Dr. Chris Servheen, USDI Fish and Wildlife Service, 1995). As of 1994, the status of the grizzly bear population in relation to the recovery goals was as follows

- The running 6-year average for unduplicated females with cubs was 21, compared to the recovery goal of 15.
- Average annual human-caused mortality was 4.5 bears (2 2% of the population estimate), compared to the recovery goal mortality limit which is to be ≤ 8 2 bears ($\leq 4\%$ mortality limit of the population estimate).
- Average annual human-caused female mortality was 2.0 bears (24% of the mortality limit), compared to the recovery goal mortality limit which is to be ≤ 2.5 bears ($\leq 30\%$ of the mortality limit).
- The distribution of females with young was 17 of 18 BMU's, compared to the recovery goal of 16 of 18 BMU's

Within the Plateau and Henry's Lake BMU's, a study was initiated in 1993 to determine the capability of these BMU's to support females with young. As of 1995, two of the BMU's (Plateau, Bechler/Teton) had sightings of females with cubs.

Process Paper D presents an overview of food habitats, cover requirements, denning habitat, home ranges, and motorized access effects for the grizzly bear.

To aid in the following discussions of each BMU, the following definitions are important to understand:

Habitat Value (HV): This is a measure of habitat quality for the grizzly bear derived from values for vegetation plus fish plus ungulates as measured by the Grizzly Bear Cumulative Effects Model. The higher the HV the better the habitat quality is for the grizzly bear. HV does not include any effects of human activities. HV helps answer the question, how good is the habitat for grizzly bears?

Habitat Effectiveness (HE): This value includes the HV plus all of the effects from human activities. Increasing amounts of human activity result in lower HE values which means lower habitat quality for the grizzly bear. HE helps answer the question, how much impact is human activity having on the quality of the habitat for grizzly bears?

HE/HV Index: This is a mathematical expression which shows how much of a decline there has been in habitat quality due to human activities. An index of 1.0 would mean that there has been no decline in habitat quality. An index of 0.5 means there has been a 50% decline in habitat quality.

Table III-14 presents an overview of existing habitat conditions for the Targhee portion for each of the BMU's. A brief summary from the grizzly bear cumulative effects model (CEM) for the existing conditions illustrates the following:

The Henry's Lake Subunit 1 has the highest HV of all BMU's on the Forest; followed by the Henry's Lake Subunit 2, then the Bechler/Teton BMU, and then the Plateau BMU.

The Henry's Lake Subunit 1 has the highest HE of all BMU's on the Forest, followed by the Henry's Lake Subunit 2, then the Bechler/Teton BMU, and then the Plateau BMU.

The HE/HV Index is highest for the Henry's Lake Subunit 1, followed by the Bechler/Teton BMU, then the Henry's Lake Subunit 2, and then the Plateau BMU.

Table III-13 Annual Yellowstone Grizzly Bear Population and Known Human Caused-Mortality Data

Based on 1993 Grizzly Bear Recovery Plan Criteria Data From Known, Human-Caused Mortalities, Minimum Unduplicated Counts of Females With Cubs, and Distribution of Females With Young

Year	Annual Undup FWC's	Annual Adult Female Mortality	Annual All Female Mortality	Annual Total Mortality	4% Total Mortality Limit 1/	30% All Female Mortality Limit	Annual Total Mortality 6yr avg	Annual Female Mortality 6yr avg
1987	13	2	2	3				
1988	19	0	3	5				
1989	16	0	0	1				
1990	24	4	6	9				
1991	24	0	0	0				
1992	23	0	1	4	9.4	2.8	3.7 (22/6)	2.0 (12/6)
1993	20	2	2	3	9.2	2.8	3.7 (22/6)	2.0 (12/6)
1994	20	3	3	10	8.2	2.5	4.5 (27/6)	2.0 (12/6)

1994 Status of the Yellowstone Population in Relation to the Demographic Recovery Targets

Target	Target Number	1994 Number
Unduplicated females with cubs (6 year average)	15	21 (127/6)
Known mortality limit as 4% of total population estimate	8.2	4.5
Female mortality limit as 30% of total known mortalities	2.5	2
Distribution of female with young	16 of 18	17 of 18

1/ Calculated as 4% of the minimum population estimate for the most current year which is based on the minimum number of females with cubs seen over the past three years

2/ Annual Undup FWC's = Annual Unduplicated Females with Cubs

Table III-14 Existing Habitat Conditions for the Targhee Portion of Grizzly Bear Management Units

Habitat Component	Henry's Lake BMU Subunit 1	Henry's Lake BMU Subunit 2	Plateau BMU Subunits 1&2	Bechler/Teton BMU
National Forest Acres	91,846	35,758	158,666	190,386
Other Ownership Acres	36,696	1,605	4,605	991
Total Acres	128,542	37,363	163,271	191,377
Percent of National Forest Acres in Management Situation 1	0	100	0	72
Percent of National Forest Acres in Management Situation 2	80	0	95	28
Percent of National Forest Acres in Management Situation 3	20	0	5	0
Motorized Road and Trail Access Density (mi /sq mi)				
Total Motorized Access Route Density	2 05	1 26	2 97	1 59
Open Road and Open Motorized Trail Route Density	1 52	0 98	1 29	0 77
Other Access Information				
Percent of NF Acres within Designated Wilderness	0 0	0 0	0 0	34 4
Percent of NF Acres within Inventoried Roadless Areas	54 9	66 8	0 0	12 5
Percent of NF Acres Open & Suitable for Crosscountry OHV	6 2	7 1	69 2	8 7
Percent of NF Acres within Core Areas	32 2	45 1	0 0	47 6
Number of Sheep Allotments in Use	9	0	0	2
Number of Cattle Allotments in Use	3	1	0	3
Total Forested Acres	60,768	28,130	161,454	168,885
Percent Mature	90 0	87 6	50 7	81 4
Percent Pole	0 7	2 7	8 4	1 6
Percent Sapling	2 1	7 0	11 3	4 3
Percent Seedling	5 0	2 6	20 6	8 8
Percent Non-stocked	2 3	0 2	9 0	4 0
Total Nonforested Acres	14,066	9,228	1,815	22,490
Number of Verified Bear Mortalities & Cause (1981-1994)				
Hunting/Poaching	0	0	1	0
Transporting	0	1	0	0
Self-defense	0	0	0	1
Unknown	1	0	0	0
Cumulative Effects Model Ratings (daily per acre average)				
Spring HV	0 2873	0 2624	0 0624	0 1693
Spring HE	0 1687	0 1095	0 0252	0 0868
HE/HV Index	0 59	0 42	0 40	0 51
Summer HV	0 2548	0 2429	0 0890	0 2072
Summer HE	0 1572	0 1577	0 0425	0 1223
HE/HV Index	0 62	0 65	0 48	0 59
Fall HV	0 2174	0 2340	0 0970	0 2740
Fall HE	0 1309	0 1314	0 0478	0 1686
HE/HV Index	0 60	0 56	0 49	0 62
Annual HV	0 2514	0 2458	0 0835	0 2196
Annual HE	0 1512	0 1328	0 0389	0 1280
HE/HV Index	0 60	0 54	0 47	0 58

Notes For Henry's Lake BMU, Subunit 1, all of the analysis (beginning with Motorized Road and Trail Density down through the Cumulative Effects Model Ratings) applies only to the National Forest acres which are in Management Situation 2 habitat

Gray Wolf - Scale: Forestwide

Possible sightings of gray wolves have occurred on the Forest, and are summarized in the Analysis of the Management Situation (AMS). There have been no reported sightings of packs or evidence of successful breeding. In April, 1994 the USDI Fish and Wildlife Service approved the Final EIS for The Reintroduction of Gray Wolves to Yellowstone National Park and Central Idaho (USDI Fish and Wildlife Service 1994a). In November of that year final rules were issued for the establishment of a nonessential experimental population of gray wolves in Yellowstone National Park, central Idaho, and southwestern Montana (USDI Fish and Wildlife Service 1994b). As a result of these actions, the following conditions exist

The portion of the Forest west of Interstate 15 is within the Central Idaho Nonessential Experimental Population Area. The portion of the Forest east of Interstate 15 is within the Yellowstone Nonessential Experimental Area. (See Figure III-6) All wolves found in the wild within the boundaries of these management areas, after the first wolf releases, will be considered nonessential experimental animals (USDI Fish and Wildlife Service 1994a and b)

This gray wolf reintroduction does not conflict with existing or anticipated Federal agency actions or traditional public uses of park lands, wilderness areas, or surrounding lands (USDI Fish and Wildlife Service 1994b). Land use restrictions may be temporarily used by land or resource managers to control intrusive human disturbance, primarily around active den sites between April 1 and June 30, when there are five or fewer breeding pairs of wolves in a recovery area. After six or more breeding pairs become established in a recovery area, land-use restrictions would not be needed (USDI Fish and Wildlife Service 1994a).

The ability of individuals holding grazing permits on public land to harass adult wolves in an opportunistic, noninjurious manner will become part of their permit conditions so it is clearly understood exactly what can occur. There is a seven day reporting requirement for any such incident (USDI Fish and Wildlife Service 1994a).

The following conditions and criteria will apply in determining the problem status of wolves (USDI Fish and Wildlife Service 1994a). Livestock in this context refers to only cattle, sheep, horses or mules.

Wounded livestock or some remains of a livestock carcass must be present with clear evidence that wolves were responsible for the damage. Also there must be reason to believe that additional losses would occur if the problem wolf or wolves were not controlled. Such evidence is essential since wolves may simply feed on carrion they have found while not being responsible for the kill

Artificial or intentional feeding of wolves must not have occurred. Livestock carcasses not properly disposed of in an area where depredations have occurred will be considered attractants. On federal lands, removal or resolution of such attractants must accompany any control action. Livestock carrion or carcasses on federal land, not being used as bait in an authorized control action (by agencies), must be removed, buried, burned, or otherwise disposed of such that the carcass(es) will not attract wolves.

On federal lands, animal husbandry practices identified in existing approved allotment plans and annual operating plans for allotments must have been followed.

If additional livestock depredations were likely, proper animal husbandry practices were employed (proper disposal of livestock carcasses, etc.), artificial feeding did not take place, and federal grazing allotment plans were followed, agencies would harass, capture, more, or kill wolves that attacked livestock (defined as cattle, sheep, horses, or mules only) on public or private land. Females with pups on public land would be released on site before October 1.

Central Idaho Nonessential Experimental
Population Area and Yellowstone Nonessential
Experimental Population Area for Gray Wolf.
(USDI Fish and Wildlife Service 1994 b)

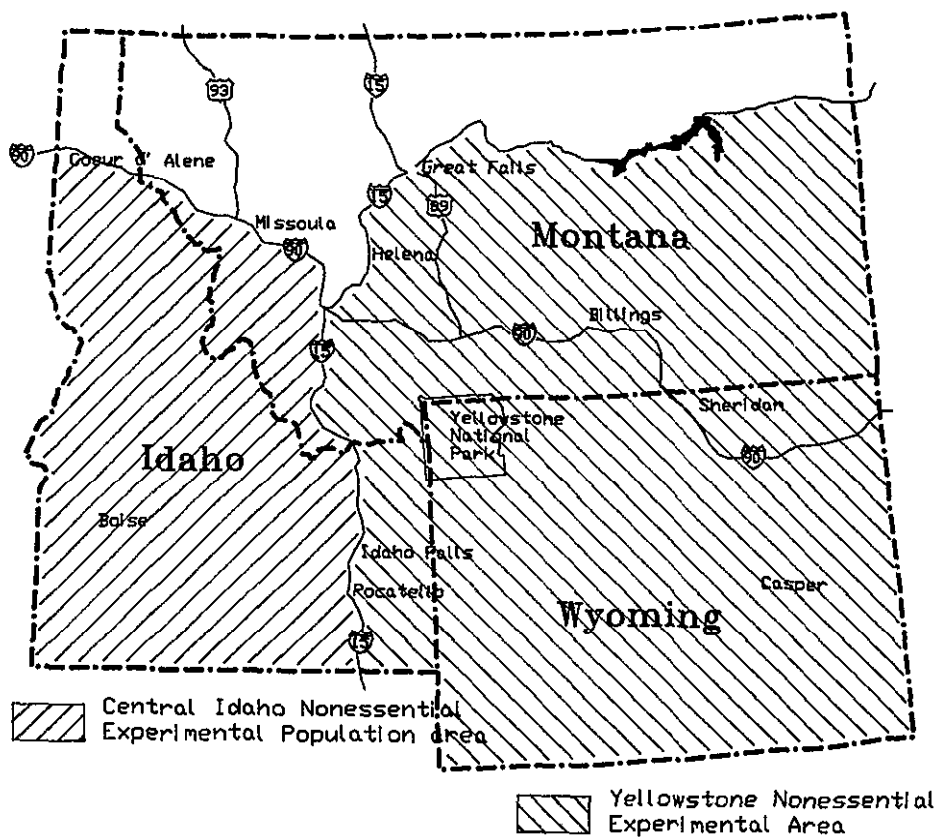


Figure III-6

Wolf recovery will not result in wolf travel corridors or linkage zones being established. The size and proximity of the areas where wolves will be managed for recovery are large enough, close enough, and have enough public land between them that additional areas are not required in the foreseeable future to maintain a viable wolf population after the three subpopulations become established (USDI Fish and Wildlife Service 1994a).

Primary Cavity Nester Habitat - Scale Forestwide and Watersheds

Distribution maps and other sources of literature indicate there are eight species of primary cavity nesters (Table III-12), that is they create their own nesting holes in dead and defective trees. Four of these primary cavity nesting species (hairy woodpecker, northern flicker, yellow-bellied sapsucker, Williamson's sapsucker) require larger size snags and provide larger nesting cavities which are important for several other species of animals.

We analyzed overall biological potential for the primary cavity nesting species as a group, and a biological potential analysis was done for the four species which require larger size snags. These biological potential analyses are based on existing snag densities. Currently, the biological potential for the primary cavity nesting species as a group is 0.61, and the biological potential for the larger cavity nesting species is 0.47.

Forest Owl Habitat - Scale: Subsection

Flammulated & Boreal Owls - Flammulated owls are known to be present on the Island Park, Teton Range, Big Hole/Palisades and Caribou Subsections. Boreal owls have been documented on all but the Lemhi/Medicine Lodge and Caribou Subsections. The habitat components considered most important for the flammulated and boreal owls are a) the amount of mature and older Douglas-fir, mixed conifer, and aspen; b) primary cavity nesting habitat for the larger woodpeckers (hairy woodpecker, northern flicker, yellow-bellied sapsucker and Williamson's sapsucker). Thirty acres encompasses the entire home range of a flammulated owl pair during the breeding/nesting period. Thirty acres encompasses the largest size nest stands recorded in the literature for boreal owls. Approximately 3,600 acres encompasses the winter home range of a boreal owl. Summer home ranges are slightly smaller. (USDA Forest Service 1994a)

Great Gray Owl - The Forest has documented the presence of great gray owls in all seven subsections. The habitat components considered most important for this species are: a) mature or older forest habitat to provide suitable nesting sites; and b) suitable foraging habitat which includes nonstocked and seedling forests and nonforested habitats. Great gray owl nest sites average 143 meters from nearest opening; a 143 meter radius circle is about 16 acres. The largest home ranges recorded for great gray owls is 6.5 sq. km., which is 1,622.4 acres. All of the subsections have suitable foraging habitat. (USDA Forest Service 1994a)

Furbearer Habitat - Scale: Subsection

Wolverine - In 1985 a wolverine survey was done in Idaho to determine the location and status of populations (Groves 1987). Results of the survey indicated that three areas of the State had wolverine populations, however, the Forest was not within one of these areas. However, documented observations of wolverine on the Forest have occurred in the Centennial, Island Park, Madison, Teton Range and Caribou Subsections. Respectively, there have been 18, 1, 3, 7, and 1 observations between 1961 and 1995.

North American Lynx - Historically, lynx populations were minimal in the contiguous United States due to a lack of suitable habitat (U.S. Fish and Wildlife Service 1994c). Favorable habitat conditions for the lynx dissipate with decreasing latitude. Thus, the lynx is restricted to higher elevations the more southern the latitude (U.S. Fish and Wildlife Service 1994c).

The only documented reports of lynx on the Forest occur in the Wyoming portion of the Big Hole/Palisades Subsection (USDA Forest Service 1994b). Based on current knowledge, it is unlikely that the Forest historically or currently provides habitat for a viable resident lynx population.

Fisher - Historically, fisher were never known to occur in the Idaho portion of the Greater Yellowstone Area (Clark, et al 1989). However, one fisher was trapped in the Island Park Subsection at Warm River Butte in 1978. Also, fisher tracks were observed in the Teton Range Subsection near North and South Leigh Creeks during the winter of 1995 by a research team studying furbearers on the Forest. At this time, there is uncertainty about both the historical and current status of fisher populations on the Forest

American Marten - Marten sightings have been documented within all subsections except Lemhi/Medicine Lodge (Table III-12).

We are not sure about the presence of American marten in the Lemhi/Medicine Lodge subsection. Suitable habitat exists for marten, however, conifer forests only make up 37 percent of this subsection, and the forests are not connected to other forested habitats with known marten populations. Therefore, there is uncertainty about marten populations and habitat in this part of the Forest

There is a furbearer study in progress in the Island Park, Madison Plateau, and Teton Range subsections. Preliminary observations indicate marten are abundant

Northern Goshawk Habitat - Scale Forestwide

The goshawk is a forest habitat generalist that uses a variety of forest types, forest ages, structural conditions, and successional stages (Reynolds et al. 1992). It preys on small to medium sized birds and mammals (robins and chipmunks to grouse and hares), which it captures on the ground, in trees, or in the air (Reynolds et al. 1992). Forests within goshawk nesting home ranges should be an interspersed mosaic of structural stages - young to old forests - to increase the diversity of habitat for goshawks and their many prey species (Reynolds et al. 1992). Goshawk monitoring on the Forest has identified 49 goshawk territories, some of these territories are historic and some active. Not all of the Forest has been inventoried or monitored for goshawks, therefore additional goshawk territories probably exist. Northern goshawks have been documented in all seven subsections. These range from a high of 13 territories in the Centennial Mountains Subsection to a low of one territory in the Teton Range Subsection. Trends are unknown at this time.

Nest Areas - Nest areas include one or more forest stands, several nests, and several landform characteristics. Nest areas are occupied by breeding goshawks from early March until late September, and are the focus of all movements and activities associated with nesting. The size (20-25 acres) and shape of nest areas depend on topography and the availability of patches of dense, large trees (Reynolds et al. 1992)

Nest areas are often used more than one year, and some are used intermittently for decades. Many pairs of goshawks have two to four alternate nest areas within their home range. All previously occupied nest areas may be critical for maintaining nesting populations because they contain the habitat elements that attracted the goshawks originally. Additionally, replacement nest areas are required because goshawk nest stands are subject to loss from catastrophic events and natural decline. (Reynolds et al. 1992)

Goshawk nest stands have a relatively high tree canopy cover and a high density of large trees. Studies suggest that the dense vegetation in these stands provide relatively mild and stable microenvironments, as well as protection from predators of goshawks. Nest areas are usually classified as mature and older forest stands. (Reynolds et al. 1992)

Post-Fledging Family Area (PFA) - PFA's include the area used by the adults and young from the time the young leave the nest until they are no longer dependent on the adults for food. The PFA surrounds the nest area and, although it generally includes a variety of forest conditions, the vegetation structure resembles that found within nest stands. PFA's vary in size from 300 to 600 acres (mean = 415 acres). PFA's provide the young hawks with cover from predators, and sufficient prey to develop hunting skills and feed themselves in the weeks before juvenile dispersal. Forests in the PFA's should contain overstories and habitat attributes critical in the life-histories of goshawk prey species. (Reynolds et al 1992)

Foraging Area - Goshawks prey on birds and mammals in the larger body-size classes available to forest-dwelling hawks. Generally speaking, because of larger species of vertebrates have less dense populations than smaller species, predators of large prey must hunt over large areas in order to meet their energy requirements. Goshawk foraging areas are about 5,000 to 6,000 acres. (Reynolds et al. 1992)

Limited radiotelemetry evidence suggests that goshawks prefer mature forests for foraging. Additional information on the composition and structure of goshawk foraging habitat was gleaned from information on the habitat requirements of goshawk prey species. Raptor populations are often limited by prey populations, and choice of foraging habitat by goshawks is predicted, at least in part, on habitats where prey are abundant and accessible. (Reynolds et al 1992)

The foraging area comprises the largest portion of the goshawk nesting home range and therefore typically includes a greater diversity of landforms, forest cover types, and vegetation structural stages. Important habitat components include snags, downed logs, woody debris, openings, large trees, herbaceous and shrubby understories, and interspersed vegetation structural stages (forest successional stages) (Reynolds et al. 1992)

Red Squirrel Habitat - Scale: Subsections

Red squirrels are so strongly associated with the conifer forests that their population densities fluctuate with cone crops. (Smith 1968, Gurnell 1983, Halvorson and Engeman 1983) Since red squirrels are so strongly dependent upon conifer seeds as a food supply, conifer forests must be of seed-producing age before red squirrels will make significant use of them. Habitat quality is also related to nesting cover and food-caching sites. Natural cavities are preferred by red squirrels as nest sites. (Hamilton 1939, Layne 1954) However, underground nests and external tree nests are more commonly used where cavities are not available. (Fancy 1980) Large diameter trees, large standing snags, and fallen trees are important sites for cone storage. (Vahle and Patton 1983)

Suitable habitat for red squirrels exists in all subsections. At the present time, about 80% of the forested acres are of cone bearing age (about 928,000 acres)

Peregrine Falcon - Scale: Subsection

Table III-8 indicates the distribution of the peregrine falcon across the Forest within the seven subsections. Process Paper D includes information on sightings and habitat preferences of peregrine falcons.

The peregrine falcon has been listed as an endangered species under the Endangered Species Act. However, in June of 1995, the U S. Fish & Wildlife Service proposed removing this species from the list of endangered and threatened wildlife. (USDI Fish and Wildlife Service, 1995)

Lemhi/Medicine Lodge and Madison Plateau - No peregrine falcon habitat has been identified. Other subsections are discussed below.

Centennial Mountains - Efforts to establish successful peregrine falcon eyries have occurred at three general areas in this subsection: Targhee Creek, Sawtell Peak and Henry's Lake Flat. The Henry's Lake Flat area is not National Forest land. At the present time, the Targhee Creek and Sawtell areas are not being used by peregrines.

Island Park - One historic peregrine falcon eyrie occurs in this subsection along the Henry's Fork (upstream from the confluence with Warm River). This site has not been used by peregrines in recent years.

Teton Range - Two eyries occur in Teton Canyon.

Big Holes/Palisades - Three peregrine falcon eyries occur in this subsection in the following general locations: South Fork of the Snake River (above Heise), Sheep Creek (near Palisades Dam), and Alpine. The Sheep Creek and Alpine eyries have been productive in recent years, but the South Fork of the Snake River eyrie has not.

Caribou - One peregrine falcon eyrie occurs in this subsection in the general vicinity of Swan Valley.

Unique Ecosystems

Research Natural Areas - Scale: Forestwide

Research Natural Areas (RNA's) are part of a national network of field ecological areas designated for research and education and/or to maintain biological diversity on National Forest System lands. RNA's are used for nonmanipulative research, observation and study. They also may serve to carry out provisions of special acts, such as the Endangered Species Act and the monitoring provisions of the National Forest Management Act.

The Forest currently has six established RNA's, each having unique features representing some of the Forest's diversity. In addition, three areas are being evaluated for designation and one RNA is awaiting final approval.

IV. FOREST USE AND OCCUPATION

ACCESS MANAGEMENT

Road System - Scale: Forestwide

The Forest road system provides access to the National Forest for recreation, industry and administration. Land transportation by motorized vehicles is the main means of travel on the Forest. Seven major highways run through the Forest and all primary access to the Forest begins from one of these highways. Average daily traffic counts collected by the Idaho State Highways Department (Gillespie 1994) suggest the heaviest traffic occurs on the highways between Idaho Falls and the northeast part of the Forest (Figure III-7). Many of the Forest's roads were constructed in the mid-1970's as part of the timber salvage program and provided access to recreationists, firewood gatherers and hunters. The roads have also proved useful for fire suppression activities. Currently there are 1,367 miles of open system roads plus 1,021 miles of open nonsystem roads. Motorized use is currently restricted on some roads as follows: 61 miles of system roads have seasonal restrictions; 572 miles of system roads have yearlong restrictions, 24 miles of nonsystem roads have seasonal restrictions, and 177 miles of nonsystem roads have yearlong restrictions.

Targhee National Forest

Average Daily Traffic (ADT) at Selected Locations

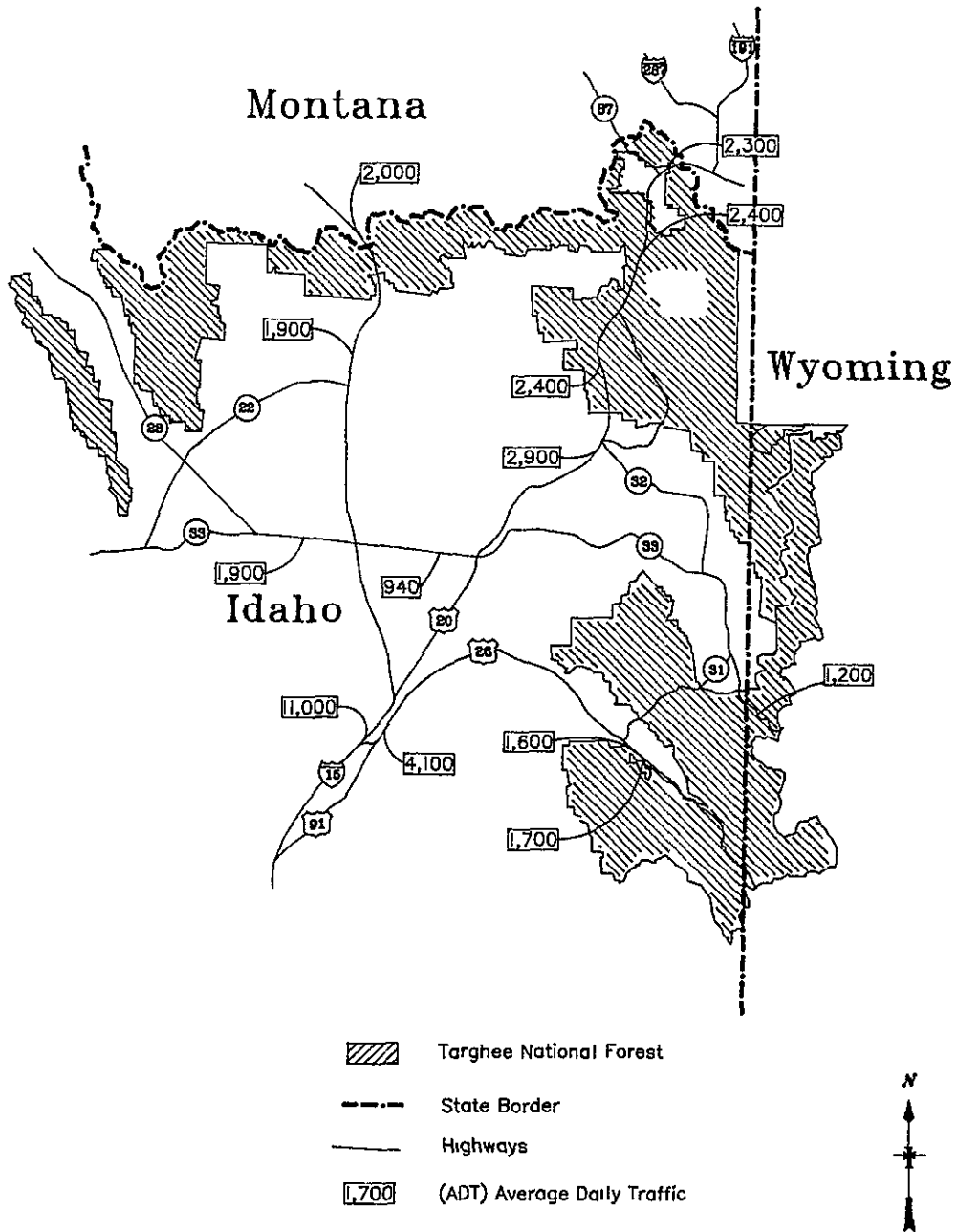


Figure III-7

Not To Scale

The present Forest road system is essentially in good shape, with maintenance being done yearly on arterial and collector roads, and some local roads, depending on resources needs. Further information on the present Forest Development Road System can be found in the Transportation section of the Analysis of the Management Situation (AMS).

The road system now in existence has created some resource conflicts with wildlife, fish and watersheds. Road restrictions or reclamations have been requested by agencies, groups, and individuals to reduce resource conflicts. Law enforcement problems have also increased over the years because of the need to enforce road restrictions

The Forest has begun restricting and/or reclaiming roads to reduce resource conflicts. Many of the spur roads built during the salvage program are now restricted. A total of 377 miles of road were obliterated from 1981 to 1991. An additional 1,245 miles of road were obliterated in 1992-93.

There are approximately 2,000 miles of existing system roads (Table III-15). Of these, 10 percent are classified as arterials. They are often two-lane and paved or have a good gravel surface and can handle unrestricted traffic at moderate speeds. Branching from the arterial roads are the collectors. Collector roads are medium standard roads that constitute about 25 percent of the mileage in the transportation system. Collector roads are stable enough for most traffic during normal season of use. Small single-lane roads, known as local roads, are found throughout the Forest and make up 65 percent of the road system. These minimum standard roads provide access for specific purposes, such as conducting a timber sale, maintaining an electronic communication station, or reaching a trailhead. They allow limited passing, but the road conditions require that vehicles move slowly. Many of the local roads are currently restricted to vehicular traffic much of the time.

Other two-track roads exist that are referred to as nonsystem roads (sometimes called "ghost roads"). These isolated roads were not designed or maintained for public use; they are created by repeated use by the public. Some vehicles cannot travel on these roads. Road surfaces are generally rough and irregular with no drainage. Some of these roads are currently restricted to motorized use. There are 1,222 miles of these roads on the Forest (Table III-15).

Table III-15 Existing Road and Trail Access	
	Existing
System Roads 1/	
Miles - Open 2/	1,367
Miles - Seasonal Restrictions 3/	61
Miles - Yearlong Restrictions 4/	572
Miles - Reclaimed/Obliterated	NA*
Total Miles	2,000
Nonsystem Roads	
Miles - Open 2/	1,021
Miles - Seasonal Restrictions 3/	24
Miles - Yearlong Restrictions 4/	177
Miles - Reclaimed/Obliterated	NA*
Total Miles	1,222
System Trails 1/	
Miles - open 2/	433
Miles - Restricted 5/	597
Total Miles	1,030
Nonsystem Trails	
Miles - open 2/	199
Miles - Restricted 5/	102
Total Miles	301
<p>1/ System roads and trails comprise the official Forest Transportation Management System. Nonsystem roads and trails (sometimes called ghost roads and trails) are not part of the official Forest Transportation Management System.</p> <p>2/ Miles - Open means road and trail miles without restrictions on motorized use.</p> <p>3/ Miles - Seasonal Restriction means road miles on which motorized use is restricted for only a portion of the spring/summer/fall seasons.</p> <p>4/ Miles - Yearlong Restriction means road miles on which motorized use is restricted for the entire spring/summer/fall seasons.</p> <p>5/ Miles - Restricted means trail miles on which motorized use is restricted either for a portion of the spring/summer/fall seasons or yearlong (as in designated wilderness areas).</p> <p>* This table refers to present time. It does not take into account the 1,622 miles of roads that were reclaimed/obliterated between 1981 and 1993.</p>	

Table III-16 displays the number of miles of system road by functional class and the kind of access provided.

Functional Class	Open All Vehicles	Seasonal Restriction (miles)	Yearlong Restrictions (miles)
Arterial	196	*0	*0
Collector	504	*0	*0
Local	667	*61	*572
Total	1367	61	572
* Open to snowmobile travel if designated			

There are 235 existing and 109 potential/needed materials sources for gravel, rock riprap, and earth borrow sites. This should serve the Forest's needs for the planning period. The 1993 Compendium of Material Sources is available for further information.

The National Forest Scenic Byways Program was developed to increase public awareness and understanding of the National Forest and State activities and recreation opportunities. Presently there are two Scenic Byways that pass through the Forest, the Mesa Falls Scenic Byway and the Teton Scenic Byway. The Mesa Falls Scenic Byway follows old State Highway 47 from Ashton to where it ties back to US Highway 20. About 20 of the total 29 miles are located on the Forest. The Teton Scenic Byway Route travels east from Idaho Falls to Swan Valley along Highway 26, then north to Victor on Highway 31, from Victor to Tetonia on Highway 33 to the intersection of Highway 32, and then to Ashton on Highway 32.

Summer Access for Off-Highway Vehicles (OHV)

Approximately 61 percent of the Forest (1,126,000 acres) is currently open for summer cross-country motorized and mechanized vehicle access. There are 1,367 miles of open system road, 1,021 miles of open nonsystem road, 433 miles of open system trails, and 199 miles of open nonsystem trails (Table III-15 and III-17). The Forest conducted an analysis of motorized access and road/trail density in the spring of 1995 to accurately inventory these opportunities. This analysis is documented in Process Paper E.

There are no trails designed specifically for motorized OHV's or mountain bikes, although some are suitable in their present condition. There is a significant increase in demand for such opportunities. Both types of use are increasing at a rate of five to ten percent per year on the Forest and adjacent lands. The highest concentration of these activities are in the Big Hole/Palisades and Caribou Subsections, where there is significant use by motorcycles and mountain bikes. As noted in the Soil and Riparian section there are areas of concern for OHV effects on soil and vegetation. There are no serious widespread adverse consequences as a result of this use. However, it is possible that motorized use is affecting some big game wildlife habitat potential or vulnerability to hunting pressure.

Winter Access

There are over 450 miles of winter trails that are groomed on the Forest (as shown in Table III-17) and 1,511,000 acres open to cross-country snowmobiling. Groomed snowmachine and cross-country ski trails and their use are most numerous in the Island Park and Big Hole/Palisades Subsections (Table III-16). The Centennial Mountains, Madison Plateau, and Caribou Subsections surrounding these two hub areas also provide many winter opportunities. In contrast, the most undeveloped backcountry opportunities and the least used by both skiers and snowmachiners are found in the Lemhi/Medicine Lodge, and Teton Range Subsections. Within the Teton Range Subsection, the Jedediah Smith Wilderness is closed to snowmobiling.

Special use permits for outfitter-guide operations for snowmobiling, dog sledding, and skiing are scattered across the Forest, but are most numerous in the Madison Plateau subsection where there are six commercial snowmachine operations. This is due to attractions such as the Two-Top National Snow-machine Trail near west Yellowstone, the Mesa Falls Scenic Area, and an excellent grooming program by Fremont County, Idaho. Growth in snowmobiling has been increasing at 5-10 percent per year annually across the Forest. As a result, the Forest constructed one new parking area and day lodge for winter users at Big Springs, in Island Park. This winter activity has resulted in some concerns regarding conflicts with wintering wildlife, and several travel access closures have been implemented to reduce conflicts.

Activity	Lemhi/ Medicine Lodge	Centennial Mountains	Island Park	Madison Plateau	Teton Range	Big Hole/ Palisades	Caribou	Forest Total 1/
# Outfitters Permitted (summer and winter use)	5	11	11	5	30	18	3	83
Average Outfitted Use-days	338	240	2299	3739	5814	5858	594	18,882
Outfitter fees paid	\$0.8M	\$1.0M	\$7.2M	\$13.7M	\$9.9M	\$17.0M	\$5M	53.0M
Groomed Snowmobile Trails (miles)	0	73	103	96	0	112	66	450
Groomed x-country ski trails (miles)	0	10	29	11	0	5	1	56
Backcountry snowmobile area (acres)	65M	91M	49M	55M	30M	72M	50M	412M
Backcountry ski tour area (acres)	5M	15M	0	0	45M	0	0	65M
Special use permits (non-outfitter/guide)	0	40	89	13	14	39	84	267
Undeveloped campsites (dispersed sites)	45	62	25	18	19	36	88	293
Heavy-use dispersed sites	4	24	6	4	19	29	20	106
Miles system summer trails	59	178	17	24	189	409	153	1,029
Miles nonsystem summer trails	35	41	34	11	35	117	26	299
Wilderness acres	0	0	0	41.6M	92.6M	0	0	134.2M
Roadless area acres (includes wilderness study)	241.8M	127.7M	0.991M	11.4M	40.1M	307.9M	148.8M	878.6M
Acres open to OHV's	183M	192M	269M	158M	51M	163M	116M	1,132M
Mi system road open to OHV use	126	327	455	173	28	118	140	1,367
Mi nonsystem road open to OHV use	168	415	215	26	32	123	40	1,021
Mi system trail open to OHV use	25	69	13	12	27	188	98	433
Mi nonsystem trail open to OHV use	15	40	32	10	17	70	20	199
# of Developed sites	3	3	20	8	5	15	7	61
Miles W, S, & R Rivers	0	18	87	25	30	54	35	249
1/ Forest Totals may differ slightly from sum of individual numbers due to rounding								

WILDERNESS AND RECREATION RESOURCES

Wilderness and Recommended Wilderness

There are currently two designated wilderness areas on the Forest. These are the Jedediah Smith Wilderness (123,451 acres) and the Winegar Hole Wilderness (10,715 acres). The Jedediah Smith is mostly in the Teton Range Subsection with the balance in the Madison Plateau Subsection. Winegar Hole is totally within the Madison Plateau Subsection. Winegar Hole is largely primitive with very little recreational use. This is mostly due to access difficulty, since there are only four miles of trail in the area. Use of this area is mostly for hunting big game. The Jedediah Smith is intensively used in the summer with approximately 60,000 visits for hiking, backpacking and horseback riding. This is a spectacular mountainous area on the west slope of the famous Teton Mountain Range. These wilderness areas are two of twelve designated in the Greater Yellowstone Area which total 3.8 million acres.

The Wyoming portion of the Palisades Roadless Area was designated by Congress as a Wilderness Study Area in 1984. The Study Area contains approximately 129,100 acres. Of these acres, over 79,800 are administered by the Bridger-Teton National Forest and 49,300 acres are administered by the Targhee. In addition, there are 110,520 acres of this roadless area in Idaho which have had no action or recommendation taken on them. The studies on the Wyoming portion have not been conducted, and are planned to be done with the Bridger-Teton as the lead forest at the time of their plan revision.

Portions of Italian Peak, Lionhead, and Winegar Hole Roadless Areas (65,000 acres) were recommended wilderness in the current Forest Plan, but no legislative action has been taken to date.

Roadless Areas

There are sixteen areas on the Forest which qualify as roadless or roadless adjacent to designated wilderness. These areas total about 841,000 acres. Within these roadless areas, some 243,000 acres are closed to summer OHV use. The majority of the roadless acres are contained in the Lemhi/Medicine Lodge, Centennial Mountains, Big Holes/Palisades, and Caribou Subsections. The 1993 roadless inventory showed a net increase in qualifying acres over the inventory in the current Forest Plan. This is because several of the roading and timber harvest projects proposed in the Plan were never completed. These areas were added to the previously inventoried areas. In contrast, the Signal Peak, Warm River South and East, and Moody Creek areas did incur enough development to require them to be removed from the inventory. In 1990, the Centennial Mountains Wilderness Suitability Study EIS (Mt. Jefferson) was completed, and none of the Targhee portion was recommended wilderness. The Mt. Jefferson area was thereby released for management according to Forest Plan direction.

Wild, Scenic, and Recreational Rivers

In November, 1994, an eligibility inventory was completed for the entire Forest, and approximately 249 miles of rivers and streams were determined eligible (Table III-17). The largest mileage of eligible stream segments is in the Island Park Subsection, and the Big Hole/Palisades Subsection has the second highest. The remaining subsections (excluding the Lemhi/Medicine Lodge) all have a lesser mileage ranging from 17 to 35 miles.

The largest potential classification mileage is for Wild, followed by Recreational and Scenic which are almost equal. Suitability studies have not been completed for any of these streams, and none are scheduled for funding until 1996.

Visual Resources

The Forest has some very unique and outstanding scenery. It encompasses peaks over 10,000 feet, arid lands, timbered highlands, lakes and waterfalls.

During the past decade, the greatest change in visual resources occurred among the vast expanses of mature lodgepole pine found in the Madison Plateau and Island Park Subsections. Large portions of this mature timber were clearcut. Some of this timber harvest occurred near major travel routes and use areas such as campgrounds, resorts, summer home areas and private lands. This changed many of the solid timbered areas to open meadow-like mosaics of scattered timber stands. Even though this was a drastic change from the past, it also provided variety in terms of scenic views and vistas. In some instances, this type of harvest enhanced areas from a visual standpoint.

The following chart shows the acres which currently meet each visual quality objective.

<u>Visual Quality Objective</u>	<u>Acres</u>
Preservation	137,761
Retention	226,882
Partial Retention	804,784
Modification	519,184
Maximum Modification	148,189

Most of the Preservation acreage falls within the Jedediah Smith and Winegar Hole Wildernesses, which are in the Teton Range and Madison Plateau Subsections. Most of the Modification and Maximum Modification acres are in the Island Park and Madison Plateau Subsections. The other classifications are scattered throughout the subsections.

Developed Recreation Sites - Scale: Forestwide

Demand for new types of specialized facilities such as trailheads, mountain biking trails, boat ramps, fishing access and snowmachine facilities is increasing at five to ten percent annually. A strong increase in demand for group camping sites is an example of this type of specialized recreation facility need.

As shown in Table III-17, there are 61 developed recreation sites with facility investments over \$50,000 on the Forest. This figure includes both existing and planned sites. These sites, which include facilities such as campgrounds and boat ramps, have a total capacity of 8,890 persons at one time (PAOT). These sites receive approximately 608,000 visits and result in 703,000 12-hour recreation visitor days (RVD's) annually. Use is increasing approximately 2 percent per year. The Big Hole/Palisades Subsection has the most sites (19), and the Island Park Subsection has the next largest number (18). The remaining subsections each have seven sites or less. Utilization rates for these sites range from low (<20%) to high (60%) across the Forest, with highest rates in the Warm River/Island Park, and Palisades areas.

Developed recreation facilities are in fair to good condition across the Forest, but there is a significant backlog in heavy maintenance and reconstruction needs. The Forest has been able to reconstruct a few of the major sites. Because many of our campgrounds and other developed facilities are adjacent to or along travel routes to Grand Teton and Yellowstone National Parks, use patterns on the Forest are affected by management actions and physical attractions of these parks.

Dispersed Recreation

The largest number of dispersed activity and camping sites are in the Caribou and western Centennial Mountains Subsections as shown in Table III-17. The next largest numbers of sites are in the Lemhi/Medicine Lodge and Big Hole/Palisades Subsections. These sites receive approximately 1,147,000 visits and result in 992,000 RVD's annually. Dispersed sites have few or no structural facilities for recreation. They are used for general camping and to provide access to fishing, hunting, OHV areas, and trails. Some of these sites have received increased use and number of camping spots, such as at Horseshoe Lake which has increased from three to seven sites in the last decade. Many dispersed activity uses are increasing at a rate of approximately 4 percent.

The capacity in PAOT of these sites is greater than the developed sites on the Forest. There are 106 heavy use dispersed sites on the Forest, and some of these dispersed campsites are showing damage to vegetation and soils. Many sites are in need of management actions to stabilize or minimize such impacts.

There are approximately 1,029 miles of system and 229 miles of nonsystem trails for motorized and nonmotorized use on the Forest. Summer use trails are most abundant in Big Hole/Palisades, Caribou, Teton Range, and Centennial Mountains Subsections (Table III-17).

Outfitters and Guides

There are 83 permitted outfitter/guide operations on the Forest at the present time (Table III-17). Outfitted activities are most numerous in the Teton Range and Big Holes/Palisades Subsections. The Centennial Mountains and Island Park Subsections also have a moderate number of permitted operations.

Forestwide, the largest number of these permits is for summer activities. These permits are for guided activities such as hunting, horseback riding, river trips, fishing, wagon rides, backpacking, horsepacking, etc. These activities represent a commercial industry with an annual income estimated at over 1.8 million dollars, and fees to the government of over \$53,000. There is continuing interest in new permits, however capacity determinations and commercial allocations have only been made for a few parts of the Forest. Therefore, a moratorium was recently initiated on the Forest to deny any new applications for permits, except in areas where capacity had been determined to be available through environmental analysis and documentation.

Special Uses

Excluding outfitter-guide permits, there are 267 other recreation special use permits on the Forest (Table III-17). These are issued for summer homes, organization camps, special events, ski areas, etc. The highest number of these are located in the Island Park and Caribou Subsections where there are large numbers of summer homes. There are moderate numbers of permitted activities in the Centennial Mountains and Big Holes/Palisades Subsections. The Forest administers permits for 203 summer homes, 32 recreation special events, 14 organization camps, and 2 regional-sized ski resorts. These permits are the major portion of the activity and result in returns to the treasury in the hundreds of thousands of dollars annually.

There are over 200 nonrecreation uses authorized by special use permit on the Forest. Uses authorized include roads; water transportation systems such as ditches, canals and pipelines, hydropower, communication sites; municipal watersheds; telephone, telegraph and power transmission lines, uses related to agriculture and industry; and uses related to research, training, cultural and historic resources.

ECONOMIC AND SOCIAL ENVIRONMENT - Scale: Region, County, and Forestwide

Figure III-1 shows how area population centers and county lines rest relative to the subsection boundaries outlined for the Forest. The area primarily affected by the Forest in terms of economic and social concerns comprises Bonneville, Clark, Fremont, Jefferson, Madison, and Teton counties in Idaho. Together these counties make up the great majority of the Forest's total administrative area and account for the largest part of Forest-related employment, personal income, and revenues for local governments. These counties are recognized as being the Area of Primary Forest Economic Influence (APFEI) (Table III-18).

Table III-18 Population Density and Unemployment					
				Unemployment Rate	
Idaho Counties Unless Otherwise Indicated	Area 1/ (Square miles)	Population 2/ 1990	Population Per Square Mile	1986 1/	1990 3/
Bannock	1,112	66,026	59	10.4	6.2
Bingham	2,096	37,583	18	9.8	6.5
Bonneville*	1,840	72,207	39	6	4.8
Butte	2,236	2,918	1	7.1	2.7
Clark*	1,763	762	<1	4.6	1.9
Fremont*	1,852	10,937	6	10.6	7.1
Jefferson*	1,093	16,543	15	8.3	3.7
Lemhi	4,564	6,899	2	10.3	7.6
Lincoln, WY	4,070	12,625	3	8.4	5.8
Madison*	468	23,674	51	6.1	6.9
Teton*	448	3,439	8	7.4	3.5
Teton, WY	4,011	11,172	3	5.3	2
APFEI*	7,464	127,562	17	6.7	
State of Idaho	82,412	1,006,749	12	8.7	6.1
State of Wyoming	96,989	453,588	5	9	5.9

* Area of Primary Forest Economic Influence -- APFEI
1/ US Bureau of the Census, County and City Data Book, 1988 US Government Printing Office. 1988
2/ US Bureau of the Census, 1990 Census of Population and Housing Summary Population and Housing Characteristics Idaho, Montana, Wyoming US Government Printing Office. 1991.
3/ US Bureau of the Census, County and City Data Book, 1994 US Government Printing Office. 1994.

The Forest is of lesser economic importance to other area counties including Teton and Lincoln counties in Wyoming and the Idaho counties of Bannock, Bingham, Butte, and Lemhi. Bannock and Bingham counties have no lands administered by the Forest. The Forest does manage significant amounts of land in Butte, Lemhi, Lincoln, and Teton (Wyoming) counties. Management of the Forest as depicted in the various alternatives under consideration is not expected to have significant effects on these counties.

Even though these counties are not included in the APFEI they still have important links to the Forest. The Grand Targhee Ski Resort, for instance, is located in Teton County, Wyoming. It is an important source of income and employment. Services and supplies for the facility must come through Teton County, Idaho, however.

People from outside this area also have strong ties to the Forest. Besides Idaho, Wyoming and Montana the Forest receives many visitors from Utah, California, and the rest of the nation. The designation of an area of influence does not diminish the interests others have in the area or the attention paid to their input.

Most of the area's population lives in cities like Idaho Falls, Blackfoot and Rexburg. The area's population is relatively small and concentrated in Bonneville County which contains Idaho Falls, the area's largest city with a population in excess of 42,000. It regularly ranks as Idaho's second- or third-largest city.

Perhaps the most striking characteristic of the area's population is the growth that has occurred in Bonneville and Madison counties during recent decades. Since 1950 the population within the APFEI has more than doubled, from 63,334 in 1950 to 137,991 in 1994. Bonneville and Madison counties have increased over 2.5 times during that same period.

Table III-18 displays the relatively low population density of the six counties making up the Area of Primary Forest Economic Influence at about 17 people per square mile.

Employment and Income

Although information is presented herein by county, by economic sector, or by other grouping it is important that the associations among the various components not be overshadowed. Area barley farmers support the Anheuser-Busch barley malting facility in Idaho Falls. Idaho's largest potato farm is located in the area and potato growers support a wide-ranging potato industry including fertilizer, irrigation equipment, storage and packing facilities, equipment manufacture and repair, and other agricultural support activities. Some 10,000 workers at the Idaho National Engineering Laboratory (INEL) live throughout the area and thus contribute to the well-being of a number of local communities.

The entire area benefits from its proximity to Yellowstone and Grand Teton National Parks. Recreationists travelling through the area use the lodging and retail sectors of the economy. Perhaps more importantly, many of those recreationists have bought summer homes in the area. With improvements in roads and vehicles, more and more people are locating in areas which were previously considered inaccessible during the winter months.

The presence of large numbers of recreationists drawn to a permanent world-class attraction like Yellowstone National Park has made the area attractive for other types of spin-off recreation. Examples are the grizzly bear theme park in West Yellowstone, Montana, just outside the Area of Primary Forest Economic Influence, and fishing on the Henry's Fork and South Fork of the Snake River.

The Grand Targhee Ski Resort has emerged as a destination resort. Although it is located in Wyoming, all traffic into it flows through the APFEI. The resort has been successful in establishing itself as a year-round facility with attendant increases in the numbers of people employed and the seasons during which they are employed. Grand Targhee employs 166 people on a full-time equivalency basis on the site. Another 23 people are employed off-site. (USDA Forest Service, Grand Targhee DEIS 1992)

Unusual associations have developed as the area's economy has grown and evolved in different ways. The Sand Dunes in Fremont County draw large crowds of recreationists, but much of the economic activity associated with the Dunes is associated with Madison County which offers a greater variety of retail services and the nearest hospital. On the other hand, the recently-closed Louisiana-Pacific lumber mill in the Madison County seat of Rexburg formerly employed a great many people who live in Fremont County.

Major employment in the Area of Primary Forest Economic Influence (APFEI) comes from the services, wholesale and retail trade, and government sectors (Table III-19). The Service sector includes a wide range of activities such as automobile repair, funeral services, lodging, health care, legal services, engineering services, amusement and miscellaneous repair shops

Idaho Counties Unless Otherwise Indicated	Agriculture	Mining	Construction	Food Processing	Lumber Mfg 1/	Other Mfg	Trans, Comm, Utils	Wholesale Trade	Retail Trade	Finance Ins & Real Estate	Service & Misc	Govt	Total
Bannock	65	D	834	126	33	1,695	985	1,501	5,490	1,362	4,130	6,021	22,242
Bingham	491	109	688	2,070	D	264	320	1,337	1,518	224	2,437	2,738	12,198
Bonneville*	245	D	2,256	420	31	1,534	906	2,890	8,992	1,194	9,646	4,420	30,538
Butte	27	D	26	--	--	1,482	6	28	147	19	4,177	215	6,198
Clark*	D	D	D	D	--	--	8	D	34	14	9	122	364
Fremont*	112	D	58	--	236	D	95	221	412	46	298	955	2,443
Jefferson*	569	D	206	393	92	24	113	437	511	52	686	958	4,053
Lemhi	D	22	45	28	139	23	96	49	464	52	286	676	1,890
Lincoln, Wy	17	515	303	**	**	519**	407	57	707	141	380	1,151	4,196
Madison*	292	--	200	246	139	743	215	636	1,381	229	1,831	1,220	7,132
Teton*	42	--	58	--	D	25	D	21	205	23	93	271	766
Teton, Wy	50	3	924	**	**	218**	260	137	2,462	449	3,649	1,203	9,354
APFEI	1,260	D	2,778	1,059	498	2,326	1,337	4,205	11,535	1,558	12,563	7,946	45,296

* APFEI--Area of Primary Forest Economic Influence
The sources of data on this page are tables provided by the Idaho Department of Employment, Research & Analysis and the 1989-1990 Annual Covered Employment for the State of Wyoming issued by the Wyoming Department of Employment, Division of Research and Planning
D -- To avoid disclosing information on individual firms no number is shown for some entries Total figures for those rows and columns are therefore underestimated
** -- Food Processing and Lumber Manufacturing are not displayed as separate Manufacturing categories They are here included in Other Manufacturing
1/ Includes logging

The respective counties' economies differ greatly. Clark, Fremont, Jefferson, and Teton Counties rely heavily on agriculture and related activities for their economic bases. Bonneville and Madison Counties both rely heavily on the services sector (most notably the Idaho National Engineering Laboratory and Ricks College) for their economic bases. Madison county until recently hosted a Louisiana-Pacific green Douglas-fir sawmill at Rexburg. That mill operated on a seven-month season, and employed about sixty people directly. Another one hundred people are estimated to have been employed on a seasonal basis doing logging, road work and hauling Most of these workers live in adjoining Fremont county

The economy of Bonneville county is much larger than those of the other counties in the APFEI and thus tends to overwhelm the statistics. The primary economic driver of Bonneville county is the Idaho National Engineering Laboratory (INEL) which accounts for the large showing of service sector employment.

Changes continue to occur in the local area's economy. Coors Brewing, long a purchaser of locally grown barley, pulled out of the market. Canola is being grown on larger acreages of area farms. Idaho Forest Industries, long a major employer in Fremont County, closed its sawmill in St. Anthony in 1992. The INEL has scheduled thousands of jobs for elimination. Snowmachine activity has blossomed to the point that anticipated restrictions on their use in Yellowstone National Park seems likely to spur increased use on the Targhee and other lands surrounding the Park. Jet ski use on area waterways is another recent development in area recreation.

Many people in the local area rely on Forest commodity production for their livelihoods to some extent. Loggers, mill workers, ranchers, outfitters, guides, and truckers fall into this category. Area mills relying in part on timber from the Forest include numerous smaller mills producing posts, poles, house logs and dimension lumber. Before its closure in 1992, the large stud mill in St. Anthony (Fremont County) received about 80% of its raw material from the Forest. About half of the material processed at the Rexburg mill before its closure in 1995 likewise came from the Forest. The Forest is a significant supplier to the smaller facilities in the APFEI as well. Dead timber serves as an important fuel supply for home heating in the local area thereby providing a source of income for some and a source of heat for others.

Some area residents rely on Forest rangeland as a source of seasonal forage for their livestock. Normally this forage is an integral part of the ranch's overall operations. Alternative sources of supply suitable for the permittees' needs are difficult to come by.

Recreation is an important part of the local economy and one with significant growth potential. It includes readily-identifiable recreation resources like the Grand Targhee Ski Resort, Kelly Canyon Ski Resort, outfitters and guides, and snowmachine rental. Other related activities include sales at area restaurants, motels and retail establishments. Harriman State Park and private facilities located off-Forest also rely on the Forest for an expanded range of activities for their visitors.

Another recreation-related economic spin-off has been the proliferation of summer home residences in the area. This has increased the local tax base without increasing demands on area schools.

Some area residents have noticed an increasing level of recreation use which they attribute to overcrowding in the adjacent Yellowstone and Grand Teton National Parks which are attracting record numbers of visitors.

The Forest Service employs some 140 workers to manage the Targhee National Forest. The Forest Service is a major employer in the area and the great bulk of its annual budget (Table III-20) goes to salaries of Forest employees living in the local area. Additional background information on the local area is available in the Forest's Analysis of the Management Situation (AMS).

1993	12.2
1992	14.0
1991	11.9
1990	11.6
1989	12.0
1988	16.3
1987	9.0
1/ Excludes firefighting costs averaging about \$1 million annually.	

Payments to Counties

The Forest also plays a role in the area economy by generating funds which are returned to local governments. These funds result from the Payment in Lieu of Taxes (PILT) program administered by the U.S. Department of the Interior and from Payments to Local Governments known as the 25% Fund (Table III-21). The "25% Fund" is the common nomenclature used for payments made under the National Forest Revenue Act of 1908, as amended. The payments are to be used as directed by the respective state legislatures for the benefit of roads and schools in the local area. Twenty-five Percent Fund payments are calculated based on Forest receipts. The Forest's timber program accounts for the largest part of these payments. PILT payments are calculated based on the amount of acreage held by the federal government, the area's population, and other federal receipts. Unlike 25% Fund payments, PILT payments may be used for any governmental function.

Table III-21 Payments in Lieu of Taxes (PILT) 1/ and 25% Fund Payments 2/ for Selected Years									
	Bonneville* (62 0%) 3/	Butte (5 6%)	Clark* (51 2%)	Fremont* (74 1%)	Lemhi (2 9%)	Lincoln, WY (1 2%)	Madison* (68 1%)	Teton* (92 8%)	Teton, WY (10 3%)
1994									
PILT	236,070	7,287	20,429	188,656	7,693	3,149	24,822	47,677	27,103
25% Fund	22,501	559	37,733	80,602	459	149	5,837	16,884	5,773
Total	258,571	7,846	58,162	269,258	8,152	3,298	30,659	64,561	32,876
1990									
PILT	225,273	7,386	20,480	160,635	7,693	3,796	23,714	44,559	27,809
25% Fund	77,162	21,261	156,580	231,517	33,656	26,448	18,242	38,726	119,301
Total	302,435	28,647	177,060	392,152	41,349	30,244	41,956	83,285	147,110
1985									
PILT	220,462	7,914	20,087	224,146	7,473	4,554	24,933	52,230	31,481
25% Fund	36,133	9,955	73,313	108,387	15,758	12,389	8,537	18,190	55,805
Total	256,595	17,869	93,400	332,533	23,231	16,943	33,470	70,420	87,286
<p>* Area of Primary Forest Economic Influence--APFEI 1/ Source Regional Office files 2/ Source Payments to States from National Forest Receipts 3/ Percents in parentheses indicate the Targhee National Forest lands as a percentage of total entitlement lands Jefferson County in Idaho has one acre of land on the Targhee National Forest It received less than \$1 annually Bannock and Bingham counties have no land in the Targhee National Forest and therefore receive no funding from these sources</p>									

Amenity Interests

Many people in the area, and outside the area, enjoy the Forest for the recreational opportunities it provides, for the scenic vistas it offers, for its aesthetic values, for its importance to wildlife and fish, and for the contributions it makes to the greater ecosystem. Interests include those associated with the effects of clearcutting on the visual landscape and on area plants, fish, and wildlife, spiritual concerns; land ethics; and environmental concerns in general

Many people value the Forest even though they have never been here. They recognize its place and importance in the larger ecosystem. The large clearcuts of lodgepole pine that began in the 1960's have been photographed extensively from the air and have been widely published. People have commented, favorably and unfavorably, about this activity. The photographs have heightened the level of public consciousness of clearcutting on the Forest

Understandably enough, most of the recreation that occurs on the Forest is associated with people who live in close proximity to it. Out-of-area recreationists, with the exception of hunters and anglers, are more likely to focus their recreational activities on the big-name attractions like Yellowstone and Grand Teton National Parks. Local people have often grown up in the area, experiencing the Forest from the

time of their youth, and enjoy the greater sense of freedom associated with the less-restrictive recreational experience available on the Forest compared to the Parks. Big game hunting, particularly elk hunting, is a fall experience of extreme importance to those who enjoy it.

Within the Forest boundaries are wildernesses, big-game herds, two ski resorts, waterfalls, a world-class fishery, and the kind of scenery associated with the adjacent Yellowstone and Grand Teton National Parks. These features give rise to a great deal of recreational use by those from outside the immediate area. Big-game hunting, camping, hiking, skiing, and recreational driving are major attractions for this group. Most of the big-game hunters are from other parts of Idaho. Residents of the adjoining states and California are the most common out-of-area users of the Forest.

Products such as timber, firewood, and grazing that the Forest provides are obviously important to the local communities. Less obvious are the plant products that individuals collect (commercially or for personal use) for food, medicinal purposes, mushrooms, dried flowers/plants, trees and shrubs for landscaping, and huckleberries and chokecherries (plus other berries) are yearly utilized by people both locally and from other areas. These products also have cultural significance to local American Indian tribes who utilize a wide variety of plants from the many habitat types on the Forest as shown in Table III-22.

Habitat	# of Species
Douglas-fir	50
Lodgepole Pine	42
Spruce/Fir	34
Limber Pine	9
Whitebark Pine	8
Mixed Conifer	54
Aspen	34
Sagebrush/Grass	70
Grass/Forbs	57
Mountain Brush	99
Alpine	21
Riparian/Aquatic	102
Rock/Barren/Talus	17

Tribal Interests

The Forest lies within the aboriginal territory of the Shoshone-Bannock Tribes. The Tribes collectively comprise a single, federally recognized Indian tribe with a governing body, the Fort Hall Business Council, which is duly recognized by the Secretary of the Interior. Tribal members are successors-in-interest of Indian signatories to the Fort Bridger Treaty. In part, that treaty led to the creation of the Fort Hall Indian Reservation in the Idaho Territory as a permanent tribal homeland. The 544,000-acre reservation lies generally between Blackfoot and American Falls, Idaho.

Article 4 of said treaty secured for the Tribes in perpetuity the continuation of a wide variety of "use rights" to off-Reservation lands. More specifically, by virtue of Article 4 of the treaty, the Tribes expressly reserved the right to hunt "on the unoccupied lands of the United States so long as game may be found thereon" including such lands owned by the federal government outside the boundaries of the Reservation. The courts decided in the Tinno decision (State v. Tinno 1972) that the right to hunt also included a right to fish (Shoshone-Bannock Tribes 1992b).

The Tribes have historically used the Targhee for hunting, fishing and gathering. Native Americans historically used at least 838 species of plants on the Forest, covering virtually every type of plant community. These activities are important economically as well as socially and culturally. Part of the economic importance to the Tribes lies in their use of hunted meat to provide food for the elderly and the disabled. "The philosophy and management direction from the Tribes has always been for subsistence hunting and this is reflected in the Tribes Big Game Regulations." (Shoshone-Bannock Tribes 1992a)

Rights to believe, express, and exercise traditional religions are protected by various federal laws, including the American Indian Religious Freedom Act of 1978. This includes, but is not limited to, access to sites, the use and possession of sacred objects, and the freedom to worship through ceremonial and traditional rites. Additionally, rights reserved under treaty may possess an inherent measure of resource protection. (U.S. v. Washington (759 F.2d 1353, 1985) in Shoshone-Bannock Tribes 1992b)

The Forest has worked with representatives of the Tribes to coordinate the Revision with them. Representatives of the Tribes have stressed the following points.

Treaties are the supreme law of the land (U.S. Constitution, Article 6, Clause 2). Treaty rights cannot be negotiated at the Department level of the United States government. Consultations with the Tribes are on a government-to-government basis.

The multiple jurisdictions they have to work with make any attempts at working with the Forest an extremely frustrating exercise. Their territory lies within the boundaries of many National Forests, on lands administered by the Bureau of Land Management, on state lands, and on lands privately held. This complicates even relatively simple matters like interpretive signs.

The processes the Forest uses to handle archaeological sites and cultural values do not fully address the Tribes' concerns. It is important to protect sites, to keep them unpublished, and to recognize that providing access to sites invites vandalism. It is important for the Forest to consult with the Tribes on a case-by-case basis when providing protection to sites. It is important that vandalism of sites be vigorously prosecuted to serve as a deterrent.

The Revision must recognize the:

- sacredness of the land
- need for protection
- obligation to consult with the Tribes as outlined in the American Indian Religious Freedom Act, the National Environmental Policy Act, and the National Forest Management Act.
- many aspects of reserved rights including, but not limited to, the priority nature of rights reserved under the treaty, as well as an inherent measure of resource protection to satisfy these rights.

The Forest must be recognized for its religious and spiritual significance to the Tribes. That significance is not limited to vision quest sites or traditional camp sites. The Forest and even the lands beyond its borders are important in their entirety. As with many other religions, tribal members are not free to share all the dimensions of their faith.

The Tribes also have a significant economic interest in the Forest. These include subsistence activities like hunting, fishing and gathering. They also include important aspects of Tribal life like sharing the fruits of the land. Riverine ecosystems are important to the Tribes not only for their resources but also for the role they play in the Tribes' religion.

Heritage Resources

Scale: Subsection

Lemhi/Medicine Lodge - This area contains over 200 heritage resources of predominately Native American sites including habitation sites and rock art. The aboriginal settlement pattern for the area is related to scarce perennial water sources in generally high altitude settings. Archaeological excavations in the area indicate that high altitude hunting camps were used primarily for hunting mountain sheep.

European-American settlement in this area was focused on homesteading and lead mining in the late 19th century. The Birch Creek Charcoal Kilns is the most significant site relating to this period of settlement and is a major tourist attraction. The remains of ancillary sites associated with the lead mining industry are found in several canyons. The Worthing Cabins also have interpretive potential for late 19th century homesteading.

Impacts to heritage resources, such as prehistoric Native American lithic scatters associated with hunting camps, are occurring from livestock grazing and antelope hunting blind construction. Construction of hunting blinds involves digging a hole up to two feet deep, which can disturb cultural deposits. Since permanent water sources in this area are scarce, most springs have evidence of prehistoric Native American occupations. Livestock tend to congregate at these springs, trampling surface cultural deposits. Soil erosion from lack of vegetation in these areas exposes buried cultural deposits.

Centennial Mountains - The Centennial Mountains contain the highest frequency of heritage resource sites on the Forest. Over 400 heritage resources of predominately Native American sites have been identified. The aboriginal settlement pattern for the area is seasonal occupations for the extraction of obsidian and collecting camas plants for medicinal use. Site types include base camps, obsidian workshops, quarry sites and hunting camps. The most significant archaeological site in this area is the Big Table Mountain Obsidian Source. Monida Pass and Targhee Pass provided natural travel routes across the Continental Divide into the buffalo hunting grounds of Montana. These passes were also utilized extensively during the 19th century by fur trade companies and later as stagecoach routes.

European-American settlement of the area is in the form of late 19th and early 20th century homesteads along the Forest fringe bordering the upper Snake River Plain.

Some prehistoric Native American sites, such as lithic scatters associated with hunting camps and lithic workshops, have been affected by logging. Monitoring following timber harvest in this subsection showed that all heritage resource sites located in cutting units were damaged by logging. Site avoidance recommendations discussed in Heritage Resource Survey Reports were not followed during timber sale administration. State authorities are aware of these, and the situation has been corrected.

Island Park - Heritage resources in the Island Park area are primarily related to the Tie Hack Period (cutting trees for railroad ties) and early Forest Service history. The 140 sites identified are composed primarily of tie hack camps associated with the Yellowstone Railroad, Forest Service administrative sites such as guard stations, ranger stations, and fire lookouts, and recreational cabins dating to the early 1900's. Social patterns in this area are closely related to the logging industry, Forest Service management and tourism. Few Native American sites have been identified.

The most significant heritage resources in this area are Mesa Falls Lodge, Bishop Mountain Lookout, Squirrel Meadows Guard Station, and Warm River Fish Hatchery. These sites receive high public visitation and have economic values associated with tourism.

Heritage resources in this area have been impacted by logging, road construction, historic building removals, and the North Fork Fire.

Madison Plateau - The Madison Plateau contains one of the lowest frequencies of heritage resource site on the Forest. Relatively extensive inventory has identified only 25 sites. The majority of these are tie hack sites associated with the Yellowstone Railroad. Native American sites are few and seem to be related to transitory movements through the area. The only site identified as suitable for enhancement and interpretation is the Big Springs Fire Lookout.

Teton Range - The Teton Range has high frequencies of Native American sites in the upper reaches of the drainages. Over 79 heritage resource sites have been identified. The vast majority are associated with high altitude adaptations by Native Americans. This area may also contain spiritual sites important to local tribes. Historic Euro-American sites are generally related to early 1900's ranching.

This area has high economic values for heritage resource tourism with an emphasis on high altitude adaptations.

Big Hole/Palisades - This area contains over 100 heritage resource sites with most sites located along the northwestern edge of the Big Hole Mountains. The majority of these sites are Native American hunting camps and lithic workshops. Historic Euro-American sites are associated with early 20th century mining and ranching. The Palisades Mountains area is one of the least inventoried areas of the Forest. Site types and frequencies are relatively unknown.

There is potential to enhance and interpret early 20th century limekiln and mining sites. Interpretation of a National Register-eligible Native American site at Table Rock Campground also has potential.

Caribou - The Caribou Range is one of the least inventoried areas of the Forest, however, 50 heritage resources have been identified. All but two sites are Native American hunting camps, lithic workshops and volcanic glass quarry sites. This area also contains the Currant Creek and Brockman Guard Stations, Forest Service administrative sites eligible for the National Register of Historic Sites. Potential exists for interpretation of the guard stations as early 20th century Forest Service sites.

Quality of Life

The Center for Business Research and Services of Idaho State University has conducted recent surveys of Quality of Life perceptions among area residents in Fremont County and the City of Idaho Falls. These two areas are vastly different in terms of population, income structure, employment opportunities, and other demographic characteristics. In both surveys, many of the questions relate to concerns people have with regard to their everyday lives—things like shopping and local government services. The amount of information presented which relates to the Forest is limited. The surveys do provide some insight into how area residents perceive their living environments.

Fremont County

Air Quality and "Open Spaces and Green Spaces" were the quality of life attributes respondents were most satisfied with. Employment opportunities and the Availability of Retail Shopping were the attributes with the least amount of satisfaction. Among respondents, 43% felt that Tourism was the type of ideal business they would like to see locate in Fremont county. Some 34% felt the same way about General Manufacturing. Employment Opportunities, Level of Individual Well-Being, and Public Education were identified as being the most important in determining quality of life.

City of Idaho Falls

Favorable characteristics of life in Idaho Falls included a Low Local Tax Rate, Medical Services, and Salary and Wage Levels. In making choices among conflicting alternatives, respondents found these selections to be the most acceptable. Limit Economic and Population Growth (32%) and Increase Taxes and the Local Cost of Living (31%). The least acceptable choices were to Permit Degrading of the Environment (30%) and Increase Taxes and the Local Cost of Living (27%).

Minorities and Women

Various programs have been implemented on the Forest to focus the resources of these group members on Forest activities to the benefit of both the Forest and the individuals. This effort is reflected in Forest Service hiring, supervising and contracting procedures. Under authority of a number of civil rights and equal employment opportunity acts and executive orders the Forest intends to continue

- ◆ Eradication of all forms of illegal discrimination from facilities, programs, activities, contracting, and hiring practices.
- ◆ Positive action in helping to provide developmental opportunities for the disabled, minorities, women, and all other employees
- ◆ Providing coordinators for the Equal Employment Opportunity, Federal Women's, and Hispanic programs
- ◆ Civil Rights Action Team activities.
- ◆ Civil rights training for all employees.

Coordination with Other Agencies

The importance of coordinating management within the Greater Yellowstone Ecosystem has been recognized by the public land management agencies. To that end, the Greater Yellowstone Coordinating Committee was established in the early 1960's. This group consists of National Park and National Forest managers who meet twice yearly to discuss issues and improve coordination between the two agencies.

There are many examples of how the various National Forests and Parks of the Greater Yellowstone Ecosystem have coordinated management across jurisdictional boundaries. The agencies have an ecosystem-wide Grizzly Bear Recovery Plan. Changes in these uniform guidelines for grizzly bear management are coordinated among the Forests and Parks. Uniform regulations for recreation use in the area have been initiated for the 1995 summer season. Federal and state agencies in the GYE are implementing coordinated guidelines for management of noxious weeds and exotic plants. Fire management is another area where resources and policies are shared across Forest and Park boundaries. Currently the Forest is participating in the integrated winter sports planning taking place throughout the ecosystem. As the Revision for the Forest is implemented, coordination with fellow managers in the ecosystem will continue.

V. PRODUCTION OF NATURAL RESOURCES

TIMBER

Timber - Scale: Forestwide and Subsection

The amount of forested land by tree species group and age class on the Forest was displayed earlier in Table III-1.

Table III-23 displays the total gross volume growing on the Forest by species and by subsection.

Table III-23 Merchantable Volume in Thousands of Board Feet (MBF) by Species 1/								
	Lemhi/ Medicine Lodge	Centennial Mountains	Island Park	Madison Plateau	Teton Range	Big Holes/ Palisades	Caribou	Total
LPP Bd Ft Volume	33,932	162,977	669,854	505,069	66,689	120,130	16,185	1,574,836
DF Bd Ft Volume	479,399	585,610	139,244	35,007	125,839	169,818	76,945	1,611,862
MX Bd Ft Volume	1,545	136,783	190,792	119,708	127,484	482,708	257,351	1,316,371
MX3 Bd Ft Volume	0	156,620	43,991	40,394	60,940	92,888	50,409	445,242
S/F Bd Ft Volume	0	21,147	2,916	8,200	17,185	13,168	6,283	68,899
AS Bd Ft Volume	611	16,017	13,892	8,567	17,018	68,716	68,083	192,904
Total Merchantable Volume MBF	515,487	1,079,154	1,060,689	716,945	415,155	947,428	475,256	5,210,114

1/ MBF per acre (LP=6 1, DF=9 0, Mixed LP/DF=7 9, Other Mixed Conifer = 12 4, Spruce/Subalpine Fir=13 9, Aspen=3 2) x 57
 (About 57% of the forested land is tentatively suitable)
 LPP = Lodgepole pine, DF = Douglas-fir, MX = Douglas-fir/Lodgepole pine, MX3 = three or more conifer species mixed,
 S/F = Englemann Spruce/Subalpine fir, AS = Aspen

Tentatively Suitable Forest Land

While the volumes shown in Table III-23 exist on the Forest, not all acres are available for timber harvest. In order to determine which land can be managed for timber production a Tentatively Suitable Forest Land Classification process is used.

Tentatively suitable forest land is defined as land that is producing or is capable of producing crops of industrial wood and meets the following criteria

- (a) Has not been withdrawn by Congress, the Secretary of Agriculture, or the Chief of the Forest Service.
- (b) Existing technology and knowledge is available to ensure timber production without irreversible damage to soils productivity, or watershed conditions.
- (c) Existing technology and knowledge provides reasonable assurance that it is possible to restock adequately within 5 years after final harvest.
- (d) Adequate information is available to project responses to timber management activities.

Tentatively suitable acres for the Forest have been determined and the process is displayed in Process Paper C. This amounts to 703,100 acres or approximately 57 percent of the total forested land on the forest. Table III-24 below displays Tentatively Suitable Acres by Ranger District and Ecological Sub-section.

	Lemhi/ Medicine Lodge	Centennial Mountains	Island Park	Madison Plateau	Teton Range	Big Hole/ Palisades	Caribou	Total
Dubois	13,040	79,700	0	0	0	0	0	92,740
Island Park	0	91,100	64,000	47,640	0	0	0	202,740
Ashton	0	0	151,070	107,230	3,330	0	0	261,630
Palisades	0	0	0	0	0	33,580	30,730	64,310
Teton Basin	0	0	31,090	0	17,710	32,880	0	81,680
Total	13,040	171,800	246,160	154,870	21,040	66,460	30,730	703,100

The 703,100 acres shown above is 249,300 less than the 952,400 acres identified in the 1985 Land and Resource Management Plan. The primary difference between the two analyses is associated with the amount of nonforest acres. The 1985 analysis identified 390,300 acres of nonforest lands and the current analysis identifies 681,079 acres, a difference of 290,779 acres.

The current analysis utilizes more up-to-date data than in 1985. The Forest has more stand exam information than previous and land-sat data was used in areas where stand exam data did not exist. A comparison of the two analyses is found in Process Paper C.

Similarly, Table III-25 displays tentatively suitable acres by species and age class.

Table III-25 Timber Information by Subsections									
	Lemhi/ Medicine Lodge	Centennial Mountains	Island Park	Madison Plateau	Teton Basin	Big Holes/ Palsades	Caribou	Total	
Total Acres	282,600	332,100	316,140	197,980	161,690	358,680	231,110	%	1,862,300
TOTAL FORESTED AC % of Total Ac	103,887 37	225,013 71	276,375 93	190,115 97	92,183 57	227,215 65	122,495 60		1,237,283 66
SUITABLE ACRES % of Forested Ac % of Total Ac	13,040 13 5	170,800 76 52	246,160 89 78	154,870 82 78	21,040 23 13	66,460 29 19	30,730 25 14		703,100 57 38
Tentatively Suitable Acres by Species and Age Group									
Lodgepole Pine (LPP)									
Non-stocked	0	2,500	17,420	13,480	170	4,270	250	10	38,090
Seedlings	1,970	10,980	48,340	27,250	0	770	60	23	89,370
Saplings	0	4,730	19,580	14,900	0	1,160	0	11	40,370
Pole	0	4,810	9,810	8,470	1,510	690	0	7	25,290
Mature	0	22,560	81,920	62,250	4,440	13,920	1,590	49	186,680
Douglas-fir (DF)									
Non-stocked	0	580	300	610	90	510	0	1	2,090
Seedlings	180	1,610	0	60	0	180	0	1	2,030
Saplings	0	0	0	0	0	0	0	0	0
Pole	0	290	320	0	100	60	0	1	770
Mature	10,890	79,930	23,780	5,290	980	3,310	3,910	94	128,090
Mature-prior harvest	0	3,430	0	0	0	120	0	3	3,550
Mixed LPP and DF									
Non-stocked	0	0	0	0	0	0	0	0	0
Seedlings	0	200	210	680	0	330	0	1	1,420
Saplings	0	360	1,800	330	0	0	0	3	2,490
Pole	0	190	1,920	200	0	70	70	2	2,450
Mature	0	14,020	30,410	13,170	4,240	23,920	10,460	94	96,220
Other Mixed Conifers									
Non-stocked	0	180	860	40	20	360	0	3	1,460
Seedlings	0	900	0	480	0	150	0	4	1,530
Saplings	0	0	0	0	0	0	0	0	0
Pole	0	0	0	0	0	0	0	0	0
Mature	0	16,810	3,440	3,960	5,220	7,570	1,830	92	38,830
Spruce/Subalpine Fir									
Non-stocked	0	0	0	0	0	0	0	0	0
Seedlings	0	0	0	0	0	0	0	0	0
Saplings	0	0	0	0	0	0	0	0	0
Pole	0	0	0	0	0	0	0	0	0
Mature	0	1,920	160	740	670	200	180	100	3,870
Aspen									
Non-stocked	0	480	700	330	0	0	0	4	1,510
Seedlings	0	10	1,180	760	0	430	80	6	2,460
Saplings	0	30	390	310	210	0	0	3	940
Pole	0	190	320	0	200	0	400	3	1,110
Mature	0	4,090	3,300	1,560	3,190	8,440	11,900	84	32,480
Total									
Non-stocked	0	3,740	19,280	14,460	280	5,140	250		43,150
Seedlings	2,150	13,700	49,730	29,230	0	1,860	140		96,810
Saplings	0	5,120	21,770	15,540	210	1,160	0		43,800
Pole	0	5,480	12,370	8,670	1,810	820	470		29,620
Mature	10,890	139,330	143,010	86,970	18,740	57,360	29,870		486,170
Mature-prior harvest	0	3,430	0	0	0	120	0		3,550
TOTAL	13,040	170,800	246,160	154,870	21,040	66,460	30,730		703,100

Based on the number of tentatively suitable forested acres identified in Process Paper C and shown in Table III-24 above and a gross volume per acre derived from local forest yield-tables, Table III-26 below displays the Total gross Volume (MCF and MBF) by species by ecological subsection that is currently growing on the tentatively suitable forest acres.

Table III-26 Merchantable Volume (MCF and MBF) for Tentatively Suitable Forest Land								
	Lemhi/ Medicine Lodge	Centennial Mountains	Island Park	Madison Plateau	Teton Range	Big Holes/ Palisades	Caribou	Total
MERCHANTABLE VOLUME IN THOUSANDS OF CUBIC FEET (MCF) BY SPECIES 1/								
LPP MCF Volume	0	33,727	122,470	93,064	6,638	20,810	2,377	279,086
DF MCF Volume	19,983	146,672	43,636	9,707	1,798	6,074	7,175	235,045
LP/DF MCF Volume	0	24,184	52,457	22,718	7,314	41,262	18,044	165,979
Other mixed MCF Volume	0	43,874	8,978	10,336	13,624	19,758	4,776	101,346
Spruce/Fir MCF Volume	0	4,710	392	1,815	1,644	491	442	9,494
Aspen MCF Volume	0	3,096	2,498	1,181	2,415	6,389	9,008	24,587
TOTAL MERCHANTABLE VOLUME MCF	19,983	256,263	230,431	138,821	33,433	94,784	41,822	815,537
MERCHANTABLE VOLUME IN THOUSANDS OF BOARD FEET (MBF) BY SPECIES 2/								
LPP Bd Ft Volume	0	138,406	502,579	381,904	27,239	85,399	9,755	1,145,282
DF Bd Ft. Volume	97,738	717,372	213,426	47,478	8,795	29,707	35,092	1,149,608
MX BD Ft Volume	0	110,926	240,604	104,201	33,547	189,255	82,760	761,293
MX3 Bd Ft Volume	0	208,629	42,694	49,148	64,785	93,951	22,712	481,919
S/F Bd Ft. Volume	0	26,655	2,221	10,273	9,302	2,777	2,499	53,727
AS BD Ft Volume	0	12,953	10,451	4,941	10,103	26,729	37,688	102,865
TOTAL MERCHANTABLE VOLUME MBF	97,738	1,214,941	1,011,97	597,945	153,771	427,818	190,506	3,694,694
1/ MCF per acre LP=1 5, DF=1 8, Mixed LP/DF=1 7, Other Mixed Conifer=2 6, Spruce/Subalpine Fir=2 5, Aspen=0 8								
2/ MBF per acre LP=6 1, DF=9 0, Mixed LP/DF=7 9, Other Mixed Conifer=12 4, Spruce/Subalpine Fir=13 9, Aspen=3 2								

Future Supply and Demand

The projected demand-supply situation in the United States implies rising prices for timber. In the U S. economy, demand and supply for market commodities are equated through price adjustments and the workings of the market. When demand increases faster than supply, price brings the two together by reducing demand and/or by inducing supply increases (USDA Forest Service, 1990 RPA Assessment).

In general, it is expected that the price of softwood roundwood will follow the historic trend and continue to increase faster than the rate of inflation for at least the next 50 years (USDA Forest Service, 1990 RPA Assessment), an indicator that demand from an increasing population will rise faster than supply can respond.

Supply

The local demand-supply situation generally reflects the national and regional trend. The following is a brief analysis of supply and demand for our area.

Table III-27 displays sources of timber that have been available in the past. The volumes shown, (except for private land which is an estimate) are averages from the past 4-year (FY 92-95) sell program from the agencies listed. While the actual amounts available in the future are unknown, all sources (except for the Targhee National Forest) are assumed to be constant for at least the next 3-5 years. Of the total, 15.1 MMBF or 51 percent historically came from the Forest. This includes sawtimber, roundwood, commercial and personal use firewood.

Table III-27. Average Volume per year available in local demand area.

Source	Total Annual Quantity (MMBF)	Sawtimber	Products
Targhee N.F.	15.1	8.8	6.3
Caribou N.F.	1.6	1.2	0.4
Bridger-Teton N.F.	0.2	0.0	0.2
Bureau of Land Mgmt.	3.2	3.0	0.2
State of Idaho	4.3	4.1	0.2
Private Land	5.0	5.0	0.0
Total	29.4	22.1	7.3

Demand

Table III-28 below displays the expected demand for wood products in our area from all users. It does not include previous demand from Louisiana-Pacific as they have announced they are closing their Rexburg mill. It also assumes the present number and mix of large and small timber operators will remain fairly constant.

Table III-28 Total Demand for all Mills and Users (MMBF)

Present Level	Survival Level	Maximum Efficiency Level
35.7	31.0	36.0

The current demand for wood in our area, all operators, large and small (including personal use firewood), is about 35.7 MMBF annually. The minimum level of timber demand, from all operators, necessary to meet the survival needs of timber industry and personal use in this area is 31.0 MMBF. This level of harvest will just barely provide for the existence of the current number of operators at their minimum operating level, plus meet the current demand for "walk-in-the door" products and personal use firewood. To provide for maximum efficiency of mill operation and meet all demands for wood products that small operators receive and meet the current demand for personal use firewood and walk-in traffic, the level of timber offer should be approximately 36.0 MMBF.

Reforestation/Timber Stand Improvement

Table III-29 indicates past levels of reforestation (Artificial and Natural) and Timber Stand Improvement (Thinning) Activities that have occurred on the Targhee National Forest.

Table III-29 Levels of Past Reforestation and Timber Stand Improvements Activities

	Reforestation Acres	TSI Acres
1981-90	104,562	11,563
1991	3,152	1,210
1992	2,874	397
1993	3,163	759
1994	4,361	493
1995	2,753	111

LIVESTOCK GRAZING

Livestock Grazing - Scale: Forestwide and Subsection

Approximately 79 percent of the Forest's 1.88 million acres are in range allotments. An estimated 67 percent of this area is suitable for grazing. Areas suitable for grazing have been determined by field range surveys. There are 154 allotments (76 cattle, 78 sheep) on the Forest where livestock grazing occurs. Of these 154 allotments, 15 sheep allotments are vacant and no grazing presently occurs. The current livestock use on the Targhee is 148,065 Animal Unit Months (AUM's). Permitted livestock consists of 21,696 cattle and 72,005 sheep. A summary of grazing activity by subsection is displayed on Table III-30.

Currently, 182 permittees hold 201 grazing permits which authorize grazing on the Forest. Nearly all of the permittees are dependent on National Forest grazing privileges to sustain all or part of their livelihood. The fee paid to graze their livestock is based on a grazing fee formula established by Congress.

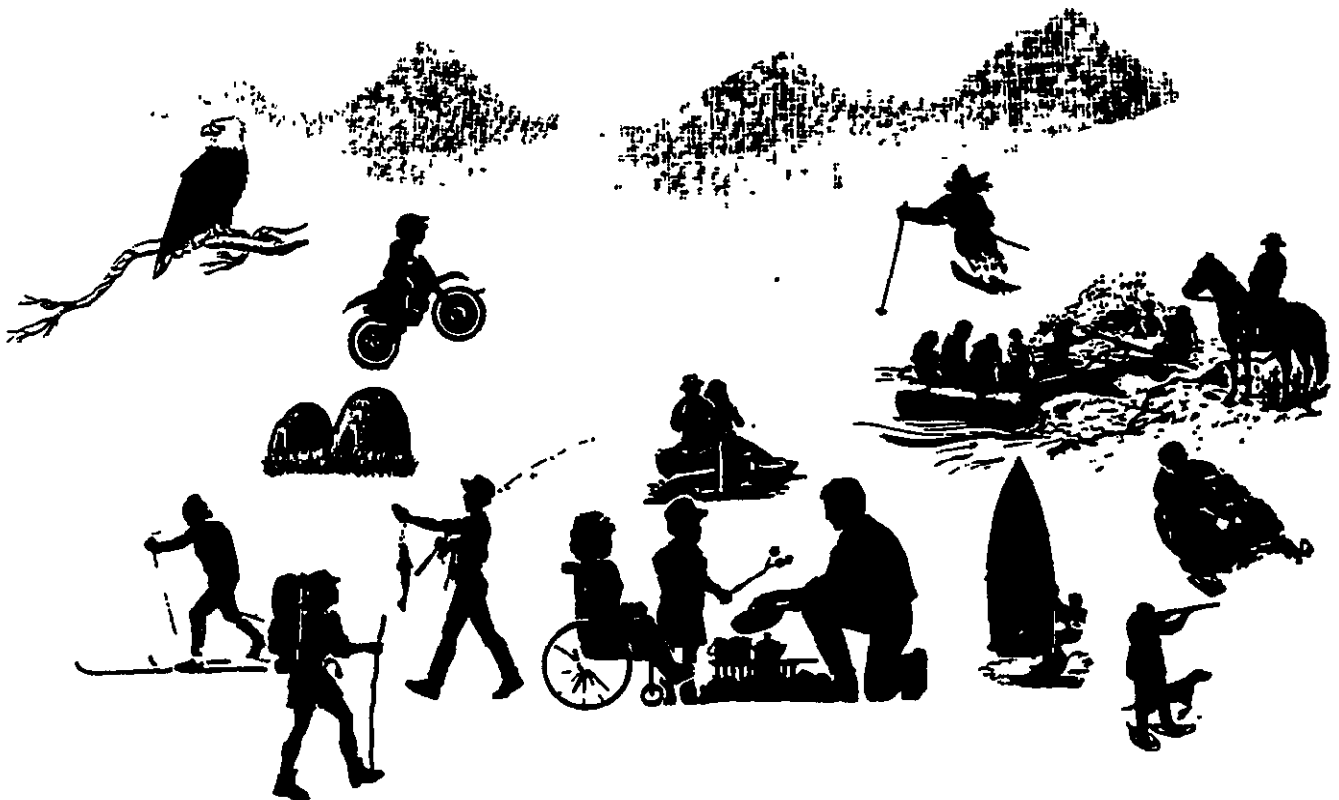
Livestock grazing has been a use of both forested and nonforested plant communities throughout the Forest since before 1900. Effects of grazing, coupled with fire suppression, over time have promoted changes in species composition and biodiversity within grazed areas. Although effects are noticeable in sagebrush, aspen and grazed forest communities, they are especially critical in riparian communities. For additional information see the herbaceous/shrub vegetation section.

Indicator	Subsection						
	LEMHI/ MEDICINE LODGE	CENTENNIAL MOUNTAINS	ISLAND PARK	MADISON PLATEAU	TETON RANGE	BIG HOLE/ PALISADES	CARIBOU
AUM'S							
Sheep	3,111	16,464	2,016	2,830	3,162	14,899	13,267
Cattle	14,161	30,067	21,273	3,765	2,182	11,092	9,776
No of Sheep	8,930	17,770	2,072	0	3,700	18,500	21,033
No of Cattle	3,513	7,547	4,783	1,241	522	2,293	1,797
NO OF PERMITS	42	75	43	10	17	46	44

Chapter

IV

Environmental Consequences



CHAPTER IV ENVIRONMENTAL CONSEQUENCES

READERS'S GUIDE - In this chapter you will find:

A description of the Consequences of implementing the alternatives with respect to the following components and key issues:

- Ecological Processes and Patterns and Key Issue Patch Size;
- Physical Elements Component;
- Biological Elements Component and Key Issues Riparian Health, Elk Vulnerability and Grizzly Bear Habitat;
- Forest Use Occupation and Key Issues Access and Wilderness;
- Production of Natural Resources and Key Issue Timber Volume.

The consequences are described in terms of Consequences Common to All Alternatives, Consequences Which Vary by Alternative, and Cumulative Effects

I. ECOLOGICAL PROCESSES AND PATTERNS

This component is described in two parts. "Ecological Processes" discusses the effects of each of the alternatives on the natural causal agents of fire, insects, and disease. "Ecological Patterns" discusses the effects of the alternatives on several important parameters which describe ecosystem conditions and spatial relationships.

The key issue element for this component is patch size. The indicator for this element is the area restricted to opening sizes smaller than the range of variability. A full discussion can be found at the beginning of the "Ecological Patterns" section in this component. Briefly, patch sizes would be smaller than the historic range under all alternatives in the Centennial Mountains, Island Park, Madison Plateau, and Teton Range subsections, largely due to implementation of the standards and guidelines to protect goshawks. Each alternative also has some restrictions to protect visual quality or grizzly bear habitat; these additional restrictions are greatest in Alternatives 3-M through 6. However, since timber harvest is scheduled on less than 15 percent of the forested lands in these subsections, the scope of adverse effects deriving from smaller patch sizes is expected to be minor.

ECOLOGICAL PROCESSES

Fire

The role of fire as an ecosystem disturbance agent has been greatly diminished by fire suppression since the early 1900's. To sustain healthy ecosystems on the Forest it is important to reestablish fire as a disturbance agent. This can be done by allowing lightning-caused fires to burn (prescribed natural fires) or by intentionally setting fires (prescribed management-ignited fires) to achieve specific management goals. Using prescribed fire in concert with silvicultural treatments to reestablish historic fire intervals should reduce the suppression costs and resource losses caused by severe wildfires. The following indicators measure how likely the Forest is to use prescribed fire as a tool in the next decade, given the risks and costs involved.

Indicators

- 1 Acres where use of prescribed fire is allowed, with few restrictions.
- 2 Acres where timber harvest is allowed with few restrictions This tends to reduce the risks associated with using prescribed fire.
3. Miles of motorized road and trail access. Access can reduce the risks and costs associated with prescribed fire.

Consequences Common to All Alternatives - Fire management plans are required for portions of the Forest that will receive prescribed burning To date, only one such plan has been written, the Jedediah Smith Wilderness Fire Plan This fire plan has not been approved, it is estimated that this fire plan would be approved at about the same time as the FEIS for the Revision. This fire plan applies to all alternatives except Alternative 1. This plan will result in increased natural fire ecology within the Wilderness, with the most potential for stand replacing fires in the northern portion. Stand replacing fires would only occur under drought conditions. In the southern part of the wilderness, fires would be expected to remain small and burn in isolated groups of trees.

Forestwide it is estimated that some 11,000 to 21,000 acres of the sagebrush/grass type will be burned in the first decade in all alternatives, which amounts to about 4 to 8% of this type on the Forest. The effect of this will be to move acres with dense sagebrush canopies to earlier seral stages where sagebrush is less dominant This will create more of a mosaic of age classes than currently exists, thereby improving diversity by reestablishing grasses and forbs on these sites. However, the magnitude of this program is not sufficient to significantly alter the seral class distribution of sagebrush/grassland overall. Although the existing seral class distribution of this type is unknown, preliminary studies indicate the Forest supports a higher percentage of mid- and late-seral stages than existed historically

All alternatives allow the use of prescribed fire to some extent. Acreages of other vegetation communities to be treated with fire are unknown in any alternative, but the likelihood that management will use this tool varies by alternative.

Consequences Which Vary by Alternative - Some restrictions are placed on the use of prescribed fire in all alternatives Reasons for the restrictions vary, but are primarily concerned with maintaining existing wildlife habitat and visual quality. Table IV-1 shows, by alternative, the number of acres where prescribed fire is allowed without significant restrictions on its use. Alternative 2 allows the most use of prescribed fires, and Alternative 5 the least. However, the differences among alternatives based on this indicator are not large.

The inability to use timber harvest or other methods to manipulate fuels and stand structures prior to a fire can significantly increase the risk of prescribed burning in the older age class forested stands Managers are less likely to use fire as a tool when the risk of escape is higher. Table IV-1 shows the number of acres where timber harvest is allowed with few restrictions for each alternative. Alternatives 1 and 2 allow the most fuel manipulation via harvest, Alternatives 3 and 3-M a significantly lower amount, and in Alternatives 4, 5 and 6 harvest is very restricted.

Motorized road and trail access to prescribed burn areas can be important for reducing risks and costs associated with prescribed fire. Roads and trails can serve as containment lines and provide escape routes Motorized access route mileage is summarized by alternative in Table IV-1. Motorized roads and trails generally decrease from Alternative 2 through Alternative 6. Alternative 1 falls between Alternatives 2 and 3 on this factor

Based on the three indicators, Alternatives 1 and 2 would allow for the highest use of prescribed fires, Alternatives 3 and 3-M significantly lower amounts, and Alternatives 4, 5 and 6 the least.

Cumulative Effects - Overall, the low number of acres scheduled for timber harvest and the restricted motorized access across the Forest will limit the use of prescribed fire for all alternatives, especially in the forested types. Alternative 2, with the highest number of acres scheduled for harvest, only harvests 1.7% of the existing mature-or-older forested acres over the next ten years. Additional vegetation manipulation will occur via nonscheduled harvest (including unsuited lands) such as firewood removal, but this small amount of fuel manipulation is not enough to allow managers to restore fire over large acreages with acceptable risks. For community types where fire intervals are outside their historic range, all alternatives are expected to delay a return to more natural fire regimes for at least the next decade. A discussion of these effects by community type follows.

Indicator	Alternatives						
	1	2	3	3-M	4	5	6
Prescribed Fire							
Prescribed Fire Allowed with Few Restrictions 1/ (Thousand Acres)	1,282	1,401	1,302	1,232	1,223	1,202	1,256
Timber Harvest Allowed with Few Restrictions 2/ (Thousand Acres)	262	275	132	132	0	0	0
Open System Roads 4/	1,320	1,411	1,221	1,197	1,072	972	961
Open Nonsystem Roads 4/	564	453	368	363	299	281	268
Open System Trails 4/	449	357	337	340	320	171	28
Open Nonsystem Trails 4/	123	113	98	98	101	61	54
Patch Size							
Area Restricted to Opening Sizes Smaller than Range of Variability (Thousand Acres)	47	25	82	259	310	333	330
Connectivity							
Acres of Aquatic Zones where Connectivity is Maintained (thousands of acres)	342	325	448	512	533	590	793
Forested Acres In Mature-or-Older Age Classes 3/	903,800 78.3%	901,000 78.2%	908,800 78.5%	906,600 78.7%	910,500 79.0%	913,100 79.2%	918,000 79.6%
1/ Prescriptions 3 1.1, 3 1.2, 3 2, 5 1, 5 1.3, 5 1.4, 5 1.5, 5 2.1, 5 4, 5 9.1, 6 1, 2 1.1, 2 2, 2 7, 1 1.6, 1 1.7, 1 1.8, 1.2, and 1.3. 2/ Includes all forested lands within prescriptions 5 1 and 5.1 3 3/ Assumes all harvest leads to reduction of mature component. Also assumes no ingrowth into the mature category in the first decade. Percents are percentages of total forested acres. 4/ The word "open" means the roads and trails do not have any restrictions on motorized use.							

Sagebrush/Grass Ecosystem - With the removal of several fire cycles from these ecosystems, the preponderance of big sagebrush stands fall within the moderate to dense canopy coverage class (greater than 15% canopy coverage). Under all alternatives, only approximately 4 to 8% of the Forest sagebrush/grass acres are projected to be manipulated during the first decade. As a result, the majority of the big sagebrush acres will continue to decline in overall watershed conditions (loss of understory vegetation resulting in increased susceptibility to erosion, reduced water infiltration and decreased organic matter recruitment).

As these ecosystems simplify, becoming a homogeneous dense canopy of dense sagebrush, they become increasingly susceptible to fires of higher severity and intensity than what historically occurred. Implications of such fires include

1. Potential for loss of species not adapted to these "altered" fire regimes (e.g., Idaho fescue),
2. Loss of nutrients and a lowering of site productivity potential (more nutrients being stored within the dense overstory versus within the soil profile as historically - thus being more susceptible to loss through ignition),
- 3 Higher potential for having more acres severely burned with subsequent chances for altering the soils physical and chemical properties,
- 4 Alteration of the natural resistance and resiliency of the soils

Lack of management within the sagebrush/grass ecosystem will also result in more acres which historically supported sagebrush/grass being converted to conifers and subsequent decrease in overall inherent site productivity

Aspen Ecosystem - Aspen is mainly found on soils that have a high inherent productivity due to the nutrient cycling (leaf fall) that occurs within healthy stands. Over time as conifers invade these sites the soils begin to acidify and nutrients are leached out of the productive surface layers to lower depths within the soil profile. If left unchecked, these soils will mature and develop into soils more suitable for conifers and less likely to support healthy vibrant aspen communities. This will reduce future options or making future options more at risk for success

Currently 93% of the aspen on the Forest is mature or at pathological rotation age. Inability to regenerate significant amounts of aspen by fire will maintain most of this type in the mature class, and will result in aspen's being replaced by conifers in many cases. Where this occurs, the ability of the soils to support aspen may be lost due to changes in soil chemistry or due to loss of clone root vitality. Severe fires are more likely to occur where conifers have become mixed with aspen, which would tend to regenerate aspen as long as fires are not so hot that they destroy the aspen root systems (most root nodes for sprouting are 3-6 mm below the surface).

Dry and Moist Douglas-fir, and Mid and Lower Elevation Subalpine Forest Fire Groups - These fire groups occur within all subsections. Mean fire intervals within these fire groups indicates that one or more fire cycles may have been removed from these areas mainly through fire suppression. Results of altering the fire regimes in these fire groups include the following:

1. Thickening of the forest - potential loss of certain habitats (e.g., aspen stands, wet/dry meadows, riparian areas etc.) due to encroachment
- 2 Accumulation of more large organic materials on the forest floor. As organic matter accumulates, decomposition rates decline and nutrient cycles stagnate. Nitrogen mineralization rates decline.

3. Decrease in stream flow and on-site water balance. Increase in interception, evaporation and transpiration Available water is less.

4 Development of ladder fuels

Implications if fires of higher intensity and severity were to occur are as follows:

1. The potential increases for the loss of species not adapted to these "altered" fire regimes (e g., old, past fire-resistant Douglas-Fir).

2. Loss of nutrients and a lowering of site productivity potential. Storing more nutrients above ground in the denser (more stems per acre) forest canopy instead of the soil profile as was historically the case makes them more susceptible to loss through fire

3 There is a higher potential for having more acres severely burned with subsequent chances for altering the soils' physical and chemical properties or of developing water-repellant layers with subsequent sensitivity to increased overland flows and erosion.

4. The natural resistance and resiliency potential for the soils would be altered, requiring longer recovery time and thus a longer risk period for resource damage.

Historic forest structures of large, widely spaced Douglas-fir trees would not be restored during the first decade. Susceptibility to Douglas-fir beetle and western spruce budworm are expected to remain high due to dense stocking and multiple-storied structure.

Due to the long fire intervals (50-350 years) in the subalpine fir type, the historic fire patterns most likely have not been significantly changed due to fire suppression. Failure to reintroduce fire in subalpine fir within the next decade is not expected to cause important impacts to this community type.

Lodgepole Pine - Historic fire regimes in the lodgepole pine community type have not been seriously disrupted on the Forest. Significant lodgepole pine acreages have been returned to early age classes by past timber management, and within the Greater Yellowstone Ecosystem a large proportion of this type was affected by the fires of 1988. Although the possibility of severe stand-replacing fires still exists within this type, such fires are in line with what historically occurred The consequences of not reintroducing fire to this type are expected to be insignificant over the first decade.

High Elevation Whitebark Pine - Lack of fire reintroduction at high elevations where whitebark pine is found may contribute to the decline of this species. Newly burned areas which provide seedbeds will continue to be lacking. Since much of the whitebark pine is mixed with subalpine fir, fires would likely be of high intensity leading to loss of mature whitebark pine trees. Both these conditions would reduce opportunities in this species for improved genetic resistance to white pine blister rust via gene recombination.

Insects and Disease

The environmental consequences discussed here focus primarily on pest management through forest vegetation manipulation. Forest management on timberlands provides the best opportunity to prevent or reduce the amount and impact of pest-related damage, although direct actions against pests may be necessary in specific (small scale) situations, as it relates to forest vegetation. With greater opportunity to manage forest vegetation, less damage would be anticipated. Areas managed intensively for timber would present the greatest opportunity to reduce or prevent timber losses, while areas managed nonintensively for timber production would have anticipated higher timber losses. Another method in treating insects and disease is the use of baiting or trap trees. Prescribed fire may be an appropriate tool in managing insects and disease, under some conditions.

Reducing competing vegetation in plantations increases available soil moisture and available light, and is essential for acceptable seedling survival and growth. Controlling tree densities in timber stands improves tree health and vigor and greatly increases their resistance to insect attack. Replacing existing stands which contain a component of overmature, decadent trees with young trees reduces mortality caused by insects and disease.

Indicators - Amount of treated acres of mature and older age classes

Consequences Common to All Alternatives - All alternatives allow some treatment of insects and disease, including vegetation manipulation. However, the intensity of application and opportunities for managing pests will vary according to the kinds and intensities of resource management planned for each alternative. Plantations of seedling, sapling and pole-size stands existing from previous vegetation manipulations will be treated during this planning period in order to enhance vigor and growth. The amount of treatment in these stands will be about the same for all alternatives.

All alternatives allow insects and disease to play their natural role in ecological succession in one or more management prescription areas. Endemic levels of insects and disease are natural and should be expected.

Vegetation management in developed recreation areas should result in improved health of the vegetation, decreased tree mortality, and fewer hazardous trees. Vegetation management in developed recreation areas should remain about the same as the current situation assuming the same level of funding as in the past.

Consequences Which Vary by Alternative - The amount of forested vegetation manipulation varies in each alternative. The alternatives with the most acres in the 5-series prescriptions allow for the most vegetation management. Alternative 2 allows the most forest management and Alternative 6 the least (see Table II-1 & Table IV-22). While the level of insects and disease activities expected from each alternative is difficult to measure, the amount of vegetation manipulation in each alternative is not significantly different.

Cumulative Effects - All alternatives provide a low level of vegetation management, and will not affect levels of insect and disease activity significantly from past forest plan activities. While the levels of vegetation management are lower than the previous planning period, treatment of mature stands at any level is beneficial in reducing insect and disease conditions.

Under all the alternatives pest-caused mortality would be expected to increase as mature timber stands continue to become overmature. This could result in both an increased level of annual losses, and the increased possibility of large periodic losses from insect and disease epidemics. Pest-caused mortality would likely increase as vegetation management decreased, though the differences between alternatives are not likely to be significant.

ECOLOGICAL PATTERNS

Patch Size

Key indicator - Area restricted to opening sizes smaller than the range of variability.

Consequences Common to All Alternatives - The size of forested patches in the Centennial Mountains, Island Park, Madison and Teton Range Subsections were relatively large historically, based on preliminary analysis. All alternatives will limit portions of these subsections to small opening sizes of one-half to 40 acres. This has the effect of creating patch sizes smaller than what historically existed. For all alternatives this situation is the result of implementing goshawk standards and guidelines. Within 5,400-acre foraging areas around each goshawk nest, opening size is limited to 40 acres or less (required by

Forestwide Standards and Guidelines) The four subsections having historically larger patch sizes contain 29 known goshawk nests. This translates to 156,600 acres where management will result in patch sizes smaller than what occurred historically. It is expected that more goshawk nests will be discovered as surveys continue, which would expand the area limited to 40-acre openings.

Consequences Which Vary by Alternative - Each alternative has some restrictions on the size of created openings which will move the Centennial Mountains, Island Park, Madison and Teton Range Subsections toward smaller patch sizes than existed historically. These limitations are generally included to protect visual quality or maintain grizzly bear habitat. Table IV-1 shows how many acres in these four subsections are placed under management prescriptions with opening sizes smaller than the range of variability. Alternatives 1, 2 and 3 have low acreages of restricted opening sizes, while in alternatives 3-M, 4, 5 and 6 these acreages are significant. However, since scheduled timber harvest in alternatives 3-M, 4, 5 and 6 occurs on less than 1.5 percent of the forested lands in the four subsections, any adverse effects on overall patch size are expected to be minor.

Cumulative Effects - The effect of small opening size requirements is to move outside the range of variability on portions of four subsections on the Forest. Past clearcutting, even while allowing up to 100-acre openings, has already created smaller patch sizes than existed historically in the Madison and Island Park Subsections. The situation could be exacerbated, particularly in alternatives 3-M, 4, 5 and 6, by requiring small opening sizes. However, since scheduled timber harvest in these four alternatives over the entire coming decade would occur on less than 1.5 percent of the forested lands in the four subsections, any adverse effects on overall patch size are expected to be minor.

Changes in patch sizes from what existed historically may affect individual species or ecosystem sustainability; however, the nature and magnitude of such effects on the Forest are not known at this time.

Connectivity

Indicators

1. Acres where aquatic connectivity is improved or maintained
2. Open motorized road & trail miles, which decrease connectivity
3. Percent of forested acres in mature or older age classes.
4. Patterns of mature forests

Consequences Which Vary by Alternative

Aquatic Influence Zone - Buffers intended to protect the entire aquatic influence zone and retain abundant riparian vegetation are utilized in Alternatives 4, 5, and 6. It is anticipated that these alternatives will restore natural levels of connectivity at a relatively rapid rate (10-30 years). Alternative 3-M, which protects the entire aquatic influence zone but retains less riparian vegetation, will eventually restore natural levels of connectivity but at a much slower rate than Alternatives 4, 5 and 6. Alternatives 2 and 3 employ narrower buffers and less protective standards and guides. It is expected that these alternatives will not restore natural levels of connectivity as effectively as alternatives 3-M, 4, 5, and 6. Alternative 1 provides the narrowest buffers and the least protective standards and guides. This alternative is expected to be the least effective in restoring natural levels of connectivity. Alternatives 1, 2, and 3 would not fully restore many stream reaches. Further information on aquatic ecosystems is shown in Table II-1 and under Aquatic and Riparian Resources in the Biological Elements section of this chapter.

Terrestrial Zone - Since open motorized roads and trails can interrupt wildlife movement and plant dispersal, the miles of such roads can be used as an inverse measure of connectivity. This is displayed for each alternative in Table IV-1. All alternatives show a gradually decreasing number of open motorized access miles. All alternatives are expected to reduce open road mileages from the existing conditions, thereby providing benefits to connectivity.

The amount and pattern of mature or older age classes across the Forest can also indicate levels of connectivity for species requiring this type of habitat. Higher amounts of mature age classes would likely provide greater connectivity. The percentage of forested acres in mature or older age classes is shown by alternative in Table IV-1. Across all alternatives the mature forested acres exhibit very little variation, ranging from 78.2% to 79.6%. Alternative 2, with the highest potential timber harvest acreage, would harvest 17,000 acres in the first decade, which translates to 1.4% of the forested land. This is not expected to create adverse effects on connectivity. Patterns of mature forest distribution do not vary by alternative. There is nothing in any alternative that would prevent managers from providing for connectivity by spatially arranging site-specific projects to approximate historic vegetation patterns.

Cumulative Effects - Clearcutting over the past decade in the Island Park and Madison Subsections has altered vegetation patterns and connectivity from what existed historically in some watersheds. Since no harvest of these watersheds is planned in any alternative within the next decade, there is little likelihood that these areas will move further from their historic patterns, nor will they be restored to historic patterns. Connectivity based solely on vegetation patterns has not been significantly changed by past timber harvest in other subsections.

Current levels of motorized road and trail density have reduced connectivity from historic levels Forest-wide. Reductions in motorized roads and trails proposed under all alternatives will eliminate some of these past effects. Road restrictions which occur near adjacent ownerships are expected to increase habitat connectivity over the current situation between Forest lands and those of its neighbors.

Along the western border of Yellowstone National Park, connectivity is significantly increased by road reclamation and restrictions in Alternatives 4, 5 and 6. More moderate gains are realized in Alternatives 1, 2, 3, and 3-M.

Changes in connectivity from what existed historically may have already affected individual species or ecosystem sustainability; however, the nature and magnitude of such effects on the Forest, and whether they exist, are not known at this time.

Adjacent Land Use Patterns

Land uses occurring adjacent to the Forest may or may not be consistent with management being proposed for the Forest. How the Forest fits within the context of its neighbors is an important factor in understanding the broad ecosystem patterns that result when the various alternatives are implemented. The appendices have information on current management of lands adjacent to the Forest.

Consequences Common to All Alternatives - For the most part, management of the Forest is expected to be compatible with adjacent land uses occurring on both public and private lands. However, there are some cases where conflicts may arise.

In all alternatives, the existence and effectiveness of winter ranges for elk, deer and antelope may be affected by activities on private land. Subdivision of agricultural lands for homes and businesses is expected to reduce winter range on private lands, thereby increasing pressure on the Forest's winter range. This is a concern especially in the Teton Range and Big Hole/Palisades Subsections, where housing developments are increasing rapidly in key winter range in the Teton Basin and Swan Valley areas.

Other inconsistencies between Forest management and adjacent jurisdictions exist where there is a strong commodity emphasis next to designated or recommended wilderness. Intensive management activities can detract from the wilderness character and experience by creating noise or visual impacts that are not consistent with wilderness. The most obvious example of this lies along the western boundary of Yellowstone National Park where the Forest's past intensive timber management ends in a sharp, straight line against the wilderness emphasis of the Park. In all alternatives this will remain visible for several decades.

Another situation that creates inconsistency is managing for nonmotorized recreation or wilderness adjacent to developed private lands. Private development and associated activities can detract from the intended nonmotorized experience by creating noise or visual impacts that do not appear natural.

In addition, keeping motorized vehicles off Forest lands is extremely difficult when individual homes have direct access to the Forest. This inconsistency exists in every alternative to some extent.

Consequences Which Vary by Alternative - Conflicts between grizzly bears and humans may become a problem where bear habitat exists next to private ranches or housing developments. Any conflicts that may arise would likely be tied to higher grizzly bear occupation of Forest habitat than currently exists. Although Grizzly Bear Management Units on the Forest do not change between alternatives, the likelihood of conflicts may be greater in alternatives which provide for better habitat effectiveness if there is a resultant increase in grizzly bear occupancy on Forest lands adjacent to other public and private lands (see the Biological Elements section of this chapter). Such problems would also be more prevalent in years when grizzly bear food sources are scarce. Adjacent lands most likely to experience conflicts between bears and ranching operations are in the Henry's Lake area, where grizzly bear habitat lies directly adjacent to active ranches. Private developments in Island Park, Henry's Lake Flat, Shotgun Valley and Robinson Creek/Fall River are those most likely to experience conflicts with grizzly bears.

There is an area of discontinuity between the Forest and the Gallatin National Forest in Alternative 2. The Lionhead area has been proposed as wilderness on both the Forest and Gallatin National Forests in all alternatives except Alternative 2. The Forest portion in Alternative 2 would have a commodity emphasis which would not match well with the Gallatin's proposal for wilderness. In addition, current management on the Gallatin is for intensive range management adjacent to a portion of Targhee land proposed for the Lionhead wilderness area. This creates a management inconsistency in Alternatives 1, 3, 3-M, 4, 5 and 6.

Except for Alternative 2, all the alternatives recommend the Lionhead Roadless Area for wilderness. The Lionhead recommended wilderness lies next to private lands which are rapidly being developed in Henry's Lake Flat.

Private developments in the Swan Valley area abut small portions of the Forest proposed for nonmotorized recreation or wilderness in Alternatives 1, 2, 3, 3-M and 4. Major portions of the Big Hole/Palisades Subsection will have this problem in Alternative 6 where proposed wilderness adjoins developments in Swan Valley and southwest of Driggs. The Big Bend Ridge area near Ashton is proposed for nonmotorized management in Alternatives 5 and 6. This is inconsistent with development that is beginning to occur on private lands in this area.

Cumulative Effects - The distribution and number of wintering deer and elk on the Forest depends on winter severity. The elk and deer winter range areas on the Forest are the upper elevational limits for these ranges. Generally, more winter range acres exist at lower elevations on BLM, State, and private lands, and a higher proportion of deer and elk winter at these lower elevations during most winters.

As a result, subdivision and loss of agricultural lands adjacent to the Forest and increasing pressure on winter range may trigger reductions in herd size over the long term. National Forest winter ranges cannot compensate for the loss of winter range acres at lower elevations on adjacent lands. If big game populations outstrip winter range capacity, winter range on the Forest could become degraded. The greatest impacts to the Forest from adjacent land uses are expected to result from conversion of agricultural lands to housing and businesses. Agricultural lands provide some habitat for a variety of species, and much of this habitat could be lost as development continues. Development may also create significant impacts on the Forest by increasing recreation pressures.

II. PHYSICAL ELEMENTS

Soils and Geology

Indicators

1. Miles or acres of road construction
2. ASQ (Allowable Sale Quantity)
3. Firewood and Products Volume
4. Roads Open, Restricted, Reclaimed/Obliterated (miles or acres)

Consequences Common to All Alternatives - Soil disturbances related to developed recreation sites, unmanaged dispersed (including OHV) recreation, concentrated developed areas (e.g. electronic sites, administrative sites, etc.), potential acres severely burned through prescribed fires within the sagebrush/grass and forested ecosystem, and fuelwood harvest would be similar under all alternatives.

Soil disturbance would continue to occur across approximately 350 acres within developed recreation sites and special use recreation sites. Soil disturbance would mainly be the result of maintenance or reconstruction activities, vehicles, and foot traffic in and between facilities. Such activities would have an effect on the soil's hydrologic function (e.g. through compaction and/or puddling) and site productivity (e.g. erosion).

Soil disturbance from unmanaged dispersed recreation and OHV use will be one of the main challenges to soil quality management. Demand for these uses will continue to escalate with corresponding concerns. At this time, it is difficult to project which of the alternatives would present more concerns to soil quality.

Soil disturbance would continue to occur across approximately 110 acres of concentrated developed areas. Soil disturbance would be the result of construction/reconstruction/maintenance activities and vehicular/foot traffic. Areas of disturbance would be susceptible to being eroded, with a subsequent loss in site productivity.

Severely burned conditions have the potential of occurring across 560 acres (5% of the area) where prescribed fire is used within the mountain big sagebrush/grass ecosystem. If areas of severely burned conditions occur in larger patches (acre or more), these areas would be more susceptible to erosion and would require a longer recovery period, thus presenting a longer risk period.

Approximately 38 million board feet of personal use fuelwood would be removed within the first decade. Areas designated for personal use and commercial fuelwood gathering would be susceptible to reductions in soil quality through such detrimental disturbances as displacement, compaction, puddling and removal of large woody debris necessary for maintenance of long term site productivity. The development of random skidding and access roads is also a concern within fuelwood areas since there is a tendency to drive up to each log or snag harvested.

Consequences Which Vary by Alternative (Refer to Table II-1)

Scheduled Timber Harvest (ASQ Lands) - Land surface disturbed by a variety of logging systems (tractor/cable) and cutting prescriptions (primarily shelterwood harvests) was evaluated. Under Alternative 6 no scheduled timber harvest would occur, thus no surface disturbance. Of the remaining alternatives, Alternative 5 would result in the least acres disturbed i.e., 675 acres over the coming decade. Using Alternative 5 as a base, the remaining alternatives (in ascending order) would expose twice as much (Alternative 4); three times as much (Alternatives 1, 3 and 3-M); and four times as much (Alternative 2) the amount of bare soil as Alternative 5. Areas of bare soil could be either compacted, displaced or puddled or a combination of these detrimental conditions. These areas would be susceptible to erosion and subsequent loss in site productivity. Disturbed areas would be the result of timber

harvesting practices such as skidding, skid trail networks, landings, etc. Ground based harvesting techniques may approach or exceed the 15% soil disturbance threshold but should be held to acceptable levels by adhering to the Soil Quality Standards and Guidelines.

Nonscheduled Timber Harvest - Timber harvesting would also occur on nonASQ Lands (unsuitable lands). Timber removal on nonASQ Lands would be in response to other resource needs, for instance, to remove hazard trees from developed recreation areas, to improve visibility along roadways, wildlife needs etc.

It is possible, though currently unplanned, for substantially greater volumes of material to be harvested to meet ecosystem management objectives than has been the case in the past. Volumes of timber to be removed would, in all likelihood, vary with each alternative but the actual amounts that might occur are not known. Concerns to the soil resource would be similar to those expressed above on ASQ lands with the added concerns of a large number of these acres occurring on steep slopes (greater than 40 percent) and/or not being readily accessible.

Roads - Land removed from the productive land base due to existing and proposed roads would be least under Alternative 6 (4,978 acres). Using Alternative 6 as a basis for comparing the remaining alternatives, Alternative 5 would remove 4 percent more acres from the productive land base, Alternative 4 would remove 18 percent more, Alternative 3 and 3-M would remove 42 percent more, Alternative 2 would remove 57 percent more, and Alternative 1 would remove 78 percent more than Alternative 6. Presently, there are 11,424 acres removed from the productive land base from roads, which is higher than any of the proposed alternatives. These lands would be effectively removed from the Forest's total productive land base for the life of the road and would be susceptible to erosion/sediment. A high percentage of these acres occur within the aquatic influence zone, thus have a short delivery distance to a stream channel. One objective under the watershed activity schedule is to inventory roads, trails, culverts, fords and stream crossings within the aquatic influence zone by the year 2000. This inventory will identify problem areas and suggest remedial actions.

Miles of roads transecting soil types having mass instability concerns is least under Alternatives 6 (356 miles, of which 42 miles occur on slopes over 40%). The highest number of miles crossing sensitive soil types occurs within Alternative 2 (three times the miles within Alternative 6, 13% of which occur on slopes over 40%). The remaining alternatives (1, 3, 3-M, 4 and 5) have twice the miles of Alternative 6, and 14% of their miles occurring on slopes greater than 40%. These road segments would be susceptible to mass erosion (especially those slopes greater than 40%) and to being major sediment producers—depending on their drainage systems.

Although Alternatives 1 and 2 allow the most access (open roads) and acres available to cross-country motorized summer use (53% and 42% of the Forest available), it is difficult to predict if dispersal of increasing numbers of recreationists would result in more or less damage to the soil resource. Similarly, Alternatives 5 and 6 allow the least access (open roads) and acres available to cross-country motorized summer use (3% and 2% of the Forest available). It likewise is difficult to predict whether concentrating recreationists into less area would result in more or less damage to the soil resource. In all cases, administration, monitoring and enforcement would be key in limiting damage to the soil resource. Alternatives 3, 3-M and 4 are intermediary (in descending order) to the above alternatives with respect to access and area open to summer cross-country travel.

Acres placed back into productivity (stabilized and revegetated) through road reclamation/obliteration would be highest under 6 (6,446 acres) and least under Alternative 1 (2,616 acres). Alternatives 2, 3 and 3-M, 4, and 5 would be intermediary, in ascending order, as to the number of acres placed back into production. Obliterated roads would have a lower inherent site productivity than adjacent undisturbed sites but overall benefits from obliteration is beneficial to soil and watershed conditions.

Range - Soil disturbance (areas with inadequate ground cover having exposed soil or areas where soil conditions are in a downward trend, e.g. eroding) would be least under Alternatives 4, 5, and 6. Alternatives 2, 3, 3-M would be intermediary Soil disturbance would be highest under Alternative 1 These areas would be susceptible to erosion and decreasing site productivity.

Dispersed Recreation - Land surface disturbance within areas managed for dispersed recreation would be potentially greatest under Alternatives 1, 5 and 6 because they have the fewest acres on which dispersed recreation sites would be more strictly managed. Alternatives 2, 3, 3-M, and 4 would place more dispersed sites under management and potentially result in less soil damage. Foot traffic and vehicles would be the main source of soil disturbance resulting in compaction, displacement, or puddling. These areas would be susceptible to erosion and have lower productivity potentials than adjacent undisturbed areas.

Cumulative Effects Common to All Alternatives - Based on the level of activities being projected within the various ecosystems, some cumulative impacts will be similar across all the alternatives. The ecological cumulative impacts to soils are described in the Ecological Processes and Patterns section

Because all of these alternatives call for management outside the historical range of mean fire intervals thus perpetuating altered ecosystems, it is very important to mitigate, protect or intensively manage these ecosystems to achieve and maintain the desired future condition These ecosystems are susceptible to fires of higher intensity/severity.

It is anticipated that dispersed recreation may increase over the current situation by 40% over the next decade thus having the greatest potential increase in relation to other Forest uses. Demands and potential conflicts by this group of users will continue to escalate in the future. Potential cumulative impacts from this use could be very similar under all alternatives (e.g., compaction/displacement, loss of vegetation ground cover, increased erosion potential, rutting, rill/gully formation, etc.).

Cumulative Effects Which Vary by Alternative

Management-Induced - Open roads also have the potential to produce continued cumulative impacts on soil quality (erosion and sedimentation) and overall watershed values. As mentioned previously, of particular concern is the potential for mass erosion occurring along roads that pass through soils having mass instability concerns (especially on those where side slopes are greater than 40%) Greatest potential for cumulative impacts (negative) from roads is under Alternative 2; continuing in descending order of impacts—1, 3 & 3-M, 4, 5, 6.

During the next decade, Camas Creek (Watershed 025) is the only watershed scheduled to have timber harvesting (in all alternatives except Alternative 6) that has 20% or more of the area in a hydrologically disturbed condition

Cumulative Effects Summary - Overall, soil quality on the Forest should improve over the existing situation under all alternatives. Soil quality standards and guidelines have been established to help direct soil quality improvement, maintenance, and/or enhancement within managed portions of the Forest. These standards and guidelines have been incorporated within the Revision.

Management-induced cumulative impacts (acres disturbed compared to total acres/alternative open for multiple use management) to the soil resource would be greatest under Alternatives 1 & 3-M (6%), Alternatives 2, 3, 6 (5%) and Alternatives 4 & 5 (4%).

Ecological cumulative impacts to the soil resource are very similar under all alternatives, especially within the sagebrush/grass and aspen ecosystems and within the Dry and Moist Douglas-Fir; and Mid and Lower Elevation Subalpine Forest Fire Groups.

There is a risk to soil quality within unmanaged portions of the Forest as mentioned under the previous section entitled "Ecological Processes." Because all the alternatives manage these ecosystems outside of their historic mean fire intervals then plans need to be formulated to mitigate, protect or intensively manage these ecosystems/fire groups to maintain the desired future conditions. Because this has not yet been done, there is a risk within these ecosystems/fire groups of having adverse effects take place to the soil resource through the occurrence of fires of higher severity and intensity than what historically happened.

Air Quality

Indicator - Potential to exceed Idaho or Wyoming Ambient Air Quality Standards.

Consequences Which Vary by Alternative - Alternative 1 allows the most activities on forest lands; this would subject air quality to more degradation from management activities than the other alternatives. Alternative 6 allows the least activities on forest lands—thus would be less likely to cause air quality degradation from management activities. An exception to these consequences would be the effects on air quality caused by catastrophic wildfire. Those effects are discussed in the cumulative effects section.

Cumulative Effects - Severe wildfire would be the primary event that would cause air quality degradation. Although there is risk of severe wildfire with all the alternatives, the risks would be higher with alternatives which limit the use of management activities the most. Activities such as prescribed fire (natural and management-ignited), timber harvest, or other vegetation manipulation methods used to reduce fuel loadings and modify stand structure, could decrease the risks of deteriorating air quality caused by wildfires on the Forest. Short-duration smoke events that meets state smoke management guidelines during early or late seasons could reduce the visual and health impacts caused by a high severity wildfire during the high visitor use season.

Caves

Impacts on cave resources would be the same for all alternatives. These would result from normal recreational use of the caves. Obtaining management funding for cave inventories, nominations, etc may be more limited under Alternatives 4-6 than in higher activity alternatives (1, 2, 3, 3-M).

Lands

There would be no impacts on lands from any alternative.

The following plans are incorporated in the Revision by reference.

- Land Adjustment Plan
- Right-of-Way Acquisition Plan
- Encroachment Plan

All three plans will be located in the landline section office on the Forest. These plans will subject to yearly updating by the landline section.

Minerals

Indicators

- 1 Area Open to Mineral Leasing
- 2 Area Open to Locatable Mineral Entry
- 3 Area Open to Mineral Material Entry

Consequences Common to All Alternatives - Under all alternatives mineral resources will be available for extraction. However, access and availability of lands for exploration and development will vary by alternative as indicated by Table IV-2.

The Forest Oil and Gas Leasing EIS will make the availability decision (acres available for oil and gas leasing) and will be coordinated with the Revision.

Consequences Which Vary by Alternative - Alternatives reflecting more developed recreation sites and facilities, more roadless areas which are to remain undeveloped, and more acres recommended for wilderness designation than in Alternative 1 will reduce the availability of lands for mineral exploration and development. As displayed in Table IV-2, Alternatives 1 and 2, in which no additional lands are recommended for wilderness classification than currently exist, provides the most land available for mineral exploration and development. Alternative 6, which has the most acres recommended for wilderness, provides the least amount of land available for mineral exploration and development.

Cumulative Effects - Alternatives which limit development activities on the Forest will have a tendency to also limit the utilization of mineral resources by restricting access and availability of lands for mineral extraction. Conversely, alternatives which provide opportunities for development activities will also provide opportunities for the utilization of mineral resources. Thus, cumulative effects of development activities in the long-run is beneficial to the utilization of mineral resources.

Table IV-2. Comparison of Minerals Effects (Acreages are in thousands)							
	Alternative						
	1	2	3	3-M	4	5	6
Acres Open to Locatable and Mineral Entry	1,383	1,414	1,324	1,277	1,340	1,197	968

The area analyzed in the Oil and Gas Leasing EIS is 1,102,828 acres, which excluded the existing wilderness and Island Park areas of the Forest. Thus, the actual available acreage figure for oil and gas leasing will be less than that shown for all alternatives. However, the acres by alternative are accurate for other leasables including phosphate and coal.

Historically discovery of valuable minerals in economic quantities to warrant development and production have been relatively infrequent on the Forest when compared to other forests in the region. The probability of mineral resource development is marginal given the current geologic knowledge of the Forest. The only current mineral activity of consequence is the extraction of travertine on the Palisades Ranger District. Before that, in the mid-to-late 1800's, the mining of lead in the western portion of the Forest was significant.

III. BIOLOGICAL ELEMENTS

Two parts make up the description of the Biological Component. These two parts are Aquatic and Riparian Ecosystems; and Terrestrial Ecosystems (upland forested and upland nonforested). Under each of these a key indicator is discussed first, with other indicators described subsequently.

AQUATIC AND RIPARIAN ECOSYSTEMS

Riparian

Key Indicator - Riparian acres not meeting DVC due to continual grazing and introduction of nonnative species (including acres in undetermined status)

The riparian vegetation along some streams would not be expected to improve to a desired condition within 10-15 years, even in the absence of livestock grazing. Under Alternative 1, riparian forage utilization would be managed to retain a specified percentage of plant material at the end of the grazing season rather than retaining a specified stubble height at the end of the grazing period. All other alternatives employ specified stubble heights

Compared to the existing situation; all alternatives close an additional 98,214 acres to grazing. Alternatives 3-M and 4 "phase out" grazing on an additional 172,186 acres and Alternatives 5 and 6 immediately close the same acres identified in Alternatives 3-M and 4. These acres that will be closed will show improvements in vegetation composition in the riparian communities faster than those acres with grazing.

Under Alternative 1, riparian vegetation trends will show slow improvements in species composition from fine-rooted species like Kentucky bluegrass, to coarse-rooted species like beaked sedge, on allotments with rotation grazing systems. Approximately 18,810 acres (68%) of the riparian vegetation will meet DVC, while 4,945 acres (18%) are predicted to move slowly towards DVC. Allotments with season-long grazing will tend to remain in their current condition (static); or as stream systems and water tables are lowered, the riparian communities will change to dryer upland species, lower successional riparian species, or introduced and weedy species. Loss of habitat for riparian sensitive plant species are greatest in this alternative. Compared to the existing situation, riparian acres not meeting DVC will increase from the current 3,650 acres to 3,963 acres during the first decade (Table II-1). Fish habitat conditions, and bank stability, would improve slowly to a moderate level commensurate with improved riparian vegetation. (Definitions and measurement protocol from Quigley et al , 1989.)

Compared to the existing situation, Alternatives 2, 3, and 3-M increase the riparian acres meeting DVC from 68% to 72%, while 19% will move toward DVC with the 4" HGL stubble height grazing requirement. Streamside *Carex* species will increase along streamsides and will better retain yearly sediments, increasing the habitat diversity, water-holding capabilities and hydrological conditions of the system. Sensitive plant habitats and biodiversity will increase moderately with these alternatives. Compared to the existing situation, riparian acres not meeting desired vegetation conditions will decrease from 3,650 acres to 2,476 acres (9%) during the first decade (Table II-1). This would result in a moderate rate of recovery and moderately high level of fisheries habitat quality commensurate with improved riparian vegetation and streambank conditions.

Compared to the existing situation, Alternatives 4, 5, and 6 increase the riparian acres meeting DVC from 68% to 76%, while 18% will move toward DVC, with the 6" HGL stubble height grazing requirements. Increased vegetation cover will hold greater amounts of sediment, accelerating changes over those in Alternatives 2, 3, and 3-M. These alternatives also have the greatest potential to improve riparian sensitive plant habitats and improve biodiversity by increasing habitat diversity. Compared to the existing situation, riparian acres not meeting DVC will decrease from 3,650 acres to 1,744 acres (6%) during the first decade (Table II-1). This would result in a rapid rate of recovery of degraded habitats and a high level of fisheries habitat quality commensurate with improved riparian vegetation and streambank conditions.

Alternative 1 will have 3,963 acres (14%), Alternatives 2,3, and 3-M will have 2,476 acres (9%), and Alternatives 4, 5, and 6 will have 1,744 acres (6%) of the riparian vegetation in undesirable, shallow rooted species. Plant communities with a high percentage of shallow-rooted species increase the risk

of flood events lowering stream channels, increasing bank-cutting, changing stream gradients, and changing riparian communities to upland communities with lowering of water tables.

Alternatives 2, 3, 3-M, 4, 5, and 6 will all show an increase in *Carex* complexes along stream edges that have a greater chance of trapping sediment and improving the vegetation diversity of the riparian areas

Water

Indicators

1. Number of stream crossings
2. Acres of timber harvest in headwaters
3. Miles of native cutthroat trout stream with at least 6" HGL (Hydric Green Line) stubble height remaining at the end of the grazing period
4. Miles of fish-bearing stream habitat with at least 4" HGL stubble height remaining at the end of the grazing period
5. Acres impacted by developed recreational sites in the aquatic influence zone as defined by the buffers described in prescription 2 8.3
6. Acres roaded in the aquatic influence zone

Consequences Common to All Alternatives - Land disturbance and impacts to riparian areas will take place under all alternatives, the magnitude of these effects will vary by alternative. Closure of roads and trails within the aquatic influence zone would create new sediment sources due to ground disturbance under all alternatives. This would be a short-term impact to riparian areas and water bodies, lasting a maximum of approximately three years (until the disturbed sites were stabilized) These closures would, however, provide a long-term benefit to aquatic and riparian resources once they became effective (i.e., when the vegetation was established). If road prisms are not removed where they exist in floodplains, even with road closure, floodplain and stream functions could be adversely affected by the confinement presented by these features.

There will be no difference between alternatives in the amount of water diverted from streams on National Forest System lands by private parties, for use under special use permits. There will also be no difference in the amount of water (instream flow and consumptive uses) claimed for National Forest purposes through the Snake River Basin Adjudication: no new uses after 1987 are claimed. There may be a difference between alternatives in the amount of water under application and license for consumptive use (e.g., for livestock watering), but the differences should be small. Compliance with legal requirements, such as meeting State water quality standards, will not differ between alternatives

Acres affected by developed recreational sites and special use permit recreation sites within the aquatic influence zone would vary little by alternative. All alternatives would have approximately 1,100 acres of disturbance associated with these sites within the aquatic influence zone. Impacts from dispersed recreation are discussed in the recreation section.

Consequences Which Vary by Alternative

Direct Impact - See Table II-1. Direct impacts to streams and riparian areas on National Forest System lands are of three general types.

1. Change in streambank, riparian soil, and riparian vegetation characteristics,
2. Direct in-channel alteration,
3. Change in the amount of sediment delivered to streams, and therefore the load that the stream must transport

Change in Riparian Soils, Vegetation, and Streambanks - Damage of riparian soils by compaction, displacement, rutting, or puddling can reduce riparian soil productivity through changes in infiltration characteristics and a reduction in the ability of soils to support desirable riparian vegetation. Changes in

the composition of riparian vegetation communities and loss of plant vigor result from such adverse impacts to soils, as well as from direct impacts from overuse by wildlife, livestock, or people. Refer to the key indicator discussion under Aquatic and Riparian Resources

Direct In-Channel Alteration - These actions include putting a structure into a stream and changing channel hydraulics, or changing some aspect of the stream's geometry (e.g., increasing its gradient) by mechanical alteration

Potential for direct impacts associated with road crossings would vary by alternative. The greatest potential would exist under Alternative 1, gradually decreasing until Alternative 6, which has approximately 2,200 fewer crossings than Alternative 1. This could be a tangible difference Forestwide, even between consecutive alternatives (e.g., Alternative 2 has about 400 fewer crossings than Alternative 1)

Change in Sediment Delivery and Load - Natural events, such as high spring runoff, may lead to both increased sediment delivery to streams and increased erosive energy to move the sediment. Roads are major sources of sediment, especially when they are near streams or cross them. Since forest roads contribute an estimated 85-90% of the sediment reaching streams in disturbed forest land (Burroughs, 1990), the amount of roads within the aquatic influence zone and number of stream crossings are used as indicators of sediment delivered to streams.

Many roads and trails located within the aquatic influence zone would be closed in all alternatives. Acres of open roads within the aquatic influence zone steadily decreases from a high of 9,552 acres under Alternative 1 to a low of 4,787 acres under alternative 6, which is half the acres affected under Alternative 1. Such a decrease in roads within the aquatic influence zone means a proportional decrease in the potential for sediment delivery to streams, for delivery of other pollutants, and for detrimental impacts to riparian areas. The influence of road prisms would still exist if they were not removed. Differences in impacts from road crossings would be the same as discussed under section 2, above (direct in-channel alteration). An inventory of roads will determine where there are problems and provide recommendations to reduce impacts to acceptable levels

Cumulative Effects

Hydrologic Effects - Manipulation of vegetation has the potential to alter streamflow regimes. Researchers have shown that creation of large openings, especially in small (i.e., headwater) watersheds allows for increased snow accumulation and more exposure to the sun. This results in higher peak flows that occur earlier than under preexisting conditions, having the potential to deliver more sediment to streams and destabilize channels. The increase in sediment delivery due to changes in peak flows cannot be calculated nor estimated

The highest potential for cumulative impacts from vegetation manipulation in headwater areas would exist under Alternative 2. Alternatives 1 and 3 have the next highest potential, and 3-M, 4, and 5 have the lowest, for alternatives having vegetation manipulation. There would be no impact under Alternative 6. From a watershed perspective, watersheds 10 (Buffalo River) and 12 (Warm River) appear to have potential for adverse cumulative impacts under all alternatives due to past activities. No additional harvest is planned in these watersheds. These are watersheds that would have approximately 30% of their headwaters in a hydrologically disturbed state for the decade, having stands that have already been manipulated and which would still be unrecovered by the end of the planning decade.

Although it is unlikely that any of the proposed alternatives would threaten the population viability of native cutthroat trout over the planning period, differences in rate of recovery of degraded habitats and overall habitat quality would result from implementation of various alternatives. Alternatives 1, 2, and 3 would protect the fewest acres within aquatic influence zones and would allow the greatest amount of potentially harmful activities associated with livestock grazing, timber harvest, riparian recreational use,

and roads and trails as displayed in Table II-1. Fisheries habitat quality, including that for native cut-throat trout, would be the lowest of any alternative under Alternative 1. Alternatives 1, 2, and 3 would result in a slow rate of recovery of degraded habitats, reduced water quality, and less habitat quality. Refer to Table II-1 for a quantitative view of riparian habitat change. Since alternatives 4, 5, and 6 would emphasize more protection of aquatic influence zones, they would result in a rapid rate of recovery of degraded habitats and the highest levels of water quality and fish habitat quality. Alternative 3-M would result in a moderate rate of recovery of degraded habitats and intermediate levels of water quality and fish habitat quality. All alternatives would meet State water quality standards.

Nearly all of the environmental consequences described for each alternative are cumulative in the sense that they reflect the environmental and management impacts of an accumulation of management actions that would occur under each alternative and that have occurred in the past. Many of these impacts have occurred over the last 100 years; some would cease with implementation of certain alternatives while others would continue over the planning period (10 to 15 years).

Wildlife Associated with Aquatic and Riparian Ecosystems

The effects of implementing the alternatives are displayed in terms of consequences to the following:

- Bald Eagle Nesting Habitat
- Trumpeter Swan Nesting Habitat
- Spotted Frog Habitat
- Common Loon Habitat
- Harlequin Duck Habitat

Bald Eagle Nesting Habitat

Table IV-3 displays the consequences of each alternative for bald eagle nesting habitat.

Consequences Common to All Alternatives - Forestwide standards and guidelines establish habitat management direction for all occupied bald eagle nesting territories, and any new territories which may become established. All recovery goals have been exceeded. Nesting habitat for all existing pairs and any new pairs will be maintained in all alternatives. This management direction will continue to have beneficial effects for the bald eagle populations on the Forest.

Management Indicator	Existing	1	2	3	3M	4	5	6
Bald Eagle Nesting Habitat								
# of Nest Sites on Forest	17	17	17	17	17	17	17	17
# of Territories on Forest	26	26	26	26	26	26	26	26
Trumpeter Swan Habitat	Forest-Wide Standards and Guidelines protect all nesting areas in all alternatives							
Spotted Frog Habitat (disturbance)	Most	Most	Moder	Moder	Moder	Least	Least	Least
Common Loon Habitat	Monitoring and Habitat Evaluation to be done in all alternatives							
Harlequin Duck Habitat	Forest-Wide Standards and Guidelines protect all nesting areas in all alternatives							

Cumulative Effects - Bald eagle nest zones and primary use areas occur on adjacent National Forests, BLM lands, State and private lands. Along the South Fork of the Snake River, a "Snake River Activity/Operations Plan" was approved by the BLM and the Forest Service in 1991. Bald eagle habitat management was a key component of that Plan.

Management actions of other agencies, such as management of fishing and fish populations by the State Fish and Game agencies, and management of river flows by the Bureau of Reclamation and the SE Idaho irrigators, may have positive or negative effects on the bald eagle population.

However, according to records which we have been able to compile from 1972 to the present, the bald eagle population has increased in southeastern Idaho.

Trumpeter Swan Nesting Habitat

Table IV-3 displays the consequences of each alternative for trumpeter swan nesting habitat.

Forestwide standards and guidelines for trumpeter swan nesting habitat apply in all alternatives.

Consequences Common to All Alternatives - Suitable habitat will be maintained for all existing nesting pairs plus any new nesting pairs which may become established.

Cumulative Effects - Many of the lakes and ponds historically used by trumpeter swans are naturally filling in with sediment and are becoming too shallow for swan use. Active management will be needed to help maintain suitable water depths for swans, or the lakes and ponds will not be usable.

Spotted Frog Habitat

Table IV-3 displays the consequences of each alternative for spotted frog habitat.

Consequences Which Vary by Alternative - Five aquatic influence zone management prescriptions have been developed for the seven alternatives. We evaluated how each alternative may affect spotted frog habitat as follows.

Influence of Buffer Widths - Bartelt and Peterson (1993) noted that spotted frogs were always within 2 meters of water, none left riparian habitats, almost all were associated with ponds until September when they left the ponds for nearby streams, and ponds within 50 m of permanent streams were an important combination of habitat characteristics. Based on this, the different buffer widths in each of the management prescriptions all appear to be adequate.

Some literature indicates that spotted frogs may move considerable distances after breeding; in these cases, the movements would be farther than any of the buffer widths in the management prescriptions. In these cases, we doubt there is much of a measurable difference in effect due to different buffer widths.

Timber Harvesting/Management - There is no data in the literature to suggest that spotted frogs are dependent upon a particular forested vegetation condition. Therefore, there is no difference between the alternatives in terms of effects from changes in forest vegetation due to timber harvesting. However, there may be a disturbance effect from the presence of human activity associated with timber harvesting. Therefore, Alternatives 1 and 2 which allow scheduled timber harvesting in the aquatic influence zones may have site-specific, short-term impacts on spotted frog populations and habitat.

Livestock Grazing - A recent conservation assessment for spotted frogs (USDA Forest Service, 1994b) listed concerns about possible threats to spotted frogs and habitat from livestock or grazing. (Concerns included such things as reduced vegetation in riparian areas, potential increases in water temperature, trampling, etc.) However, no documented studies were cited in support for these concerns.

In studies done on the Forest, Clark et al (1993 and 1994 plus errata page) reported there appeared to be no significant relationship between spotted frog occurrence and evidence of grazing. They stressed however, that no controlled study was performed investigating the effects of grazing on spotted frogs, and therefore appropriate caution should be exercised when evaluating the importance of the results.

Using an assumption that less grazing activity may result in potentially less effect on spotted frog habitat, Alternatives 4, 5, and 6 will have the least amount of potential disturbance; Alternatives 2, 3 and 3-M will have intermediate amounts of potential disturbance, and Alternative 1 the most amount of potential disturbance.

Recreation and Other Activities - Using an assumption that less recreation activity and other human activities in spotted frog habitat may result in less potential effects on their habitat, Alternatives 4, 5, and 6 will have the least amount of potential disturbance; Alternatives 2, 3 and 3-M will have intermediate amounts of potential disturbance; and Alternative 1 the most amount of potential disturbance.

Riparian Habitat Condition and Trend - In Alternative 1, 86% of the riparian acres are meeting DVC's or will be improving towards DVC's. In Alternatives 2, 3, and 3-M, 90% of the riparian acres are meeting DVC's or will be improving towards DVC's. In Alternatives 4, 5, and 6, 93% of the riparian acres are meeting DVC's or will be improving towards DVC's.

All alternatives are expected to maintain the current spotted frog distribution on the Forest. General habitat conditions are expected to improve with all alternatives, with the most improvement occurring in Alternatives 4, 5, and 6.

Common Loon Habitat

Consequences Common to All Alternatives - The Forest has an objective to evaluate the potential to provide and maintain suitable breeding habitat for common loons at the sites mentioned in Chapter III. If this evaluation proves that these sites are suitable breeding habitat for common loons, the Forest is to develop common loon management plans for these sites. Current habitat conditions will be perpetuated at these sites in all alternatives.

Harlequin Duck Habitat

Consequences Common to All Alternatives - There is no scheduled timber harvesting adjacent to any of the streams with documented breeding activity. Livestock grazing, existing recreation activity (existing trails, recreation facilities, dispersed use, etc.), and other human activities are not measurably different among the alternatives for the sites with documented reproduction. Existing habitat conditions will be maintained in all alternatives.

TERRESTRIAL ECOSYSTEMS

Upland Forested Ecosystems

Indicators - Acres and percent change in age classes of forested community types.

Consequences Common to All Alternatives - Potential for loss of individuals or populations, and suitable habitat for Payson's milkvetch *Astragalus paysonii* (sensitive species) is the same for Alternatives 1-6. Fire is thought to be an important part of this species' life cycle, as it inhabits lodgepole pine and lodgepole pine/Douglas-fir mixed forests in the seedling to pole age classes; and in disturbed areas and openings in mature age classes. (Fertig et al 1993)

Consequences Which Vary by Alternative - Table IV-4 shows the amount of change in percent of mature forest with timber harvest for each subsection, by alternative. Changes in the mature forest acres do not necessarily reflect a change to a lower age class. The range of management methods, from clearcutting to thinning, and use of prescribed fire, will create a variety of changes in the vegetation composition in the mature forest. Changes will range from conversion to grass/forb communities with seedlings, to open stands of mature trees with different understory species, resulting from different light and moisture conditions.

Alternatives 1 through 5 have various harvest rates in each of the subsections. Changes in the mature stands range from 0% to a maximum of 3.4% in these alternatives which is not a significant change of mature forests in any of the subsections. Forests in the mature age class will continue to dominate the landscapes in all alternatives.

Management for white bark pine is possible in all alternatives but timber harvest is limited in BMU's, Alternatives 5 and 6, and in wilderness. Fire as a tool is available in all alternatives.

Management acres in mature aspen stands is shown in Table IV-5. Management levels for all alternatives are insignificant in changing the age classes in aspen. Stands will continue to change to coniferous forest types, as Douglas-fir and subalpine fir trees increase and dominate the aspen stands. Disease and insects common within mature age classes of aspen will accelerate the change to coniferous forest types.

Table IV-4. Change in Percent of Mature Age Class Forest Due to Scheduled Timber Harvest Over the Coming Decade

	Lemhi/ Mecidine Lodge	Centennials	Island Park/ Madison	West Slope Tetons	Big Hole Palisades	Caribou	Forest Total
Current % Mature total forested ac	90 103,887	79 225,012	62 466,489	97 92,182	95 227,216	99 122,495	79.6 1,237,281
Alternative 1 Harvest ac % Harvest 1/ % Mature	30 <1 90	7,657 3 76	5,203 0 60	470 <1 96	1,030 <1 94	380 <1 98	14,770 1.5 78.4
Alternative 2 % Harvest 1/ % Mature	0 0 90	6,594 3 76	6,656 1 60	270 <1 96	1,840 <1 94	1,580 1 97	16,940 1.7 78.2
Alternative 3 % Harvest 1/ % Mature	0 0 90	5,814 3 77	6,426 1 60	50 <1 97	540 <1 95	1,400 1 97	14,230 1.4 78.5
Alternative 3-M % Harvest 1/ % Mature	0 0 90	5,661 3 77	4,593 <1 61	80 <1 97	320 <1 95	770 <1 98	11,424 1.2 78.7
Alternative 4 % Harvest 1/ % Mature	0 0 90	3,480 2 78	3,160 <1 61	25 <1 97	225 <1 95	620 <1 98	7,510 0.8 79.0
Alternative 5 % Harvest 1/ % Mature	100 <1 90	3,720 2 78	770 <1 62	170 <1 96	70 <1 95	0 0 99	4,830 0.5 79.2
Alternative 6 % Harvest 1/ % Mature	0 0 90	0 0 79	0 0 62	0 0 97	0 0 95	0 0 99	0 0 79.6

1/ The percent change from a mature age class, undisturbed forest, to an early age class or mature forest with previous harvest.

	Alt 1	Alt 2	Alt 3	Alt 3-M	Alt 4	Alt 5	Alt 6
Current Acres	106,193	106,193	106,193	106,193	106,193	106,193	106,193
% Mature	92.3	92.3	92.3	92.3	92.3	92.3	92.3
Managed Acres	3,250	5,590	3,840	3,200	1,500	760	0
% Change to Low Age Class	3.1	5.3	3.6	3.1	1.4	0.7	0
% Left in Mature Class	89.2	87.0	88.7	89.2	90.9	91.6	92

Cumulative Effects - Mature forest community types will continue to dominate the landscapes Forest-wide Aspen stands for all alternatives will continue to be converted to coniferous forests as Douglas-fir and subalpine fir increase within the aspen stands. Aspen across the forest will decrease as a component of the landscape, which decreases the total biodiversity of the landscape. Aspen stands provide natural wildfire buffers that change the fire rates and intensities across the landscape. Loss of aspen stands to conifers creates larger continuous stands that can have high fire intensities that increases the severity of wildfire on the landscape.

Coniferous forests will continue to mature increasing biomass, canopy cover and fuel loading within the stands. The understory will change to shade-tolerant species and also decrease in the number of species as the forest habitat becomes more uniform. As mature conifer forests continue along current trends, insects and disease will increase creating areas of dead trees and greater fuel loads, increasing the risk of large and intense wildfire. Open areas created by dead trees will provide sites for early seral species to establish and will increase the habitat and species diversity within large stands. Absence of periodic low impact fires will put most of the mature forest in jeopardy of stand-replacing fires over large areas due to fuel loading.

Coniferous forest species, especially Douglas-fir will continue to encroach into sagebrush/grass, mahogany, grass/forb meadows, riparian and mountain brush communities throughout the forest. Conversion of herbaceous and shrub communities decrease the biodiversity and habitat diversity of the mid-elevation and high elevation areas of the Forest. As forests mature, water requirements also increase which decrease water availability to wet meadows and riparian areas.

Whitebark pine stands will continue to decline across the Forest. Regeneration in most stands is low due to encroachment of other coniferous species and lack of fire.

Upland Nonforested Ecosystems

Indicators - Acres (and percent) meeting desired vegetation conditions (DVC).

Consequences Common to All Alternatives - Potential for loss habitat, individual plants or populations of upland sensitive plant species is dependent on projects, locations, and slopes. About 12,555 acres of sagebrush/grass community type are planned to be burned (10,755 ac.), sprayed (500 ac.) or rotobeat (1,300 ac.) to improve vegetation conditions over the coming decade. Management on these sites will account for a change in species cover type and composition. To achieve the 10,755 acre burning goal, an additional 10,000 acres may be partially burned. Acres scheduled for burning would be predominantly in late-seral sagebrush with canopy cover greater than 30%. Some acres of mid-seral sagebrush with canopy cover of 15-30% could be affected depending on burn design. Partially burned acres are assumed to be converted from late-seral to mid-seral. Management of the 12,555 to 22,555 acres of sagebrush/grass community type represents 4 to 8% of the acres that will move towards meeting DVC's over the next decade.

Cumulative Effects - A predominance of acres in high-seral and mid-seral stages will continue to dominate the landscapes under all alternatives. As shrub cover increases, productivity and biodiversity will decrease and potential for wildfires will increase. Lack of fire has decreased habitat potential for plant species that prefer early seral stage habitats such as *Penstemon lemhiensis* (sensitive species)

Canopy cover over 15% in sagebrush significantly impacts herbaceous species productivity and ability to reestablish over time. About 65% of the Forests range land is currently in late-seral stage due primarily to lack of fire in these communities. Resting or eliminating grazing will not show significant improvements over time in understory herbaceous species when high canopies of sagebrush occur (Winward 1991). These communities increase the risk of large acres wildfires that are of higher intensity and severity than was historically present under 12-40-year fire cycles. These unnaturally hot fires could alter subsequent plant diversity by destroying existing soil seed banks, burning deeper into crowns of bunchgrasses and perennial forbs (and subsequently killing these plants) and changing the physiology of the soils by changing soil conditions and productivity.

Upland and riparian communities will continue to decrease with encroachment of coniferous forest species. Mahogany stands are all in the high-seral stage and are becoming decadent due to lack of fire, and an increase in Douglas-fir establishment. Increases of spruce and subalpine fir along mid- and high-elevation riparian areas has decreased willow and other shade-intolerant riparian species within the riparian zone and increased the susceptibility of these sites to erosion.

Wildlife Associated with Terrestrial Ecosystems

Key indicator - Elk Vulnerability (EV)

Consequences Which Vary by Alternative - Table IV-6 displays the percent of the Forest which meets the EV threshold levels of the State Fish and Game Departments. (Process Paper D displays the details of this analysis on a watershed basis for each alternative).

The primary effect (that the Forest Service has control of) in this EV analysis is the density of open motorized roads and trails, and the amount of area open to cross-country OHV travel. Since Alternative 1 has the highest density of open motorized roads and trails, and the most area open to cross-country OHV travel, this alternative has the highest EV and the potential for a higher proportion of the bulls to be harvested, thus the lowest percentage of the Forest meeting State EV thresholds. Since Alternatives 5 and 6 have the lowest density of open motorized roads and trails, and the least area open to cross-country OHV travel, these alternatives have the lowest EV and the potential for the lowest proportion of the bulls to be harvested, thus the highest percentage of the Forest meeting State EV thresholds.

In Alternatives 2 and 3-M, within certain management prescriptions, use of all-terrain vehicles (ATV's) is permitted cross-country and on restricted roads and trails during the big game hunting season for retrieval of legally harvested big game animals. Before hunters can use ATV's to do this, certain conditions must be complied with (see specific management prescriptions). There has been no research or monitoring on how this provision might affect elk vulnerability. There is concern from some agencies and individuals that this provision might result in higher EV.

Cumulative Effects - All roads and trails receiving motorized use, and cross country motorized use, are incorporated into the EV analysis. Hunter-day densities were provided by the State Fish and Game Departments (see Process Paper D). If hunter-day densities change in the future, due to changes in hunting seasons, motorized access restrictions, or human populations, then this analysis will need to be updated.

Table IV-6 Consequences of each Alternative for Terrestrial Ecosystems - Wildlife Management Indicators Species and Habitats								
Management Indicator	Existing	1	2	3	3-M	4	5	6
Elk Vulnerability % of Forest meeting State Fish and Game thresholds 2/	42	58	72	83	91	89	98	98
Elk Habitat Effectiveness 1/	0.56	0.60	0.62	0.63	0.64	0.66	0.69	0.70
Elk and Deer Winter Range								
Total Acres	321,264	321,264	321,264	321,264	321,264	321,264	321,264	321,264
% of acres meeting DVC	78	81	82	82	82	84	84	84
% of acres moving toward DVC	13	11	11	11	11	10	10	10
% of acres not improving	9	8	7	7	7	6	6	6
% of acres capable of being used for cross-country snowmachine use	38	38	38	38	38	38	38	38
% of acres closed to cross-country snowmachine use	22	22	21	23	34	28	42	62
Gray Wolf	Protected as a nonessential experimental population in all alternatives							
Primary Cavity Nesting Habitat 3/ All Primary Cavity Nesters Four Large Species	0.61 0.47	0.61 0.47	0.61 0.47	0.61 0.47	0.61 0.47	0.61 0.47	0.61 0.47	0.61 0.47
Forest Owl Habitat (Acres) 4/ Percent of All Forested Acres	985,000 79.6	970,000 78.4	968,000 78.2	971,000 78.5	974,000 78.7	977,000 79.0	980,000 79.2	985,000 79.6
Furbearer Habitat (Acres) 4/ Percent of All Forested Acres	985,000 79.6	970,000 78.4	968,000 78.2	971,000 78.5	974,000 78.7	977,000 79.0	980,000 79.2	985,000 79.6
Goshawk Habitat	Forest-wide S&G's provide the same protection in all alternatives							
Red Squirrel Habitat (Acres) 5/ Percent of All Forested Acres	928,000 80.0	938,000 81.0	936,000 81.0	938,000 81.0	942,000 82.0	945,000 82.0	948,000 82.0	953,000 83.0
Peregrine Falcon Habitat	Forest-wide S&G's provide the same protection in all alternatives							
<p>1/ Elk habitat effectiveness is based on open motorized road and trail densities during the spring, summer, and fall season, and hiding cover. A perfect rating would be 1.0, which would require no motorized access and 50 to 60 percent hiding cover. The numbers in the table are a weighted average for the entire Forest based on watershed analysis.</p> <p>2/ Elk vulnerability is based on motorized access density during the general elk hunting season and hunter-day densities. The numbers in the table are the percent of the Forest meeting elk vulnerability threshold levels set by the State Fish and Game Departments.</p> <p>3/ The numbers in the table are an index of biological potential for primary cavity nesting species. An index of 1.0 would mean that enough snags of the right sizes exist on every forested acre of the Forest to meet 100 percent of the habitat requirements for all primary cavity nesting species. The four large species are Williamson's sapsucker, northern flicker, hairy woodpecker, and rednapped sapsucker.</p> <p>4/ These are acres of mature and older forested habitat.</p> <p>5/ These are conifer acres with trees old enough to bear cones. Cone-bearing ages were defined as pole, mature, and older size classes and age classes.</p>								

Elk Habitat Effectiveness (EHE)

Consequences Which Vary by Alternative - Table IV-6 displays how EHE changes on a forestwide basis for each of the alternatives. (Process Paper D displays EHE analysis in more detail on a watershed basis for each of the alternatives)

The primary factor in EHE analysis is the density of open motorized roads and trails. Since Alternative 1 has the highest density of open motorized roads and trails, it has the lowest EHE value. Since Alternative 6 has the lowest density of open motorized roads and trails, it has the highest EHE value.

A lesser factor in EHE analysis is the amount of hiding cover. In all alternatives, the amount of hiding cover improves slightly as new seedlings grow into sapling stands in previously logged areas of the Forest. The amount of timber harvesting proposed in all alternatives is less than the number of acres growing into better hiding cover.

The overall effect from improving EHE (which ranges from .60 in Alternative 1 to .70 in Alternative 6) is a probable wider distribution of elk into areas previously under utilized because these areas had high motorized access densities and densities are now reduced. Improving EHE does not mean elk populations will increase.

Cumulative Effects - All roads and trails receiving motorized use are incorporated into EHE analysis. All previous timber harvesting, plus all future proposed timber harvesting are incorporated in EHE analysis.

Elk and Deer Winter Range

Consequences Common to All Alternatives - The feed ground in Rainey Creek would be phased out in all alternatives, within five years of the Record of Decision. Research studies have shown that deer and elk have high fidelity to winter range areas. Even though it would be the intent of the Forest Service and the Idaho Department of Fish and Game to encourage these animals to winter on adjacent natural winter ranges, this may not be successful. If not successful, there could be a reduction in the deer and elk population in this area with the phaseout of the winter feed ground.

Consequences Which Vary by Alternative - The amount of winter range acres meeting desired vegetation conditions increases from existing levels as follows: +3% in Alternative 1, +4% in Alternatives 2, 3, and 3-M; +6% in Alternatives 4, 5, and 6 (Table IV-6).

The amount of winter range acres closed to cross-country snowmachine use changes from existing levels as follows: no change in Alternative 1; -1% in Alternative 2; +1% in Alternative 3; +12% in Alternative 3-M; +6% in Alternative 4; +20% in Alternative 5; +40% in Alternative 6 (Table IV-6).

The majority of the deer and elk that summer on the Forest do not winter on the Forest. The number of deer and elk wintering on Forest winter ranges depends on the severity of the winter. As far as we know, no alternative would decrease the suitability of winter ranges on the Forest for deer and elk from existing habitat conditions. Improvements in the number of acres meeting DVC's, and increased restrictions on cross-country snowmachine use will result in improved winter range conditions for deer and elk, but populations may not increase over existing levels.

Cumulative Effects - Development on private lands is a concern as it can adversely affect areas historically used by wintering deer and elk.

Key Indicator - Grizzly Bear Habitat

Key Indicator - Open Road and Open Motorized Trail Route Density (OROMTRD)

Tables IV-7, IV-8, IV-9, and IV-10 present an overview of future OROMTRD and other habitat conditions for the Forest portion of each of the BMU's for each of the alternatives.

Other Indicators

1. Total Motorized Access Route Density (TMARD)
2. Cross-country OHV
3. Forest Acres in Core Areas
4. Winter Snowmachine Use
5. Livestock Grazing
- 6 Timber Harvest

Consequences Common to All Alternatives (within the BMU's) -

1. The size of each BMU remains the same in all alternatives.
2. Acres within designated Wilderness remains the same in all alternatives.
3. Acres within inventoried roadless areas remains the same in all alternatives.
4. There is no timber harvesting proposed in the Henry's Lake BMU, Subunit 2.
- 5 The number of cattle allotments remains the same in all alternatives.

All developed and undeveloped recreation sites (also known as "point sources" in the grizzly bear cumulative effects model) remain the same in all alternatives (Some additional analysis may indicate that road restrictions and reclamations in some alternatives may create a change in use at some of the point sources, but at this time no changes have been made for the alternative analysis)

Consequences Which Vary by Alternative (within the BMU's) - The importance of managing motorized access, one of the most influential parameters affecting habitat security, has been emphasized for grizzly bears. (Interagency Grizzly Bear Committee 1994). By managing motorized access on the landscape, the following grizzly bear management objectives can be met (Interagency Grizzly Bear Committee 1994):

- Minimize human interaction and potential grizzly bear mortality.
- Minimize displacement from important habitats.
- Minimize habituation to humans.
- Provide relatively secure habitat where energy requirements can be met

Important elements of motorized access include. open road and open motorized trail density, total motorized access route density, and the amount of core areas. (Interagency Grizzly Bear Committee 1994). We analyzed how each of these elements of motorized access change in each BMU for each of the alternatives. In addition, we also analyzed how spring/summer/fall cross-country motorized access changes in each BMU, and winter snowmachine use. This information is presented in Tables IV-7, IV-8, IV-9, and IV-10 The following briefly summarizes the information from the tables.

Total Motorized Access Route Density (TMARD) and Open Road and Open Motorized Trail Route Density (OROMTRD) -

In the Henry's Lake BMU, Subunit 1, TMARD ranges from 0.99 in Alternative 1 (a 52 percent reduction from existing conditions) to 0.47 in Alternative 6 (a 77 percent reduction from existing conditions) OROMTRD ranges from 0.60 in Alternative 1 (a 60 percent reduction from existing conditions) to 0.35 in Alternative 4 (a 77 percent reduction from existing conditions).

In the Henry's Lake BMU, Subunit 2, TMARD ranges from 0.66 in Alternative 1 (a 48 percent reduction from existing conditions) to 0.38 in Alternative 6 (a 70 percent reduction from existing conditions). OROMTRD ranges from 0.45 in Alternative 1 (a 54 percent reduction from existing conditions) to 0.28 in Alternative 6 (a 71 percent reduction from existing conditions).

In the Plateau BMU, Subunits 1 and 2, TMARD ranges from 1.74 in Alternative 1 (a 41 percent reduction from existing conditions) to 0.70 in Alternative 4 (a 76 percent reduction from existing conditions). OROMTRD ranges from 1.03 in Alternative 2 (a 20 percent reduction from existing conditions) to 0.49 in Alternative 5 (a 61 percent reduction from existing conditions).

In the Bechler/Teton BMU, TMARD ranges from 1.10 in Alternative 1 (a 31 percent reduction from existing conditions) to 0.49 in Alternative 6 (a 69 percent reduction from existing conditions). OROMTRD ranges from 0.59 in Alternative 2 (a 23 percent reduction from existing conditions) to 0.39 in Alternatives 4, 5, and 6 (a 49 percent reduction from existing conditions)

Cross-Country Off-Highway Vehicle (OHV) Use -

In the Henry's Lake BMU, Subunit 1, most of the Forest acres are currently closed to OHV use; only 6.2 percent of the acres are currently open and suitable for OHV use. The alternatives range from 6.2 percent of the acres being open and suitable for OHV use (Alternative 1) to 0 percent of the acres being open and suitable for OHV use (Alternatives 3, 3-M, 4, 5, and 6).

In the Henry's Lake BMU, Subunit 2, most of the Forest acres are currently closed to OHV use, only 7.1 percent of the acres are currently open and suitable for OHV use. The alternatives range from 7.1 percent of the acres being open and suitable for OHV use (Alternative 1) to 0 percent of the acres being open and suitable for OHV use (Alternatives 3, 3-M, 4, 5, and 6).

In the Plateau BMU, Subunits 1 and 2, 69.2 percent of the Forest acres are currently open and suitable for cross-country OHV use. The alternatives range from 69.2 percent of the acres being open and suitable for OHV use (Alternative 1) to 0 percent of the acres being open and suitable for OHV use (Alternative 3-M)

In the Bechler/Teton BMU, most of the Forest acres are currently closed to OHV use, only 8.7 percent of the acres are currently open and suitable for OHV use. The alternatives range from 8.7 percent of the acres being open and suitable for OHV use (Alternative 1) to 0.2 percent of the acres being open and suitable for OHV use (Alternatives 3-M, 4, 5, and 6)

Forest Acres Within Core Areas -

In the Henry's Lake BMU, Subunit 1, 32.2 percent of Forest acres currently meet core area standards. Core areas in the alternatives range from 65.6 percent of the BMU in Alternative 2 to 82.8 percent of the BMU in Alternative 4.

In the Henry's Lake BMU, Subunit 2, 45.1 percent of Forest acres currently meet core area standards. Core areas in the alternatives range from 74.9 percent of the BMU in Alternative 1 to 92.2 percent of the BMU in Alternative 6.

In the Plateau BMU, Subunits 1 and 2, 0 percent of Forest acres currently meet core area standards. Core areas in the alternatives range from 33.1 percent of the BMU in Alternative 2 to 70.9 percent of the BMU in Alternative 5

In the Bechler/Teton BMU, 47.6 percent of Forest acres currently meet core area standards. Core areas in the alternatives range from 47.6 percent of the BMU in Alternative 1 to 70.6 percent of the BMU in Alternative 5.

Winter Cross-Country Snowmachine Use -

Snowmachine use is primarily a concern because of the potential to displace bears before they hibernate or after they emerge from their dens in the spring. We are not aware of specific problems or

incidents occurring on the Forest, but the alternatives do prescribe different cross-country snowmachine use dates as follows in an effort to be sensitive to potential future effects.

In the Henry's Lake BMU, Subunit 1, there are no cross-country snowmachine use restrictions in Alternatives 1, 2, and 3. About 85 percent of the BMU has cross-country snowmachine use dates of December 15 to April 1 in Alternatives 3-M, 4, 5 and 6

In the Henry's Lake BMU, Subunit 2, about 46 percent of the BMU has cross-country snowmachine use dates of December 15 to April 1 in Alternative 1. There are no cross-country snowmachine use restrictions in Alternative 2. In Alternatives 3, 3-M, 4, 5 and 6, an additional 50 percent of the BMU has cross-country snowmachine use dates of December 15 to April 1.

In the Plateau BMU, Subunits 1 and 2, about 8 percent of the BMU has cross-country snowmachine use dates of December 1 to June 1 in Alternative 1. There are no cross-country snowmachine restrictions in Alternative 2. About 20 percent of the BMU has cross-country snowmachine use dates of December 15 to April 1 in Alternative 3. In Alternatives 3-M, 4, 5, and 6 all of the BMU has cross-country snowmachine use dates of December 15 to April 1.

In the Bechler/Teton BMU, about 34 percent of the BMU is closed to all snowmachine use in all alternatives in the Winegar Hole and Jedediah Smith Wilderness Areas. In Alternatives 1 and 2, there are no cross-country snowmachine use restrictions outside of wilderness. In Alternative 3, an additional 3 percent of the BMU has cross-country snowmachine use dates of December 15 to April 1. In Alternatives 3-M, 4, 5, and 6, an additional 56 percent of the BMU has cross-country snowmachine use dates of December 15 to April 1.

Cross-country snowmachine use dates of December 15 to April 1 are considered to have no adverse effect for the grizzly bear because most bears are in their winter dens by December 15, and most bears do not emerge from their dens until after April 1.

Livestock Grazing -

There is a well documented history of grizzly bears preying on domestic sheep when there were sheep allotments in Management Situation 1 areas of the Forest in the 1970's and 1980's (Orme and Williams 1985). All of the sheep allotments in Management Situation 1 areas have already been closed. There are 11 sheep allotments currently in use in Management Situation 2 areas (9 allotments in the Henry's Lake BMU, Subunit 1, and 2 in the Bechler/Teton BMU). There have been no grizzly bear/sheep conflicts in the Henry's Lake BMU, Subunit 1, but there have been two bear/sheep conflicts (identified as grizzly bear) in the southern portion of the Bechler/Teton BMU.

In Alternatives 1, 2, and 3, the sheep allotments are allowed to remain. In Alternatives 3-M and 4, the sheep allotments would be phased out over time on an opportunity basis. In Alternatives 5 and 6, the sheep allotments would be closed immediately upon completion and approval of the Forest Plan.

Timber Harvesting -

In the Henry's Lake BMU, Subunit 1, 90 percent of the forested acres are currently classified as mature and older. The highest amount of timber harvesting would occur in Alternative 1, with 87.0 percent of the forested acres remaining as mature and older by the end of the 1st decade. All other alternatives would have between 88.5 to 90 percent of the forested acres remaining as mature and older by the end of the first decade.

In the Henry's Lake BMU, Subunit 2, some 87.6 percent of the forested acres are currently classified as mature and older. There is no timber harvesting scheduled in any of the alternatives.

In the Plateau BMU, Subunits 1 and 2, about 50.7 percent of the forested acres are currently classified as mature and older. Only Alternative 1 has scheduled timber harvesting; in this alternative, about 49.8 percent of the forested acres would be mature and older by the end of the first decade.

In the Bechler/Teton BMU, some 81.4 percent of the forested acres are currently classified as mature and older. The highest amount of timber harvesting would occur in Alternative 2, with 80.0 percent of the forested acres remaining as mature and older by the end of the first decade. All other alternatives would have between 80.1 and 81.4 percent of the forested acres remaining as mature and older by the end of the first decade.

Cumulative Effects - To measure the cumulative effects from the items listed above, the grizzly bear cumulative effects model (CEM) was used to measure how impacts would change for each alternative. Tables IV-7, IV-8, IV-9, and IV-10 display the results of the CEM. For all of the BMU's, the dominant factor in differences in CEM outputs between the alternatives is the difference in motorized road and trail densities between the alternatives. A brief summary of the results follows

Henry's Lake BMU, Subunit 1 - The HE/HV index is lowest for Alternative 1 (annual average of 0.65) and is highest for Alternative 6 (annual average of 0.70)

Henry's Lake BMU, Subunit 2 - The HE/HV index is lowest for Alternative 1 (annual average of 0.52) and is highest for Alternative 6 (annual average of 0.62).

Plateau BMU, Subunits 1 and 2 - The HE/HV index is lowest for Alternative 1 (annual average of 0.49) and is highest for Alternatives 5 and 6 (annual average of 0.65).

Bechler/Teton BMU - The HE/HV index is lowest for Alternative 1 (annual average of 0.59) and is highest for Alternative 5 (annual average of 0.71).

At this time, no definitive statement can be made for a "threshold" number for TMARD, OROMTRD, amount of core area, or CEM outputs, in order to achieve a certain number of grizzly bears using a specific area. Analysis on female home ranges is currently being done by the Interagency Grizzly Bear Study Team, which may help define threshold levels in the future. Generally, the lower the TMARD and OROMTRD, the higher amount of core area and the higher HE/HV CEM output, the better the habitat conditions are for grizzly bears. The Yellowstone grizzly bear population has been increasing, and all demographic recovery targets are currently being met.

Gray Wolf

Consequences Common to All Alternatives - Application of the Forestwide standards and guidelines is expected to allow wolf pairs to establish dens on the Forest if they choose to do so, and to receive the protection of the nonessential experimental population rule (USDI Fish and Wildlife Service, 1994b).

Primary Cavity Nesting Habitat

An overall biological potential for the primary cavity nesting species as a group was analyzed for each alternative. In addition, a biological potential analysis was done for four of the species which require larger size snags (red-napped sapsucker, Williamson's sapsucker, hairy woodpecker, northern flicker). These biological potential analyses are based on existing snag densities and projected changes in snag densities due to management activities as specified in the management prescriptions.

Consequences Common to All Alternatives - All of the management prescriptions which allow scheduled timber harvesting and fuelwood harvesting (with the exception of management prescription 5.2.2) require the retention of snags and green replacement trees. The snag and green replacement tree requirements vary in these management prescriptions, ranging from > 40 percent of biological potential to 100 percent of biological potential for primary cavity nesters.

In addition to the management prescriptions which allow scheduled timber harvesting, snag and green replacement trees requirements are also contained in other motorized management prescriptions where fuelwood harvesting could be permitted based on the presence of roads for access and management prescription direction which allows fuelwood harvesting. The snag and green replacement tree requirements vary in these management prescriptions, ranging from > 40 percent of biological potential to 100 percent of biological potential.

There is no snag and green replacement tree requirements in the management prescriptions which are nonmotorized, wilderness, wilderness study areas, proposed wilderness, research natural areas, wild/scenic/recreational rivers, or special management areas. In these management prescriptions, timber harvesting is not scheduled, and primary cavity nesting habitat will evolve with natural processes.

There is no snag and green replacement tree requirements in the recreation and concentrated development management prescriptions. In these management prescriptions, public safety and protection of facilities is the paramount importance, therefore snags and other hazard trees are generally removed from these sites. The total acres in these sites is less than one-half of one percent of the total acres on the Forest.

Table IV-6 displays the biological potential for the primary cavity nesting species for each alternative on a Forestwide basis (Process Paper D displays the biological potential on a watershed basis for each alternative) In all alternatives, the biological potential for all primary cavity nesting species is 0.61, and the biological potential for the larger cavity nesting species is 0.47. As a result of the snag and green replacement tree requirements in the management prescriptions, there is no measurable difference in biological potential for primary cavity nesting species between the alternatives due to scheduled timber harvest activities.

Cumulative Effects - The analysis for future biological potential does not include possible future effects of natural disturbances. Future natural disturbances may have a greater effect on the biological potential for primary cavity nesting species habitat than vegetation management activities proposed for each alternative. Generally, natural disturbances such as fire, insects and disease create additional snags in the short term.

Forest Owl Habitat

Consequences Common to All Alternatives - Proposed management activities are not expected to change habitat conditions for these species regardless of the alternative.

Flammulated Owl - All known nest sites, whether or not they are active, will be protected in all alternatives

Boreal Owl and Great Gray Owl - All known nest sites, whether or not they are active, will be protected in all alternatives. Within home ranges, $\geq 40\%$ of the forested acres will be maintained in late successional stages.

Furbearer Habitat

Furbearers include the American marten, fisher, lynx and wolverine. These species require late successional forest habitats (mature and older forests) for some or all of their habitat requirements. Snags and down woody debris are also important components of their habitat.

Consequences Which Vary by Alternative - Table IV-6 displays how the quantity of late successional forest habitat is expected to change due to scheduled timber management activities in each alternative. The amount of late successional forest habitat changes by alternative according to the amount of timber harvesting proposed in that alternative. Alternative 2 has the largest potential change in habitat (-1.4%), and Alternative 6 the least potential change (0%)

Goshawk Habitat

Consequences Common to All Alternatives -

Nest Areas - Three suitable nest areas and three replacement nest areas (≥ 30 acres in size each) are to be provided for all goshawk territories. Where possible, these six areas are to be managed in a ≥ 180 acre contiguous area. The suitable nest areas are to be mature and older stands of trees, with numerous snags (80 to 100 percent biological potential for cavity nesting species). Any vegetation management within nest areas is to occur during the months of October to February. There are to be no new system roads.

Post-Fledging Family Area - This area is ≥ 420 acres in size. A variety of forest successional stages can be present, but ≥ 40 percent of the forested acres must be in mature and older size/age classes. Any created opening must be ≤ 40 acres in size. Numerous snags are to be present (80 to 100 percent biological potential for cavity nesting species). Any vegetation management within this area is to occur during the months of October to February. There are to be no new system roads.

Foraging Area - This area is $\geq 5,400$ acres in size. A variety of forest successional stages can be present, but ≥ 40 percent of the forested acres must be in mature and older size/age classes. Any created opening must be ≤ 40 acres in size. Numerous snags are to be present (80 to 100 percent biological potential for cavity nesting species). Vegetation management within this area can occur any-time during the year. Road densities are to be \leq the density required by the management prescription.

Since this goshawk management direction applies to all alternatives, there is no measurable difference between the alternatives in terms of goshawk habitat. This management direction applies to all known territories, whether or not they are active.

Red Squirrel Habitat

Consequences Which Vary by Alternative - Table IV-6 displays the acres of conifer cone-bearing habitat in each alternative. All remaining alternatives result in an increase in cone-bearing habitat from 1 to 3 percent. The increase is the result of some previously harvested acres coming of cone-bearing age during the decade. The number of acres coming of cone-bearing age is larger than the number of acres proposed for timber harvesting in any of the alternatives.

Peregrine Falcon Habitat

Consequences Common to All Alternatives - Forestwide Standards and Guidelines for peregrine falcon habitat apply in all alternatives. Suitable habitat will be maintained for all existing nesting pairs plus any new nesting pairs which may become established.

IV. FOREST USE AND OCCUPATION

This component is described in four parts: Access Management, Wilderness, Recreation, and Social and Economic. Under the first two parts, key indicators are discussed first, with subsequent discussion of other indicators. No key indicators are associated with the third and fourth parts.

ACCESS MANAGEMENT

Road and Trail System and Motorized Access

Consequences are presented in the winter and summer access sections which follow. In summary, winter motorized access will be monitored in most alternatives, and summer motorized transportation system and access will be reduced in all alternatives.

Summer Access

Key Indicators

1. Miles of road open to summer motorized
2. Miles of trail open to summer motorized
3. Acres open to summer cross-country OHV

Consequences Common to All Alternatives - There will be some reduction from current levels in miles of road and trail open to motorized use in all alternatives. This would result in increased needs and costs for law enforcement and signing to manage the system of restricted roads and trails. Another consequence common to all alternatives is the routine reconstruction of roads and structures.

The Forestwide Guidelines concerning trail condition surveys and restricting OHV use on slopes 25-40 percent and greater should help meet the Revision goals of sustaining OHV opportunities and sustaining trails in good condition while minimizing effects to other resources.

Consequences Which Vary by Alternative - Table IV-11 shows a comparison of roads and trails by alternative that will be open to motorized use, restricted, or reclaimed. Compared to existing conditions, changes in open roads and trails in the alternatives are as follows.

- open system roads range from an increase of 44 miles (+3%) in Alternative 2 to a reduction of 406 miles (-30%) in Alternative 6
- open nonsystem roads range from a reduction of 457 miles (-45%) in Alternative 1 to a reduction of 253 miles (-74%) in Alternative 6.
- open system trails range from an increase of 16 miles (+4%) in Alternative 1 to a reduction of 405 miles (-95%) in Alternative 6.
- open nonsystem trails range from a reduction of 76 miles (38%) in Alternative 1 to a reduction of 145 miles (73%) in Alternative 6.

In the preferred alternative (3-M), most of the system roads proposed for reclaiming/obliteration, are located within the grizzly bear BMU's

In most all cases, the system roads that have been identified to be reclaimed/obliterated are roads that are currently restricted, and were originally constructed in conjunction with timber sales.

Roads closed for resource management purposes limit opportunities for dispersed camping, berry-picking, sight-seeing, and other activities that conventionally depend on road access. The amount of opportunities available with the various alternatives is varied, according to the programmed amount of new or existing road development and resource management activities, particularly timber harvesting.

Table IV-11 Road and Trail Access								
	Existing	1	2	3	3-M	4	5	6
System Roads 1/								
Miles - Open 2/	1,367	1,320	1,411	1,221	1,197	1,072	972	961
Miles - Seasonal Restrictions 3/	61	177	92	80	86	75	24	53
Miles - Yearlong Restrictions 4/	572	390	211	251	155	142	129	122
Miles - Reclaimed/Obliterated	NA*	113	286	448	562	711	875	864
Total Miles	2,000	-	-	-	-	-	-	-
Change in open miles from existing	-	-47	+44	-146	-170	-295	-395	-406
% change in open miles from existing	-	-3%	+3%	-11%	-12%	-22%	-29%	-30%
Nonsystem Roads								
Miles - Open 2/	1,021	564	453	368	363	299	281	268
Miles - Seasonal Restrictions 3/	24	32	39	36	34	33	38	26
Miles - Yearlong Restrictions 4/	177	64	31	69	61	56	73	55
Miles - Reclaimed/Obliterated	NA*	562	699	749	764	834	830	873
Total Miles	1,222	-	-	-	-	-	-	-
Change in open miles from existing	-	-457	-586	-653	-658	-722	-740	-753
% change in open miles from existing	-	-45%	-56%	-64%	-64%	-71%	-73%	-74%
System Trails 1/								
Miles - open 2/	433	449	357	337	340	320	171	28
Miles - Restricted 5/	597	581	673	693	690	710	859	1,002
Total Miles	1,030	-	-	-	-	-	-	-
Change in open miles from existing	-	+16	-76	-96	-93	-113	-262	-405
% change in open miles from existing	-	+4%	-18%	-22%	-22%	-26%	-61%	-94%
Nonsystem Trails								
Miles - open 2/	199	123	113	98	98	101	61	54
Miles - Restricted 5/	102	178	188	203	203	200	240	247
Total Miles	301	-	-	-	-	-	-	-
Change in open miles from existing	-	-76	-86	-101	-101	-98	-138	-145
% change in open miles from existing	-	-38%	-43%	-51%	-51%	-49%	-69%	-73%
<p>1/ System roads and trails comprise the official Forest Transportation Management System. Nonsystem roads and trails (sometimes called ghost roads and trails) are not part of the official Forest Transportation Management System.</p> <p>2/ Miles - Open means road and trail miles without restrictions on motorized use.</p> <p>3/ Miles - Seasonal Restriction means road miles on which motorized use is restricted for only a portion of the spring/summer/fall seasons.</p> <p>4/ Miles - Yearlong Restriction means road miles on which motorized use is restricted for the entire spring/summer/fall seasons.</p> <p>5/ Miles - Restricted means trail miles on which motorized use is restricted either for a portion of the spring/summer/fall seasons or yearlong (as in designated wilderness areas).</p> <p>* This table refers to present time. It does not take into account the 1,622 miles of roads that were reclaimed/obliterated between 1981 and 1993.</p>								

Acres open to cross-country OHV travel decrease significantly from present levels in all alternatives. The decrease from present levels ranges from approximately 172,000 acres (15%) in Alternative 1 to over 1 million acres (97%) in Alternative 6. However, it should be recognized that many of these acres are in terrain and vegetative cover which do not actually permit cross-country travel. So, the decrease in acreage may not be as significant as it appears at first glance.

Costs for signing designated routes, rehabilitation of old alignments, and providing law enforcement will increase significantly, especially for Alternatives 3 through 6. Trail reconstruction and maintenance costs will also be much higher to meet soil and water standards and guides and to accommodate the higher use levels with motorized and mechanized equipment.

Most foot and horse trails would not be affected by any of the alternatives. However, under the alternatives with more motorized restrictions there would be some benefit to the nonmotorized user in terms of relief from interaction with motorized users. Some of the impacts to trails, such as rutting or displacement of soils, being caused by OHV use would also be removed.

Cumulative Effects - As acres and roads/trails open to motorized access decrease from Alternatives 1 through 6, the density of OHV users on designated routes will increase on the routes remaining open. In addition, some loop trails will be eliminated, along with current access to some of the more spectacular scenic vistas. The increased interaction may result in increased user or resource conflicts and additional resource impacts. This could have an overall effect of loss of enjoyment of the recreation activity for some people in some of the areas. In other areas, it may be possible to develop "play areas" that become favorites of those who like a "social experience," or who enjoy the spectator opportunity.

A secondary effect of decreasing motorized access areas would be reduction of hunting and fishing opportunities for those requiring motorized access. This might not be too significant except in Alternatives 5 and 6.

An additional effect of decreasing motorized access would be decreased trail maintenance. A good portion of our trail maintenance work is performed by motorized users and the state of Idaho's Trail Ranger program which uses trail bikes for its maintenance crew. Motorized users and trail maintenance funding from the State would naturally decline as restrictions on motorized access increase, unless some type of reconstruction program can be initiated to improve trails for motorized use.

Overall, it is questionable whether there will be enough designated routes and cross-country areas open to travel to meet the needs of increasing motorized access demand in any alternative, but especially in Alternatives 5 and 6. Much of the cross-country use that is presently occurring would be eliminated by Alternatives 3-6. Therefore, the actual and apparent loss of OHV access and recreation opportunities may be of concern to some OHV users.

Winter Access

Indicators

1. Acres open to winter cross-country snowmachines
2. Miles of groomed trails for snowmachines

Consequences Common to All Alternatives - Management direction such as establishing linear capacities for snowmachine trails; providing networks of groomed trails, providing winter users with educational information and signing about wildlife needs; and prohibiting snowmachines and other equipment from groomed cross-country ski trails, should minimize adverse consequences on users and wildlife.

Consequences Which Vary by Alternative - Acreage open to cross-country snowmachine use (Table II-1) is maintained or increased for Alternatives 1-4, decreases slightly in Alternative 5, and significantly decreases (400,000 acres) in Alternative 6. These decreases are due to increases in winter range and recommended wilderness prescription allocations.

Miles of designated, groomed, or marked snowmachine trails increases 150-200 miles over current levels in Alternatives 2-4. Alternative 5 maintains existing levels of trails. Alternative 6 would result in a significant decrease in designated snowmachine routes from current levels. This decrease is due to increased wildlife winter range and recommended wilderness allocations.

Cumulative Effects - Winter recreation use opportunities would in large part be maintained in all alternatives. However, Alternatives 5 & 6 would have more restrictions on winter motorized use, and therefore, some reduction in those opportunities and use would be possible. Potential effects on wintering wildlife would be minimal in all alternatives.

WILDERNESS AND RECREATION RESOURCES

The following topics present the effects and consequences of the alternatives on the various wilderness and recreation resources. Key alternative comparison indicators for these resources are displayed in Table II-1. Overall, total recreation use would not change much between alternatives, but the types of use probably would. The trend from Alternative 1 to 6 would be away from semi-primitive motorized (SPM) and roaded natural appearing (RNA) recreation opportunities to an increase in primitive (P) and semi-primitive nonmotorized (SPNM), although some semi-primitive motorized (SPM) opportunities would remain. *This overall trend would be due to the reduction in motorized access and increase in recommended wilderness from Alternatives 4 through 6.* Such a trend would also support of a shift from currently evolving tourism/rural development to a slower developing, eco-tourism pattern.

Wilderness and Recommended Wilderness

Key Indicator - Acres of recommended wilderness

Other Indicator - Acres of management opportunity classes for the Jedediah Smith Wilderness

Consequences Common to All Alternatives - Designated wilderness and wilderness study acres remain the same in all alternatives. Quality and character of designated wilderness would not be degraded by any alternative. All action alternatives include a wilderness implementation schedule (WIS) and monitoring plan for the Jedediah Smith Wilderness and a WIS for the Winegar Hole Wilderness Plan. The Revision prescriptions; monitoring plans; and the implementation schedules will become the wilderness management plan for each wilderness. These plans provide direction for management and monitoring of resource and social conditions and to address any changes which may result. These plans would maintain wilderness resources and recreation opportunities at approximately current levels and conditions.

Consequences Which Vary by Alternative

Recommended Wilderness - With the exception of Alternative 2 which has no recommended wilderness, the acreage of recommended wilderness increases from Alternative 1 to Alternative 6, with the largest increases in Alternatives 5 and 6 (Table II-1). Motorized OHV travel would be impacted by Alternatives 3-6, and significant Forestwide reductions in summer, cross-country OHV travel would result from Alternatives 5 and 6 to be consistent with the 1.3 prescription access table.

Existing Designated Wilderness - The main difference in designated wilderness would be in the Opportunity Class I-III allocations (Table IV-12). Opportunity Class I, II, and III areas are represented by prescriptions 1.1.6, 1.1.7, and 1.1.8 respectively. Alternative 1 (No-Action) contains prescriptions to match the current management situation. Alternatives 2-6 contain a variety of applications of the new prescriptions based on the Limits of Acceptable Change (LAC) opportunity classes developed by the Jedediah Smith Project Team as documented in a process paper on file in the Supervisor's Office. These Opportunity Classes involve levels of recreation, research and maintenance, and potential resulting changes in resource or social impacts. Generally, Alternatives 2 and 3 would have the highest social

interaction effects among recreationists and the greatest chance for disturbance of wildlife. Alternatives 3-M and 4 would have less chance of social interaction or wildlife disturbance impacts. Alternatives 5 and 6 would have the least chance of user conflicts or impacts to the resources, since these two alternatives do not contain any Class III (highest recreation level) areas.

Cumulative Effects - Alternative 1 (No-Action) has the highest probability of potential adverse impacts to wilderness character over time. This is because it lacks a management and monitoring process to measure change in wilderness values. All other alternatives should have little cumulative impact or secondary effects, since the LAC monitoring process should allow adverse interactions or impacts to be noted, and a management response applied to appropriately deal with problems if they arise.

Mgmt. Rx	Opportunity Class	Alternative (Thousand Acres)						
		#1	#2	#3	#3-M	#4	#5	#6
1.1.1	NA 2/	40	0	0	0	0	0	0
1.1.2	NA 2/	11	0	0	0	0	0	0
1.1.3	NA 2/	32	0	0	0	0	0	0
1.1.4	NA 2/	25	0	0	0	0	0	0
1.1.5	NA 2/	27	0	0	0	0	0	0
1.1.6	I	0	83	83	102	102	115	115
1.1.7	II	0	39	39	20	20	19	19
1.1.8	III	0	13	13	13	13	0	0

1/ Opportunity Class - Class I is lowest recreation use level, and Class III is highest use level.

2/ Prescriptions 1.1.1 - 1.1.5 are for the Current Forest Plan, which does not use LAC/Opportunity Class.

Roadless Areas

Indicators - Acres of roadless.

Consequences Which Vary by Alternative - As shown in Table II-1, the acres of roadless area would decrease from Alternative 1 to Alternative 2, and then increase again through Alternative 6. Alternative 6 would have the highest amount, which approximates the existing inventory. Roadless areas receive the highest level of management protection in Alternative 6 because of the recommended wilderness (1.3 prescription) allocation, which increases significantly between Alternatives 1 and 6 and because of lower motorized road and trail density standards. Alternative 2 is an exception, in that it has no recommended wilderness acres in it. As a result, cross-country summer OHV travel opportunities become significantly reduced between Alternatives 2 and 6. Table II-1 shows another example of the increasing restriction to OHV activity within the indicator entitled "acres roadless closed to summer OHV." This acreage increases from 243,000 acres in Alternative 1 to 378,000 acres in Alternative 5 and takes a sharp rise to 614,000 acres in Alternative 6. This pattern is similar to and verifies the recommended wilderness indicator discussed previously.

Cumulative Effects - Potential effects from timber harvest and roading would be highest under Alternative 1, with approximately 5,600 acres of roadless area possibly impacted during the next decade. However, this represents potential impact of only 1% or less to the inventoried roadless acres. This potential impact declines to 4,500 acres in Alternative 2, 3,500 acres in Alternative 3, 1,650 acres in Alternative 3-M, to 1,800 acres in Alternative 4, to 1,350 acres in Alternative 5, and no acres in Alternative 6.

Wild, Scenic, and Recreational Rivers

Consequences Common to All Alternatives - The eligibility of these rivers is not affected by the alternatives. Suitability studies need to be completed for all of these segments. This would need to be done on a priority basis for approximately one-third of the streams at a time, starting with those in the South Fork-Snake River Basin because of a current cooperative agreement with the State of Idaho. These studies would be done in coordination with the State of Idaho's studies and legislative recommendations. The remaining streams would probably be done in two additional studies - one for those in the Henry's Fork basin and a second for those in the Teton River basin, and probably in that order of priority.

Visual Resources

Indicator

Visual Quality Objectives (VQO)—Acres by VQO Class and associated ranges of VQO.

Consequences Which Vary by Alternative - With the exception of Alternative 2, the alternatives generally trend toward larger allocations of VQO's for Preservation, Retention, and Partial Retention going from Alternative 1 to Alternative 6 (Table II-1).

It should be noted that the VQO data in Table II-1 is mostly displayed as a range of VQO, such as retention to partial retention. This was necessary because the alternative prescriptions are described as a range, rather than with a single VQO. Therefore, the analysis could not be done in a comparative manner to the existing VQO's shown in Chapter III.

Alternatives 1-3 could result in some reduction in visual quality in areas of additional intensive timber harvest activity where VQO's of Modification and Maximum Modification are higher than in Alternatives 3-M through 6. Alternatives 5 and 6 would tend to maintain and could improve existing visual quality except in areas of management needs. For example, there are areas along major travel routes and use areas where greater restrictions on timber harvesting might prevent maintaining existing natural or created openings for scenic vistas over extended time periods. Such restrictions could preclude enhancement of some landscapes in thick monotonous timber stands.

Developed Recreation

Consequences Common to All Alternatives - Consequences will basically be the same for all alternatives (see Forest Plan Implementation Schedule for capital investments) because developed recreation facility construction and reconstruction will be about the same in all alternatives. This will include heavy maintenance and some reconstruction of recreation facilities, but little new site development. However, there may be some tendency for higher demand for developed recreation facilities in Alternatives 1-2, with decreasing demand in Alternatives 3-6.

Consequences Which Vary by Alternative - Generally, the higher the overall development and management activity levels, the higher the recreation use potential and associated development. This is due to user response to higher amounts of available opportunities and road and trail access. In Alternatives 1-2, there would be continuing diversity of opportunities with considerable motorized access. As the alternatives (3-6) increase in motorized restrictions for wildlife protection the need for developed facilities may decline somewhat. However, it is possible that the need for development of facilities such as

trailheads to access wilderness, rivers, etc. may increase over time even in these lower-scale development alternatives. This increase might offset the projected decline in amount of developed facilities

Cumulative Effects - As the alternatives become more restrictive in terms of motorized access and opportunity (i.e., Alternatives 3-6), there would likely be some displacement of recreationists from areas now being used. This could place a heavier burden on existing developed facilities, and create a need for new ones in a more concentrated geographic area. Furthermore, as recreation demand continues to increase, displacement and crowding could have a negative effect on recreation and social experiences. Additional displacement from adjacent heavy use areas such as Yellowstone National Park could further increase these effects.

Dispersed Recreation

Indicators - Acres allocated to dispersed camping prescription.

Consequences Common to All Alternatives - Approximately the same number of road-accessed, dispersed campsites (293) would continue to be used on the Forest in all alternatives. The number of sites would probably stay the same, because existing sites that would become unavailable due to new management allocations would simply be relocated to sites in other adjacent areas. Approximately one-third of these are heavy-use sites used by large groups (35+) during most days of the summer. Summer-use trail mileage of nonmotorized system trails would also remain constant across all alternatives.

Consequences Which Vary by Alternative - In the mapping of alternatives, a varying number of heavy-use dispersed campsites was allocated to the 4.3 dispersed campsite management prescription. Alternative 1 was given the least allocation for heavy-use dispersed sites (Table II-1) because very little management of dispersed sites is being done at present. Alternatives 2-4 have the most acres allocated (approx. 2,800 each), and Alternatives 5-6 were designed with 1,500 acres each of dispersed site prescription (Prescription 4.3) because the latter two are intended as less management intensive alternatives. The intent of this prescription allocation was to recognize the heavy public interest in these sites for camping, and to place a management emphasis on maintaining them while also maintaining soil resources and aquatic and riparian habitat. Provided funding for monitoring and management of these sites is available, alternatives with the highest acreage allocation should provide a better chance of maintaining recreation settings and opportunities, reducing or minimizing impacts to soils and vegetation; and maintaining or improving aquatic habitat. This is because restrictions on use of open fires, tents, and hardening of sites, etc. could be put into effect to reduce impacts to vegetation and soils in or near aquatic zones.

Cumulative Effects - It is possible in Alternatives 1-3 that some existing, dispersed camping sites and trails would need to be moved or closed to resolve conflicts with wildlife or aquatic management standards and guidelines. In Alternatives 3-M through 6, displacement or closure of such areas would be more likely to occur because there is less access and because aquatic buffer restrictions are greater. This could have an adverse impact on recreation experiences, due to having to add more facilities elsewhere, or due to crowding/congestion in smaller geographic areas. This could result in a need for increased monitoring, law enforcement, and management costs to prevent unacceptable impacts to soil, vegetation, aquatic, or wildlife resources.

Outfitters and Guides

Consequences Which Vary by Alternative - The number of new outfitter and guide permits issued would probably be less in Alternatives 3-M through 6 than in 1-3. Overall activity and amount of outfitted use would also be less in Alternatives 3-M through 6. The type of activities outfitted in Alternatives 3-M through 6 would be more related to backcountry, nonmotorized uses, due to increased restrictions on motorized and mechanized equipment in roadless, recommended wilderness and designated wilderness areas.

Cumulative Effects - Cumulative impacts would be higher in Alternatives 1-3 than in 3-M through 6 due to the higher demand for and access to recreation opportunities

Special Uses (Recreation)

Consequences Common to All Alternatives - Requests for special use permits for activities such as special events (e.g., races, group activities, etc.) and outfitting and guiding will likely increase gradually for all alternatives. At some point of saturation, the permitted activities would reach a plateau and level off.

Consequences Which Vary by Alternative - The trend for special uses in response to alternatives would be similar to that for developed sites. In Alternatives 1-3, there would be more increase in demand for special events and motorized access permits such as guided snowmachine or OHV trips. However, in Alternatives 4-6, the trend would be more towards undeveloped, backcountry experiences such as mountain biking, backpacking, horsepacking, hunting, and similar opportunities. The number of new special use permits would probably be less in Alternatives 3-M through 6 than in 1-3 and overall recreation use under permitted activities would also be less.

Cumulative Effects - Cumulative impacts of actual recreational use would likely be higher in Alternatives 1-3 than in Alternatives 3-M through 6, but those impacts would tend to be in the more easily accessed areas and closer to existing developed areas or special interest roads, trails, or attractions. In Alternative 3-M through 6, the additional cumulative impacts of recreation use would tend to be in more undeveloped, backcountry areas with a more primitive experience level. These, too, could have a measurable effect on wildlife, etc.

SOCIAL AND ECONOMIC EFFECTS

Indicators - The indicators used are jobs, employee compensation, payments to local governments (from both the 25% Fund and the Payments in Lieu of Taxes program), the Forest budget, population characteristics, land use patterns, effects on American Indians, and civil rights concerns. The factors are all discussed under the larger categories of life-styles, attitudes-beliefs-values, and social organization. Background information on these indicators is contained in Chapter III and in the Analysis of the Management Situation (AMS).

Consequences Common to All Alternatives

Population Characteristics - As discussed in Chapter III, the area is experiencing significant population increases. This rate of increase is not expected to be significantly affected by any of the alternatives.

The proportion of the area's population which is interested in the Forest for its recreational uses is expected to increase as recreational use continues to grow. The proportion of the area's population which is interested in the Forest for timber production or for livestock production is expected to decline.

Land Use Patterns - Lands adjacent to and within the Forest are increasingly passing from traditional uses like ranching to new uses like subdivisions. Forest management has to consider these new neighbors when deciding how best to manage Forest resources with particular attention being devoted to fire protection, visual quality and recreation opportunity. This challenge can be expected to continue to increase under all alternatives as the human population of the area increases.

Some newcomers to the area have deviated from long-held local custom by closing off access through their property to Forest lands. Their focus on having a Forest in a more natural condition has also been at odds with those who see the Forest as being a resource to be used. These sorts of conflicts can be expected to continue, if not worsen, under all the alternatives due to continuing in-migration.

American Indians - Input from the Shoshone-Bannock tribes indicates their strong concern for continuing the viability and abundance of plants, fish and wildlife on the Forest for the use of their members consistent with their treaty rights. Some of that input has focused on project-specific needs like providing designated routes for motorized access during the tribes' hunting season. The tribes have also commented on their need to have the public and the Forest Service respect their rights to practice their native religion. All the alternatives are structured so as to afford tribal members the rights guaranteed them by treaty.

Heritage Resources - No significant differences in alternatives would likely exist. However, there would be more risk of disturbance of sites in Alternatives 1 through 3-M than in 4-6. This would be only a slightly higher risk due to potential for ground-disturbing activities being somewhat higher. Also, there may be a little more likelihood of discovering new heritage resource sites during project-specific site surveys for Alternatives 1 through 3-M than in the lower-activity alternatives.

Lifestyles - The overall level of recreational use is expected to continue to increase along with its associated income and employment opportunities. Increased recreation use means more people from outside the immediate local area visiting, spending money, and in some cases investing in local property. The overall increase in recreation is expected to occur regardless of which alternative is selected. A certain percentage of the people visiting Yellowstone National Park can be expected to visit Forest attractions like Mesa Falls, for instance.

As Yellowstone and Grand Teton National Parks become more crowded the Forest can also expect to accommodate more of that spillover traffic. For instance, because snowmachining in Yellowstone National Park is reaching saturation levels, the Targhee is expected to receive more of that traffic—regardless of which alternative is selected.

The area also provides opportunities for further development of recreational activities. The recently opened Grizzly Bear Theme Park just outside Yellowstone's boundaries is an example of the kind of development which might occur regardless of which alternative is selected for the Revision.

Civil Rights - No civil rights effects associated with the alternatives have been identified. The contraction in the local timber industry is not expected to have disproportionate effects on women or minority groups. No civil rights effects have been identified as varying across the alternatives.

It is possible that with reduced budgets it will be more difficult for the Forest to achieve its affirmative action objectives. Some have speculated that reductions in the Forest budget might disproportionately affect women and minorities. The recent downsizing which occurred on the Forest did not have that effect. Future downsizing efforts are not expected to have disproportionately negative effects on women or minorities.

Consequences Which Vary by Alternatives

American Indians - Tribal members use the Forest in many different ways. Some of these uses are identical to those of the general population and are described elsewhere herein. Other interests may be unique to tribal members. For instance, gathering Forest products is an important part of the culture of some tribal members. Those who rely on open roads or motorized trails to access favorite spots may have to find alternative sites if motorized access is restricted. It is also possible that closing motorized access to some areas may effectively deny access to the infirm.

Discussions with the tribes to date have not revealed a preference for more or less roading per se. Concerns have been voiced about closing roads during the tribe's hunting season - something that needs to be addressed on a continuing, site-specific basis. In general though, as the alternatives reduce the amount of roads and trails available for motorized use, the time and effort involved in hunting is expected to increase. That also applies to other tribal activities which require access to the land. The

tribes have indicated that the game retrieval provision in some alternatives is not expected to significantly benefit tribal hunters who generally lack the resources to afford high-flotation cross-country motorized vehicles. Reducing motorized use may improve the suitability of the land for vision quest and various other cultural activities.

Each alternative maintains large areas of the Forest in both motorized and nonmotorized use but it is unclear whether one alternative meets overall Tribal needs better than another.

The Forest recognizes the rights afforded the tribes by treaty and by law as outlined in Chapter III of this document. All the alternatives comply with these requirements.

Lifestyles - Under Alternative 1 the trend of reducing Forest timber harvests would continue. This would mean that more of those people whose livelihoods depend on timber harvesting would lose those jobs and the associated income. Because access to fuelwood is frequently aided by timber harvests, people are likely to find it more difficult to get fuelwood for home use.

Those whose livelihoods are affected by the availability of Forest forage for domestic livestock would not expect to see their use of that resource significantly change in terms of overall use. Area livestock producers would however, have to invest more resources into the improvement of range allotments without necessarily seeing any increased use of available forage.

In terms of the way the Forest looks, people are likely to be generally pleased as young trees continue to reestablish in the large clearcuts of the Caldera and Plateau areas near Yellowstone National Park.

What this all means is that more people will be relying on the Forest as a recreation resource rather than as a provider of timber or livestock forage. It also means that area schools and roads will be receiving less money from Forest activities that generate receipts—principally timber management—through the 25% Fund. Payments in Lieu of Taxes would likely rise slightly, as shown in Table IV-13, for all alternatives. Likewise the budget for the Forest (and its associated local expenditures for payroll and supplies) will be reduced.

What Table IV-13 shows in its entirety is that the Forest's primary effect on the local economy derives from the recreational activity it provides. And no alternative is expected to significantly change the overall level of use - though usage is expected to shift over the landscape and by type. That comes as small consolation to those who have lost a livelihood in the timber industry.

Attitudes, Beliefs, Values - Many people believe the Forest should be used to produce timber products in conjunction with other Forest uses. Alternative 1 allocates the same amount of land to intensive timber production as the existing Forest Plan. It does not, however, continue timber harvests at the levels of the past. Instead the Forest would continue the recent trend toward very low timber harvests. This is because the potential yields identified in the current Forest Plan for timber are not sustainable.

The Forest will be stepping up its enforcement efforts to ensure that roads and trails closed to motorized traffic are not used by motorized vehicles. Even though in Alternative 1 these efforts are focused only on enforcing existing motorized use restrictions, many people will see them as Forest Service efforts to lock up the Forest. Others who see the Forest as being over-roaded are not likely to accept Alternative 1's proposal to substantially reduce motorized use through increased enforcement, more effective closures, or an improved public involvement program. There is great skepticism as to whether the road closures can be effectively implemented without the support of the local citizenry. The likelihood exists that there will be an increased level of conflicts between Forest Service personnel working to effectively close roads and trails and those who have grown accustomed to using them.

Table IV-13. Summary of Forest Effects on the Local Economy
(Dollar figures are expressed as Million Dollars)

	Recent Levels 1/	Average Annual Figures for Decade 1 of Implementation						
		1	2	3	3-M	4	5	6
JOBS 2/								
Livestock	115	115	111	111	100	100	100	100
Recreation	1,767	1,991	1,991	1,991	1,991	1,991	1,991	1,991
Timber	187	30	36	30	22	15	9	0
Total	2,069	2,136	2,138	2,132	2,113	2,106	2,100	2,091
EMPLOYEE COMPENSATION 3/								
Livestock	1.1	1.0	1.0	0.9	0.9	0.9	0.9	0.9
Recreation	34.2	38.6	38.6	38.6	38.6	38.6	38.6	38.6
Timber	4.0	0.6	0.8	0.6	0.5	0.3	0.2	0
Total	39.3	40.2	40.4	40.1	40.0	39.8	39.7	39.5
PAYMENTS TO LOCAL GOVERNMENTS 4/								
25% FUND								
Livestock	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03
Recreation	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Timber	0.24	0.04	0.05	0.04	0.03	0.02	0.01	0.00
Total	0.31	0.11	0.12	0.11	0.10	0.09	0.08	0.07
Payments in Lieu of Taxes	0.88	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Total	1.21	1.01	1.02	1.01	1.00	0.99	0.98	0.97
FOREST BUDGET 5/	12.8	11.9	12.1	12.2	12.0	11.9	11.7	11.0
FOREST BUDGET PLUS OTHER FEDERAL COSTS 6/	14.0	13.2	13.4	13.7	13.5	13.4	13.3	12.7
PRESENT NET VALUE 7/		2,097	2,095	2,089	2,092	2,098	2,104	2,113

1/ Figures shown in this column are estimates of actual production or use during the period shown. Figures for livestock reflect actual forage consumption rather than permitted levels, some of which might not have been used

2/ Source: Forest IMPLAN model. Full-time and part-time employment. Recent Levels are based on 1995 levels for livestock, and an average of 1991-1993 for the other job categories shown.

3/ Source: Forest IMPLAN model. Wages and salaries plus the value of benefits and any contributions to social security and pension funds by the employer and the employee. Recent Levels are based on 1995 levels for livestock, and an average of 1991-1993 for Recreation and Timber.

4/ Payments to Local Governments come from two different programs, the 25% Fund and Payments in Lieu of Taxes. Recent Levels are for the period of 1992-1994. Payments from the 25% Fund result from Forest gross receipts whereas Payments in Lieu of Taxes derive from the population of the local government, the amount of its land under federal ownership, and other federal receipts, such as those received from the 25% Fund.

5/ Recent Levels are an average of the period 1991-1993, expressed in 1992 \$ terms. Includes the full range of Forest costs usually accounted for in the budget including Monitoring and Evaluation, Road Restriction, and Road Reclamation/Obliteration

6/ Recent Levels are an average of the period 1991-1993, expressed in 1992 \$ terms. Includes firefighting and law enforcement expenditures not tracked in the budget.

7/ Dollar-valued benefits less dollar-valued costs discounted at a 4% annual rate over the 150 year period of analysis.

The motorized access situation is particularly troublesome in that for a number of years, roaded access on the Forest was continually increasing—largely as a consequence of logging activity. People had come to expect more and more motorized access. In recent years, that access has been decreasing in order to provide better habitat for wildlife.

Alternative 1 would also likely not be acceptable to those whose belief systems are more tuned to nonconsumptive use of the Forest. That is due in large part to the fact that in the past Alternative 1 called for scheduling timber harvests at such high levels that they could not be continued into the future. Thus, the frame of reference people have for logging on the Forest is that areas entered for logging are logged very heavily - not harvested at rates that are sustainable.

As currently formulated, Alternative 1 would not continue the practice of logging at levels that cannot be continued into the future. But it is unlikely that those whose value systems were offended by Alternative 1's high harvest rates of the past could come to accept this identical land allocation even without the high harvest levels.

Big game hunting, and in particular elk hunting, is a major event on the Forest. Participants eagerly await the season's arrival. The success they have enjoyed in recent years would not be expected to change with the selection of Alternative 1, although with continuing growth in the previously clearcut areas and more effective road closures, hunter success may be more difficult to achieve.

Sense of Control, Sense of Self-Sufficiency - The financial, social and psychological insecurity associated with lost jobs and reduced incomes associated with lower timber harvests would be evident in Alternative 1. Businesses that could not make up this loss of raw material supply from other sources would likely shut their doors or continue operations at reduced levels. Employees would need to find other jobs or to relocate. The effect is more pronounced on the local economy because jobs in the timber industry tend to be better-paying. And while the existing Forest Plan did acknowledge that harvest levels would have to be reduced, the levels of reduction described in that document were nowhere near as severe as is now indicated.

There is no reason to expect that those who lose their jobs in the local timber sector will be able to find comparable-paying jobs in the local area. They will be faced with the prospect of getting along with a lower income, working multiple jobs, relocating, or reducing expenditures.

At the same time though, these job reductions are consistent with a trend that has been recognized for some time. Timber-related jobs have been on the decline. For some there is a grudging recognition that even things like personal use fuelwood are not going to be as readily available in the future as they have been in the past.

People whose livelihoods or recreation-based activities (like fuelwood gathering) are associated with timber harvesting are likely to feel their sense of control and sense of self-sufficiency diminished because they will suffer a loss in earnings or in the use of a recreation opportunity. People whose primary interest on the Forest is on nonconsumptive use would likely have a mixed response to the Forest's management under Alternative 1. Many of the Forest's watersheds that were previously heavily logged would be left largely undisturbed in Alternative 1—including much of the area in the highly visible US Highway 20 corridor used by so many people heading into Yellowstone National Park. The timber harvest would, however, be moved into other areas to which a different set of recreationists might object.

Local governments receive payments associated with the Forest from the 25% Fund, which remits to local governments 25% of Forest gross receipts; and from the Payments in Lieu of Taxes program, which bases payments to local counties based on their human population, their area under federal ownership, and their receipts from other federal sources. Area counties receive substantially more from the latter program than from the former. It would not be expected to change significantly based on the alternative selected. Payments from the 25% Fund are expected to change substantially as shown in Table IV-13. Money from these funds help compensate the local governments for expenses they incur relative to the federally-owned lands within their jurisdiction.

Social Organization: Community Cohesion - Selecting the Continue the Forest Plan Alternative (Alternative 1) would likely have no perceptible effect on community cohesion.

Social Organization: Community Stability - People involved in the timber industry and its related industries would continue to lose their jobs. More jobs will become available in the sectors serving recreationists. The livestock industry would see little change other than the need to invest more money into permitted use areas. For some who are operating on the margin, that could be the difference between maintaining an operation and getting out of the business, but overall use of the Forest forage resource by livestock is expected to change very little. Those trends have been in place in the local area for some time. They will continue under Alternative 1.

Economic Efficiency - The primary measure of economic efficiency used in the analysis is Present Net Value (PNV). Present Net Value is, "The difference between the discounted value (benefits) of all outputs to which monetary values or established market prices are assigned and the total discounted costs of managing the planning area." (36 CFR 219.3)

Dollar values were identified for recreation, timber, livestock grazing, and water. Costs included in the analysis included all costs of managing the Forest, including firefighting, law enforcement, and monitoring.

As shown in Table IV-13, the range of the PNV's is quite small, the overall range varying less than two percent. The predominant reason for this small range is that recreation and water benefits, which comprise the great bulk of dollar-valued benefits, are not expected to vary by alternative. Changes in recreation use may occur, such as concentration of use in smaller areas or movement of recreationists from one type of recreation to another. The overall level of recreation is expected to be the same for all alternatives. Likewise, no changes in water flows from the Forest are anticipated by alternative. Changes in benefits thus derive from changes in the range and timber programs.

Variations in costs do occur across the alternatives and over time. These are associated with reduced timber harvests, increasing road restrictions and law enforcement, and increasing costs of firefighting.

Alternatives 2-6

Lifestyles - The numbering scheme of these alternatives stretches from 2 to 6. As the numbers assigned to the alternatives increase, the alternatives move consistently toward:

- Less opportunities to make a living off the Forest by producing timber products or raising livestock.
- Restricting those management activities which leave lasting visual reminders.
- Increasing the possibility of lasting visual reminders due to unmanaged occurrences like wildfires.
- Reduced incidence of livestock grazing.
- Fewer roads and trails.
- Fewer roads and trails open to motorized use.
- Less cross-country motorized use.
- More nonmotorized recreation opportunities.
- Greater protection of wildlife habitat.
- More recommended wilderness.

Timber-related employment would be expected to vary directly and proportionally to the projected ASQ.

Reductions in domestic livestock grazing, while substantial (especially in Alternatives 3-M, 4, 5, and 6), are not nearly so severe as those associated with the timber industry. The economic viability of grazing operations is likely to diminish though as restrictions are placed on the allotments to improve resource conditions.

Aesthetically, those desiring a more natural appearing landscape will see the heavily logged areas of the Forest coming back in new growth in all the alternatives. The alternatives with higher levels of ASQ will harvest larger amounts of timber in other less-logged or nonlogged watersheds around the Forest. Those areas will show the effects of humans working on the land, building roads, removing timber, and establishing new timber stands in direct proportion to the amount of ASQ.

Those alternatives with fewer miles of road and trail open for motorized use (as shown in Chapter II) would likely see increased concentrations of motorized use on the miles remaining open, reductions in recreation dependent on motorized use, increases in nonmotorized recreation, or some combination thereof. The way people recreate on the Forest will definitely change. People will not have the same type of hunting experience in every alternative. Opportunities for solitary experiences on the Forest will change as well

Attitudes, Beliefs, Values - The numbering scheme of the action alternatives stretches from 2 to 6. As the numbers assigned to the alternatives increase, the alternatives move consistently toward:

- Greater accommodation of those who feel the Forest's resources should be left to change without human intervention
- Less accommodation of those who feel the Forest's resources should be used for the benefit of humans.
- Greater trust that developments which occur without human intervention will benefit the ecosystem.

Social Organization (Community Cohesion and Stability) - Any of the alternatives would create stress on the local social organization. The most stressful would likely be those alternatives near the extremes of the spectrum—1 and 2, 5 and 6—because they respond more clearly to the needs of one group rather than those of another. For instance, Alternatives 5 and 6 recognize the needs of those favoring increases in nonmotorized recreation and protection of wildlife habitat as being more important than the needs of those who favor motorized recreation use and timber harvest on the Forest

In order for the local communities to come together in a positive manner, some sense of a new social order must emerge on the local scene that integrates the diverse views held on how the Forest should be managed. Otherwise the tensions and stresses associated with an un-networked leadership are likely to continue. The Forest can also work constructively in this area by maintaining its efforts in public involvement.

To the extent that new social order is not achieved, there will likely be progressively more vandalism and trespass associated with the alternatives as they decrease motorized access to the Forest.

Facilities

Consequences Common to All Alternatives - The individual facilities are not anticipated to have any major effects on environmental components beyond those existing today. The Forest Service may alter and repair such facilities as administrative sites and other structures on the land owned by the federal government, as necessary to carry out its mission. Any proposed facilities will be subject to environmental analysis to verify the need for the proposal, to review alternatives, and to determine site-specific effects and mitigation measures as needed. Decisions on proposals will be based on in separate environmental assessments or impact statements.

Non-Recreational Special Uses

Consequences Common to All Alternatives - There are approximately 204 existing special use permits, in addition to recreation special use permits on the Forest. Ditches, canals, fences, power plants, powerlines, telephone lines, fences, roads, electronic sites, communication sites, and dams are all examples of these uses.

Any new proposed special use permits will be subject to environmental analysis to verify the need for the proposal, to review alternatives, and to determine site-specific effects and mitigation measures as needed. Decisions on proposals will be based on in separate environmental assessments or impact statements.

Consequences Which Vary by Alternative - Alternative 2 identifies two potential communication sites. One site is on the Island Park Ranger District, located on Two Top Mountain. The other is located on Palisades Ranger District on Big Elk Mountain. The other alternatives are unchanged.

V. PRODUCTION OF NATURAL RESOURCES

Timber

Key Indicator - Volume Harvested, Allowable Sale Quantity (ASQ)

Other Indicators

1. Acres Harvested
2. Unscheduled Timber Harvested
3. Firewood/Product Volume
4. Suitable Timber Acres
5. Harvest Volume as a percent of Long Term Sustained Yield
6. Noninterchangable component (NIC)
7. Harvest Acres by Harvest System
8. Supply and Demand for wood products
9. Reforestation
10. Timber Stand Improvement (TSI)

Consequences Common to All Alternatives

Unscheduled Timber Harvest - All alternatives allow unscheduled timber harvesting for the following purposes:

- Public safety;
- Visual quality;
- Long term maintenance of vegetation conditions,
- Commercial, personal use and camp firewood,
- Commercial and administrative post and pole cutting;
- Administrative use;
- Achieve mature growth standards;
- To meet specific recreation objectives;
- Attain desired vegetation characteristics;
- Improve wildlife habitat; and
- Where needed to meet management prescription goals.

The volume and acres associated with unscheduled timber harvest are currently unknown but treatments will occur to implement ecosystem management and to meet the various prescription goals and objectives

Firewood/Product Volume - All alternatives allow harvest of wood products other than ASQ volume. A goal of the Revision is to conduct an inventory for determining a sustainable level of firewood and then offer that level. A current estimate of volume (firewood and products) that would be available from the forest annually during this planning period (the first decade of revision implementation) is 3.8 MMBF. This compares to approximately 4.6 MMBF that was sold during Fiscal Year 95 and 6.3 MMBF which is a four-year average for the years of 1992-95

All alternatives harvest less firewood and product volume compared to the levels associated with the past planning period. Demand for firewood is down, due to a decreased supply and the quality of offered material, over the past 4-5 years. The anticipated supply level is below the expected demand. This will result in more competition for sales and therefore, increased cost to purchasers. Demand for product volume (post and poles) is increasing within the planning area. There will be a decrease in availability of personal use post and poles for farm and ranch use and a move toward competitive bids as demand will exceed supply. The supply of poles may be augmented by precommercial thinning material as thinning opportunities will increase during this planning period.

Harvest System - The ASQ acres for all alternatives will be harvested using even-aged silvicultural systems (clearcut, commercial thinning, seed tree, shelterwood and overstory removal) and where appropriate, and to a lesser degree, uneven-aged systems (group selection, individual tree selection and commercial thinning). Specific direction regarding appropriate harvest systems for each species is found in the Forestwide Standards and Guides and will be applied on a site-specific basis.

Timber Stand Improvement (TSI) - During the planning period it is estimated that there will be 34,841 acres of regenerated forest stands that will need to be thinned. Of the total 17,812 acres are planned to be treated this decade. Some 24,111 acres of the total acres available are within BMU's. Some 17,029 acres (71%) of the 24,111 acres in BMU's are located within core areas and by prescription cannot be treated.

Consequences Which Vary by Alternative

Timber Prescription Areas - Table IV-14 below displays the total number of acres within each alternative which are allocated to timber management activities (ASQ). The display represents total acres within timber management prescription boundaries (includes forested and nonforested).

Table IV-14. Total Acres Within Timber Management Prescriptions							
	Alt 1	Alt 2	Alt 3	Alt 3-M	Alt 4	Alt 5	Alt 6
Timber Prescription Ac.	795,600	857,300	663,800	585,800	523,600	272,300	0

Suitable Timber Acres - All seven alternatives have different amounts of acres suited for timber management. Table IV-15 below displays the numbers of acres of available suitable timber by alternative. Total tentatively suitable acres for the Forest are 703,100. The process used to determine total suitable acres is found in Process Paper C

	Alt 1	Alt 2	Alt 3	Alt 3-M	Alt 4	Alt 5	Alt 6
Suitable Acres	591,420	598,830	549,010	487,000	421,510	208,810	0

Total suitable acres shown above reflect forest acres within the timber management prescription acres shown in Table IV-14. The difference between total tentatively suitable acres (703,100) and those shown in Table IV-15 above, reflect specific constraints within the prescription mix in each alternative. The alternatives with the largest acreages of suitable forest land will have the most effect on forested vegetation.

Acres Harvested - Table IV-16 displays harvest acres for each alternative. Harvest acres are determined by the number of suitable acres within management prescriptions that allow timber harvest activities. The differences between the acres shown below and the suitable acres shown above is due to specific constraints within each prescription area, past timber activities in that area, and the fact that suitable acres shows the area harvested over an entire 150-year period of analysis rather than the first decade. Process Paper B provides information on the constraints used for this analysis.

Alternative 2 harvests the most acres during the decade followed by 1, 3, 3-M, 4, and 5. There are no ASQ harvest acres associated with Alternative 6. All alternatives harvest 1.4% or less of the total forested acres and 2.4% or less of total suitable acres.

	Alt 1	Alt 2	Alt 3	Alt 3-M	Alt 4	Alt 5	Alt 6
Harvest Ac (Yr)	1,477	1,694	1,423	1,143	751	473	0
Harvest Ac. (Dec)	14,764	16,940	14,230	11,430	7,510	4,730	0
% of Total Forested Acres	1.2	1.4	1.2	0.9	0.6	0.4	0.0
% of Total Mature Forested Acres	1.5	1.7	1.4	1.2	0.8	0.5	0.0
% of Forest Suitable Acres	2.1	2.4	2.0	1.6	1.1	0.7	0.0
% of Alternative Suitable Acres	2.5	2.8	2.6	2.1	1.8	2.3	0.0
Aspen Harvest Ac.	325	559	384	320	150	76	0
% of Ac. Treated	22	22	27	28	20	16	0.0
LPP Harvest Ac.	561	644	597	457	368	184	0
% of Ac. Treated	38	38	42	40	49	39	0.0
Other Conifer Ac.	591	491	440	366	233	213	0
% of Ac. Treated	40	29	31	32	31	45	0.0
% Tractor Logging	86	88	87	90	90	84	0.0
% Cable Logging	14	12	13	10	10	16	0.0

Except for Alternative 1, lodgepole pine (38-40%) is the species that is harvested the most. This was the case in the existing Forest Plan except that the percentage of lodgepole pine to the total harvest was about 90%. Aspen harvest (16-28%) makes up a larger percent of harvest as compared to the existing Plan as is the case with Douglas-fir and the mixed conifer groups (29-45%)

The use of all logging systems to harvest timber would continue under all alternatives. Selection of appropriate systems would be made at the project level and would be based on silvicultural needs, watershed protection, operational feasibility and costs.

Noninterchangeable Component (NIC) - Table IV-17 below displays the number and percent of suitable acres by alternative that fall into a NIC. NIC acres are ASQ acres associated with aspen, forested slopes between 40-60%, specific prescriptions (5 3 2 - 5 3.5, 5.7, 5.8, and 5 9 2), and areas designated as roadless. This component basically indicates that the volume from these acres, if lost to harvesting opportunities, will not be made up elsewhere. As an example, if aspen cannot be harvested in the amounts shown above because of lack of market, the volume lost is not required to be made up with additional harvest of another species. Another example would be volume from a roadless area. If an alternative not to harvest timber is selected in a future site specific project analysis, the volume would not be made up from other lands.

	Alt 1	Alt 2	Alt 3	Alt 3-M	Alt 4	Alt 5	Alt 6
NIC Acres (Total)	352,486	237,137	312,387	256,162	210,755	67,377	0
% of Suitable Ac.	60	40	57	53	50	18	0 0
Ac Aspen (1st Decade)	3,250	5,590	3,840	3,200	1,500	760	0
Ac 40-60 % slopes (1st Decade)	2,067	2,033	1,850	1,143	750	757	0

Alternative 1 has the largest amount of NIC acres followed by Alternatives 3, 3-M, 4, 2, and 5. Alternative 5 also has the least amount of suitable acres of any alternative with a scheduled timber harvest.

Harvest Volume - Harvest volume data is shown in Table IV-18 below. ASQ is the amount of timber volume that each alternative allows to be harvested based on the number of suitable acres, average volume per acre and management direction within each prescription area.

	Alt 1	Alt 2	Alt 3	Alt 3-M	Alt 4	Alt 5	Alt 6
Annual (ASQ)	5,116	5,963	5,007	3,698	2,457	1,487	0
Decade (ASQ)	51,160	59,629	50,073	36,979	24,578	14,866	0
Average Vol/Ac. MBF	3,465	3,520	3,519	3,235	3,273	3,143	0
% of Total Forest Vol.	1.0	1.0	1.0	0.6	0.7	0.3	0.0
% of Suitable Vol.	1.4	1.6	1.4	1.0	0.7	0.4	0.0
Aspen Volume	2,404	2,297	1,576	1,315	616	312	0
% of Total Vol.	30	39	31	36	25	21	0.0
LPP Volume	3,690	2,327	2,158	1,652	1,330	665	0
% of Total Vol	47	39	43	45	54	45	0.0
Other Conifer	1,801	1,339	1,273	731	511	510	0
% of Total Vol	23	22	25	19	21	34	0.0

Alternative 2 provides the most volume harvested during the decade, followed by Alternatives 1, 3, 3-M, 4 and 5. Alternative 6 does not provide any volume from ASQ harvest. All alternatives harvest 1.0% or less of total forested volume and 1.6% or less of total suitable volume.

In comparison to the existing Forest Plan, lodgepole volume will again provide the largest amount of volume but only about 40-50% to the total. Aspen volume provides 20-40% of the total volume which is a significant increase from past management. Douglas-fir and the mixed conifer group also increase significantly comprising 20-35%.

Volumes per acre are shown above in Table IV-18. The average volume per acre across the alternatives is about 3.4 MBF. During the previous planning period (1981 - 1990) the planned volume per acre averaged around 5.0 MBF and the actual sawtimber volume per acre was 6.2 MBF. The planned volume per acre is less than the previous planning period due to two wildlife constraints. The first requires 20 logs per acre in each decomposition class be left on-site. These logs should be a minimum of 7" in diameter (average 9.5" in diameter) and be 20' long. This would equate to about 0.75-1.0 MBF per acre left on the ground if adequate down and woody material is not available. The second wildlife constraint that affects volume per acre is a snag per cavity nesting requirement for leaving snags and snag recruitment trees. For a 100 percent biological potential at the high end, 10 snags per acre and 25 snag recruitment trees per acre (half in the 7.0"-9.9" diameter class) would have to be left. This would also equate to 0.65-1.25 MBF per acre being left standing.

Long Term Sustained Yield Capacity (LTSYC) - LTSYC is the highest uniform wood yield from lands being managed for timber production that may be sustained, under a specified management intensity, consistent with multiple use objectives. Table IV-19 below displays the LTSYC on an annual basis for each alternative. LTSYC generally shown in MCF (thousand cubic feet) is also displayed in MBF (thousand board feet) (estimate) terms for ease in comparing the alternatives.

	Alt 1	Alt 2	Alt 3	Alt 3-M	Alt 4	Alt 5	Alt 6
LTSYC (MCF/Yr)	7,144	7,271	7,451	6,155	5,772	2,801	NA
LTSYC (MBF/Yr.)	32,065	32,635	33,442	27,626	25,907	12,572	NA
Harvest Volume as a % of LTSYC	16	18	15	13	10	11	NA

For clarification, LTSYC indicates the amount of volume that is produced annually from the suited acres shown for each alternative in the long term. This includes growth from all trees and does not necessarily mean total merchantable volume that is available for harvest. By law, harvest levels cannot exceed LTSYC. Alternative 2 comes the closest to meeting its LTSYC but only utilizes 18 percent in decade 1, less than 1/5 the annual growth predicted in the long term. Alternative 2 is followed by Alternatives 1, 3, 3-M, 5 and 4 respectively.

Supply and Demand - Chapter III displays information on the current supply for sawtimber and wood products and the predicted demand from operators in our area. Table IV-20 below displays how the volume available from each alternative meets the demand.

	Alt 1	Alt 2	Alt 3	Alt 3-M	Alt 4	Alt 5	Alt 6
ASQ	31	36	31	23	15	9	0
Firewood/Products	23	23	23	23	23	23	23
% Total	54	59	54	46	38	32	23
% Present Demand	25	27	25	21	18	15	11
% Survival Level	29	31	28	24	20	17	12

Alternative 2 provides the most volume in terms of past supply and present demand but falls well short of historical levels provided by the Forest. Even during recent years (1991 - 1994) the Forest provided 54.4% of the volume available to the local demand area. Under Alternative 2, the Forest will supply about 59% of the volume available to the local market. This total would be less than half of what the local area demands. Following Alternative 2, Alternatives 1, 3, 3-M, 4, 5 and 6 provide decreasing amounts. Survival level is the minimum level of timber demand, from all operations, necessary to meet the needs of timber industry and personal use.

Future Harvest Levels - Table IV-21 below displays future levels of harvest.

Decade	Alt 1	Alt 2	Alt 3	Alt 3-M	Alt 4	Alt 5	Alt 6
2	5,158	6,060	5,504	3,692	3,281	1,425	0
3	15,197	13,400	12,346	9,708	4,693	3,457	0
4	14,063	13,187	13,435	10,377	6,048	4,037	0
5	15,810	13,443	13,100	10,619	6,642	4,204	0
6	14,429	14,474	21,916	15,609	7,186	6,281	0

Reforestation - Table IV-22 below displays the level of reforestation activities expected during the planning period.

	Alt 1	Alt 2	Alt 3	Alt 3-M	Alt 4	Alt 5	Alt 6
Ac of Reforestation	25,190	27,360	24,650	21,850	17,930	15,150	10,420
Minimum Ac. of Planting	10,420	10,420	10,420	10,420	10,420	10,420	10,420
Ac. of Reforestation in BMU's	1,975	1,975	1,975	1,975	1,975	1,975	0

About 10,420 acres of the total reforestation needs shown above will be planted in all alternatives. Additional amounts in Table IV-22 come from planned harvest during the planning period and will be a mixture of artificial and natural regeneration. The amount of each will depend on the species harvested, harvest system used, and suitability for natural regeneration during the planning period. This will be determined through site-specific analysis.

Cumulative Effects

Silvicultural Systems - Even-aged management systems will continue to be used resulting in even-aged stands. Uneven-aged systems will be used to a lesser degree, but will have very little cumulative effect as the successional stage generally does not change when activities occur.

Fuelwood - The recent levels of fuelwood will continue to decrease due to the low number of acres treated under any alternative. Requirements for more down and woody vegetation and maintaining snags within harvest units will also reduce available fuelwood material offered in slash piles.

Use of aspen for firewood material could increase due to the increased aspen acreage that is available for treatment. Aspen firewood is not part of the ASQ.

Fire - The hazard from wildfire on the suited lands should remain about the same as in the past because the acres available to harvest, once harvested, will not reduce the composition of the mature component significantly. The hazard on the nonsuited lands should remain constant or slightly increase as the stands continue to mature and no activities are initiated to reduce fuel loading.

Insects and Disease - Insects and disease will continue to be present in both the suited and nonsuited lands. Vegetation management activities planned during this period will decrease in amount on the suited acres, but even a 2% or less reduction in mature stands provides some benefit in reducing insects and disease problems. On the unsuited lands, insect and disease could build up to epidemic proportions.

Growth on the managed stands would increase with management intensity. As more lands are developed, total growth would increase. Growth on the nonsuited lands would remain constant or decrease as the stands increase in age and are past culmination in the later successional stages.

Livestock Grazing

Indicators - The "Production" indicators for "Livestock Grazing" that will be covered in this portion of chapter 4 are:

1. Amount of permitted AUM's and livestock.
2. Number of grazing permittees and permits
3. Amount of acres open to grazing.
4. Number of allotments open to grazing

Consequences Common to All Alternatives - Three vacant sheep allotments on the Island Park Ranger District and four vacant sheep allotments on the Ashton Ranger District will be closed to sheep and cattle grazing to better manage grizzly bear habitat. One vacant sheep allotment on the Dubois Ranger District and another vacant sheep allotment on the Palisades Ranger District will be closed to sheep and cattle grazing to improve watershed and soils conditions. This is a reduction of 5,648 sheep AUM's, reduces the number of open sheep allotments from 78 to 69 and closes an additional 98,214 acres to grazing of domestic livestock. Since these allotments are currently vacant, this reduction in a real sense has already occurred.

All reconstruction of existing range improvements and all proposed new improvements will be needed equally with each alternative. These improvements are needed to: 1) arrest deteriorated range conditions and improve rangeland health, 2) maintain or implement improved grazing systems and Allotment Management Plans, and 3) mitigate site specific situations identified in previously completed NEPA documents. All proposed new nonstructural improvements (burns, spray, seedings, etc.) and noxious weed control will be implemented to improve ecological conditions. No increase in AUM's or livestock carrying capacity is anticipated.

Consequences Which Vary by Alternative - Unless otherwise specified, all environmental consequences are calculated to occur by the end of the first decade. The effects of implementation on indicators for all alternatives is shown in Table IV-23.

With the existing Forest Plan (Alternative 1), livestock management (grazing) systems are primarily utilized to maintain or improve forage outputs for livestock and wildlife and to protect and improve watershed conditions. Direction is not given to sustain livestock use at any specified level. The direction is to "Obtain optimum use of all suitable grazing lands on the Forest consistent with other resource needs." Information about this direction and how well the existing Forest Plan met objectives can be found in the "Range Section" of the Analysis of the Management Situation (AMS).

Riparian utilization in Alternative 1 is expressed as a percentage of forage utilized and ranges between 30% and 65% for herbaceous vegetation and 20% and 40% for browse, depending on the type of grazing system and "range" condition. There is a 100-foot buffer zone along each side of all perennial streams. Compared to the existing situation, Alternative 1 maintains the existing number of grazing permits, permittees, sheep, sheep AUM's, and cattle allotments open to grazing. Alternative 1 projects a slight increase in cattle numbers and AUM's.

Alternatives 2-6 express riparian forage utilization in terms of HGL "stubble height" and have wider buffer zones. With Alternatives 2-6, livestock management (grazing) systems are primarily utilized to maintain or improve forage outputs for livestock and wildlife and to protect and improve watershed conditions. The amount of protection varies among alternatives. Direction is not given to sustain livestock use at any specified level.

Alternative 2 implements the Aquatic Influence Zone Prescription which provides for a 4" HGL stubble height for all riparian areas either at the end of the grazing period or for all pastures grazed after September 1 and has buffer widths ranging from 100 feet to 200 feet on each side of all fish bearing

streams. Compared to the existing situation, Alternative 2 maintains the existing number of grazing permits, permittees, and cattle allotments open to grazing. Alternative 2 projects decreases for sheep and cattle numbers and AUM's.

Alternative 3 is similar to Alternative 2 except for a slight difference in cattle AUM's (88 AUM difference). Like Alternative 2, Alternative 3 implements a 4" HGL stubble height for utilization on riparian forage.

Alternative 3-M implements the Aquatic Influence Zone Prescription which provides for a 4" HGL stubble height for all riparian areas either at the end of the grazing period or for all pastures grazed after September 1 and has buffer widths ranging from 150 feet to 300 feet on each side of all fish bearing streams.

Compared to the existing situation, the Alternative 3-M implementation of the "phaseout" of sheep grazing to better manage grizzly bear and big horn sheep habitat will reduce sheep grazing by 8,995 active AUM's (18%). The reduction sustained as a result to improve grizzly bear habitat amounts to 5,446 AUM's (10.9%) and will eliminate (phaseout) all sheep grazing (100% of the sheep AUM's) on the Island Park Ranger District and portions (21% of the sheep AUM's) on the Teton Basin Ranger District. The reduction associated with improved big horn sheep habitat amounts to 3,549 AUM's (7.1%) and will reduce (phaseout) sheep grazing (51% of the sheep AUM's) on the Teton Basin Ranger District. As a result of providing improved riparian management, and additional projected reduction of 845 active sheep AUM's (1.7%) will occur on the Dubois Ranger District.

Compared to the existing situation, Alternative 3-M reduces livestock and AUM's, grazing permits and permittees, and the number of allotments and acres open to grazing.

Compared to the existing situation and Alternatives 1 through 3-M, Alternative 4 will achieve better riparian conditions in the shortest amount of time. This will result in a 12% Forestwide reduction of cattle AUM's. Alternative 4 implements the Aquatic Influence Zone Prescription which provides for a 6" HGL stubble height for riparian forage utilization at the end of the grazing period or for all pastures grazed after September 1 and has buffer widths ranging from 150 feet to 300 feet on each side of all fish-bearing streams. The most significant reductions in cattle AUM's will occur on the Dubois, Palisades, Teton Basin, and Ashton Ranger Districts with projected reductions of 7,986 AUM's (20%), 1,770 AUM's (10%), 486 AUM's (8%), and 925 AUM's (6%) respectively.

Alternative 4 implements the phaseout of sheep grazing in grizzly bear habitat and bighorn sheep habitat the same as in Alternative 3-M. The reduction in sheep AUM's on the Dubois Ranger District is also the same as Alternative 3-M.

Compared to the existing situation, Alternative 4 decreases livestock and AUM's, grazing permits and permittees, and the number of allotments and acres open to grazing.

Alternatives 5 and 6 are identical to Alternative 4, except that termination of sheep grazing in grizzly bear habitat will occur immediately.

Cumulative Effects - Because livestock operations and allotment conditions vary across the Forest, it is difficult to determine how each individual allotment or permittee will respond to implementation of the standards, guidelines and prescriptions associated with each alternative. For example, a change in AUM's can be the result of changes in the number of livestock, permitted season, or a combination of both. As demonstrated by traditional and nontraditional range management practices, the loss of AUM's (except those associated with grizzly bear habitat or bighorn sheep habitat) can often be mitigated while improvement in other resources such as fish and wildlife habitat and other "nonproduction" indicators occur. An actual change in AUM's can only occur with a site-specific analysis of each grazing allotment. The projected effects on the indicators associated with AUM's, livestock numbers, permits, and permittees are the Forest's best estimate of the potential impacts (Table IV-23).

Compared to the existing situation, implementation of Alternatives 1, 2, or 3 are not likely to significantly or adversely affect the majority of livestock grazing permittees with grazing privileges on the Targhee National Forest. However, depending on future site-specific analysis for each allotment, some allotments may be affected

Table IV-23. Comparison of Indicators by Alternative by the End of Decade 1								
Indicator	Existing Level	1	2	3	3-M 1/	4 1/	5	6
AUM's Sheep Cattle	55,749 92,316	50,101 93,517	49,801 89,110	49,801 89,022	40,261 89,022	40,261 81,083	40,261 81,083	40,261 81,083
Livestock 2/ Sheep Cattle	72,005 21,696	72,005 21,896	71,605 20,646	71,605 20,646	58,045 20,646	58,045 18,846	58,045 18,846	58,045 18,846
Permittees Sheep Cattle	33 142	33 142	33 142	33 142	25 142	25 132	25 132	25 132
Permits Sheep Cattle	76 201	76 201	76 201	76 201	63 201	63 187	63 187	63 187
Acres (MM) Open Closed	1 498 391	1 400 489	1.400 .489	1.400 .489	1.228 .661	1.228 .661	1.228 661	1.228 .661
Allotments 3/ Sheep Cattle	78 76	69 76	69 76	69 76	54 76	54 76	54 76	54 76
1/ These figures implement the "phase out" of sheep. 2/ These figures are the midpoint of the ranges described in Chapter III 3/ Allotments open to grazing.								

Compared to the existing conditions, implementation of Alternatives 3-M, 4, 5 or 6 will affect livestock permittees on all ranger districts. The largest significant impacts will occur to cattle permittees with grazing privileges on the Dubois and Palisades Ranger Districts, and to sheep permittees grazing sheep on the Island Park and Teton Basin Ranger Districts.

VI. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Irreversible commitment of resources refers to a decision that disturbs or reduces a nonrenewable resource, or a renewable resource to the point that renewal can only occur over a long period of time and/or at a great expense. Examples are minerals extraction, loss of cultural resources, and construction of major roads or hydroelectric projects

Irretrievable commitment of resources refers to lost production or use of renewable resources due to land use decisions. This represents the opportunities foregone for the period of time that the resource is unavailable.

Mineral extraction activities will require site-specific environmental analysis that explores the extent and consequences of irreversible commitments. To lessen the irreversible commitment of resources, it is the Forest manager's job to provide mitigation that will minimize adverse environmental impacts. The Forest has about 3300 miles of open or restricted roads. Table IV-12 shows what will happen to that figure over the coming decade. Open and restricted road miles may be regarded as being effectively withdrawn from vegetation production. Roads reclaimed or obliterated may be regarded as beginning to regain their capability to produce vegetation.

There would be some irreversible losses to soil hydrologic function and site productivity in areas where management activities are directed. Adherence to soil quality standards and guidelines, which are designed to reduce adverse impacts to an acceptable level, should allow soils to recover their natural properties for resiliency (e.g., soil organic matter in both surface and subsoil layers, available water holding capacity, etc.).

Road construction, timber harvest, grazing, dispersed recreation and motorized recreation (OHV's) have the highest likelihood of producing irreversible damage to the soil resource. Wildfires within the Cool, Dry Douglas-Fir Forests, Moist Douglas-Fir Forest, and Mid and Lower Elevation Subalpine Forests, where one or more fire cycles has elapsed due to fire suppression, might result in fires having a higher severity and intensity, resulting in irreversible losses (e.g., changes in the soils' chemical and physical properties or in the development of hydrophobic layers with subsequent increased overland flows and accelerated erosion) to the soil resource.

The portions of the inventoried roadless areas that are developed by roading and timber harvest will be lost for future wilderness consideration. Estimated acres that would be developed at some point during the next 150 years range from 40,000 acres in Alternative 6 to 148,000 acres in Alternative 2. Activities that are not scheduled by the Revision or are unforeseen, such as those external to the Forest Service (mining, power transmission lines), may also be regarded as an irreversible or irretrievable commitment of resources. See Table II-1 for a summary of wilderness and undeveloped acreage by alternative.

Adverse Environmental Effects that Cannot be Avoided - Adverse effects on some components of the environment cannot be avoided by actions proposed under the alternatives. Actions to benefit one component may have at least temporary adverse effects on another. A broad range of alternatives have been formulated, each with its own resource or environmental emphasis. Alternatives include management standards and guidelines, along with mitigation measures, to avoid or reduce adverse environmental effects. Monitoring will be used to measure how effective the standards and mitigation measures are in reducing adverse effects.

Some of the adverse effects that cannot be avoided in all alternatives include

- Forest management activities frequently result in impacts upon the visual resource. These changes in the landscape, although usually temporary, are often objectionable to some observers.
- A short-term increase in fire hazard will occur due to waste material, limbs, and tops left on the ground during and following timber harvest operations.
- A long-term increase in fire hazard will occur because actions are not being taken to reduce fuel loadings which are judged to be in excess of the range of variability.
- Intermittent and localized decrease in air quality may result due to dust from road construction, road maintenance and use, and due to smoke from wildfires, prescribed burns, and campfires.

- Short-term localized increases in soil erosion, vegetation degradation, and stream sedimentation may occur due to land-disturbing activities.
- Elimination of small areas from vegetation production will occur due to construction of permanent physical developments.
- Potential for additional conflicts between recreation use and other land use activities will increase in some alternatives.
- Temporary disturbance of wildlife and their habitat conditions in localized areas may result from increased human activity and changed vegetation conditions.
- Energy will be used to manage and provide goods and services.
- Increased soil compaction may occur on activity sites such as timber harvest areas and recreation areas

Many of these adverse effects are temporary, occurring during the site-specific activity, or transitional as forest vegetation progresses through successional stages

Short-term Uses of the Human Environment and the Maintenance of Long-term Productivity - Short-term uses are those that generally occur on a yearly basis, such as livestock grazing of forage or recreation site irrigation as a use of water. Long-term productivity refers to the capability of the land to provide for future generations. The quality of life for future generations is determined by the capability of the land to maintain its productivity.

Alternatives that have the greatest amount of timber harvest activity will result in the most short-term and continuing activity that may have an effect on the long-term productivity. Alternative 2 has the most potential for long-term effects, while Alternative 6 has the least. Other alternatives present middle range effects.

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The following is a list of the current Forest Leadership Team (FLT) and Forest Interdisciplinary Team (IDT) members and others who developed the Targhee National Forest Plan, Draft Environmental Impact Statement, and supporting documents

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Minerals - 16 years
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Range Conservationist - 1 year

Soil Conservation Service

Soil Conservationist - 1 1/2 years

Range Conservationist - 6 years

District Conservationist - 4 years

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**List of
Process
Papers**



Process Papers

Process Paper A - Issue Identification and Public Involvement

Process Paper B - Forplan Analysis

Process Paper C - Tentatively Suitable Timber Analysis

Process Paper D - Wildlife Analysis for the Forest Plan Revision

Process Paper E - Access Working Paper

Process Paper F - Sensitive Plant Species

Process Paper G - Idaho and Wyoming Rare Plant Species

Other Process Papers

- Implementing Ecosystem Management in Forest Plan Revisions (Sept. 23, 1994)
- Adjacent Land Use Patterns Analysis
- Roadless Areas
- Wild, Scenic, and Recreational Rivers Eligibility Determination
- Recreation Use Projection Process for Targhee National Forest Plan Revision
- Jedediah Smith Wilderness Environmental Assessment for Forest Plan Amendment

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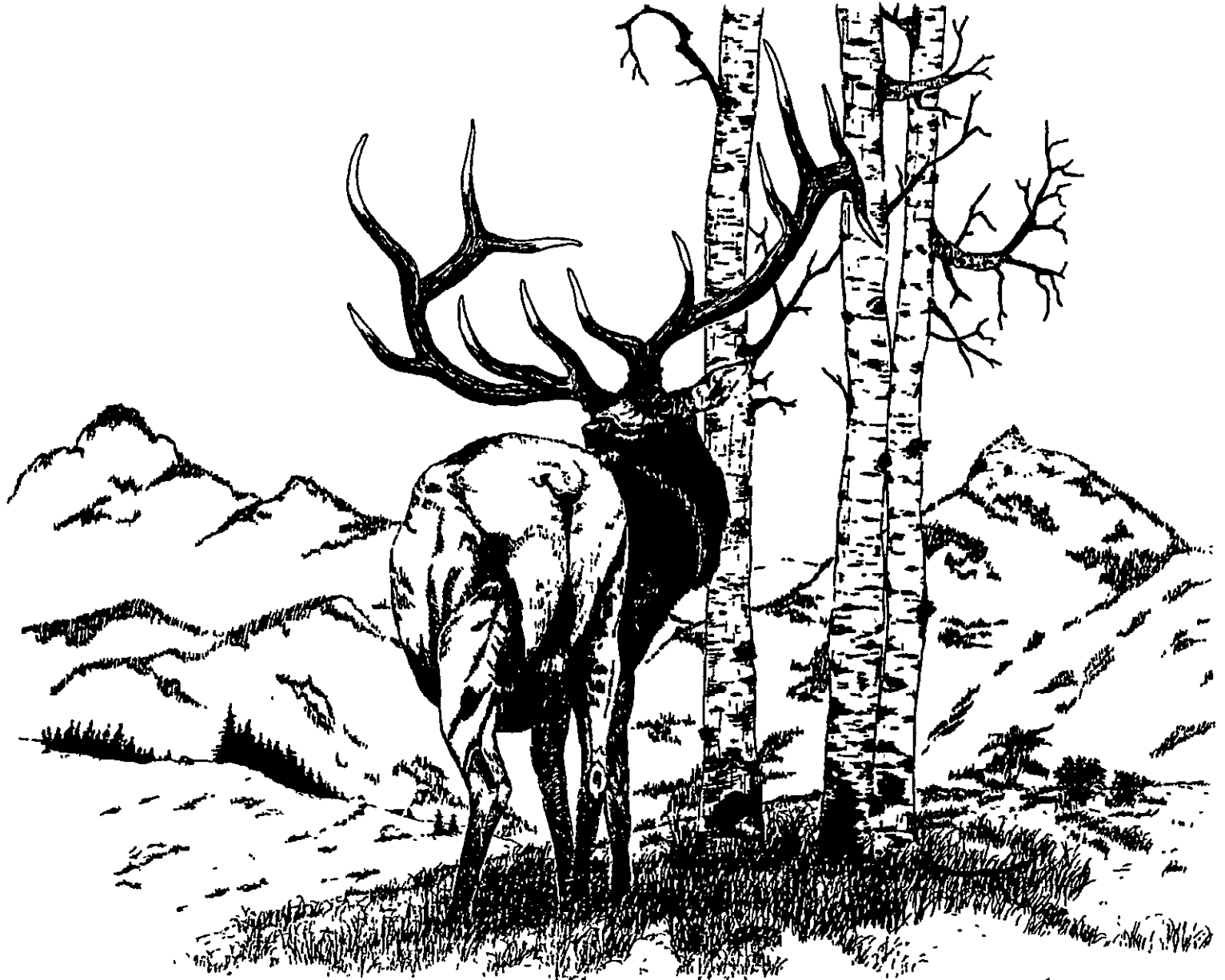
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Intermountain
Region

Targhee
National
Forest

Draft Forest Plan Revision

Targhee National Forest



DRAFT FOREST PLAN REVISION
for the
TARGHEE NATIONAL FOREST
Intermountain Region R-4
January 1996

Lead Agency:	Forest Supervisor Targhee National Forest P.O. Box 208 St. Anthony, ID 83445
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This Draft Forest Plan Revision was prepared according to Secretary of Agriculture regulations (36 CFR 219), which are based on the Forest and Rangeland Renewable Resources Planning Act (RPA) as amended by the National Forest Management Act of 1976 (NFMA). This Draft Forest Plan Revision was developed in accordance with regulations (40 CFR 1500) for implementing the National Environmental Policy Act (NEPA). A detailed Draft Environmental Impact Statement (DEIS) has been prepared as required by NEPA and 36 CFR 219, because the Draft Forest Plan Revision is considered a major federal action significantly affecting the quality of the human environment.

If any particular provision of this Revision, or the application of the action to any person or circumstances, is found to be invalid, the remainder of the proposed action and the application of that provision to other persons or circumstances shall not be affected.

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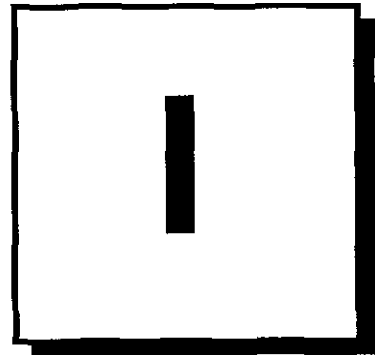
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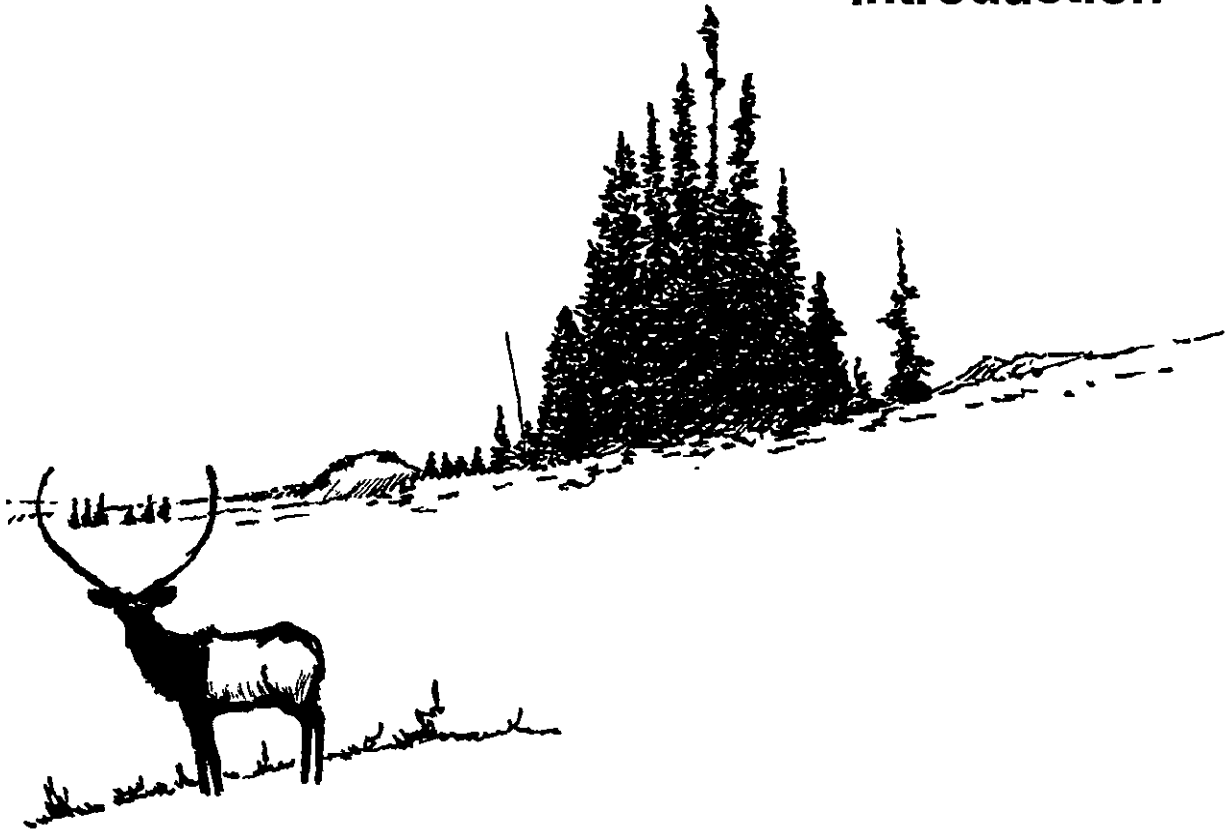
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Chapter



Forest Plan Revision Introduction



CHAPTER I

FOREST PLAN REVISION INTRODUCTION

PURPOSE OF THE LAND AND RESOURCE MANAGEMENT PLAN (FOREST PLAN REVISION)

The Revision guides all natural resource management activities and establishes management standards for the Targhee National Forest (hereafter referred to as "the Forest"). The Revision embodies the provisions of the Resources Planning Act (RPA) as amended by the National Forest Management Act (NFMA), Endangered Species Act (ESA), and other guiding documents. The Forestwide Standards and Guidelines and management prescriptions state the Revision's management direction; however, the project outputs, services, and rates of implementation are dependent on the annual budgeting process.

The Forest Plan will be revised every 10-15 years, or sooner should conditions or demands significantly change

Development of the Revision occurs within the overall framework of both National and Regional Planning. The Revision and accompanying Environmental Impact Statement (EIS) are "tiered" to the Intermountain Regional Guide. Regional planning is a two-way street that helps convey direction from National to the Forest level, and helps transmit information from the Forest to the National level. The Regional Guide establishes standards and guidelines, and resolves Regional issues

During the Revision process, alternatives were developed, analyzed, compared, and a preferred alternative selected. This Revision is based on the "preferred alternative" displayed in the accompanying Draft Environmental Impact Statement (DEIS). The planning process and analysis procedures used in developing this Plan, as well as the other management alternatives that were considered, are described or referenced in the DEIS. In the development of the alternatives, estimates were made based on broad averages, as to the various activities and resulting outputs of implementing that alternative. These estimates were used to compare alternatives and to arrive at the preferred alternative. Actual outputs may vary slightly from those displayed in the preferred alternative, however, the intent of the preferred alternative will be met.

Forest Plan direction serves as an "umbrella" for the environmental analysis for proposed projects at the Forest and Ranger District levels. Future environmental analyses documented in environmental assessments (EA's) and EIS's will refer to this Plan, the accompanying EIS, and related documents wherever possible (except for the travel plan which will be implemented based on the Final EIS (FEIS) associated with this plan). EA's will be developed for project level activities not specifically described in this Plan and will concentrate on issues unique to the project.

The Revision does not give specific "how-to's" of project implementation. Many implementation plans will be developed during the life of the plan that will provide this operational direction. These plans will be adapted as new scientific principles and methods become available to improve resource management activities. The Revision does provide Wilderness Plan direction in the form of prescriptions, Standards and Guidelines, Implementation Schedules, and Monitoring Plans for the Jedediah Smith and Winegar Hole Wildernesses. In addition, the Revision contains detailed guidance for implementing Travel Management Plan Maps for all Districts on the Forest. A fire management plan for the Jedediah Smith Wilderness has recently been completed which outlines operational direction for that portion of the forest.

The Revision replaces previous resource management plans. Upon final approval of the Revision, all Forest activities, including budget proposals, will conform to it. All permits, contracts, and other uses of Forest lands must also conform with the Revision. But some existing permits and leases are already committed. In this case, existing contracts will remain in effect until they can be adjusted to accommodate Revision direction.

PLAN STRUCTURE

The Revision provides the long-term direction for managing the Forest. The Revision contains the overall direction when implemented to achieve the desired condition of the Forest.

The Forest Plan is organized into five chapters and two appendices:

Chapter I Forest Plan Revision Introduction

Discusses the general purpose of the Forest Plan, the relationship of the Plan to other documents, and the Plan structure. Includes a brief description of the Forest.

Chapter II Summary of the Analysis of the Management Situation (AMS)

Summarizes the key information contained in the AMS and describes the need to revise the Targhee National Forest Management Plan.

Chapter III Forest Management Direction

Presents the Forestwide Management Direction, provides ecological subsection descriptions, lists the management prescriptions, and presents the direction, standards and guides for management of the Forest.

Chapter IV Implementation of the Forest Plan

Displays the major activities required to meet the Desired Future Conditions (DFC) set forth in the EIS.

Chapter V Monitoring and Evaluation

Shows how the Forest will monitor compliance with, and performance of, critical standards and guidelines in the Revision. In this sense it is only a part of a larger range of project level monitoring activities which take place on the Forest.

Appendix

Summary of National Goals Relevant to Land and Resource Management.

References Cited

Glossary

Defines technical terms used throughout the document

Index

LOCATION OF THE FOREST

The Forest contains approximately 1,810,000 acres of National Forest System land located in south east Idaho and western Wyoming. Parts of the Forest lie in Idaho counties of Bonneville, Butte, Clark, Fremont, Jefferson, Lemhi, Madison, Teton, and Wyoming counties of Lincoln and Teton. The Forest is bordered on the east by Yellowstone and Grand Teton National Parks and the Bridger-Teton National Forest, south by the Caribou National Forest, west by the Challis and Salmon National Forests, and north by the Beaverhead and Gallatin National Forests. Figures I-1 and I-2 display the location of the Forest on a National and local scale.

The Forest has five administrative Districts.

<u>District</u>	<u>Net Acres</u>
Dubois D-1	458,080
Island Park D-2	345,518
Ashton D-3	357,350
Palisades D-4	472,315
Teton Basin D-5	267,632

The Forest Supervisor's office is located in St. Anthony, Idaho.

Vicinity Map of Targhee National Forest
on a National Scale

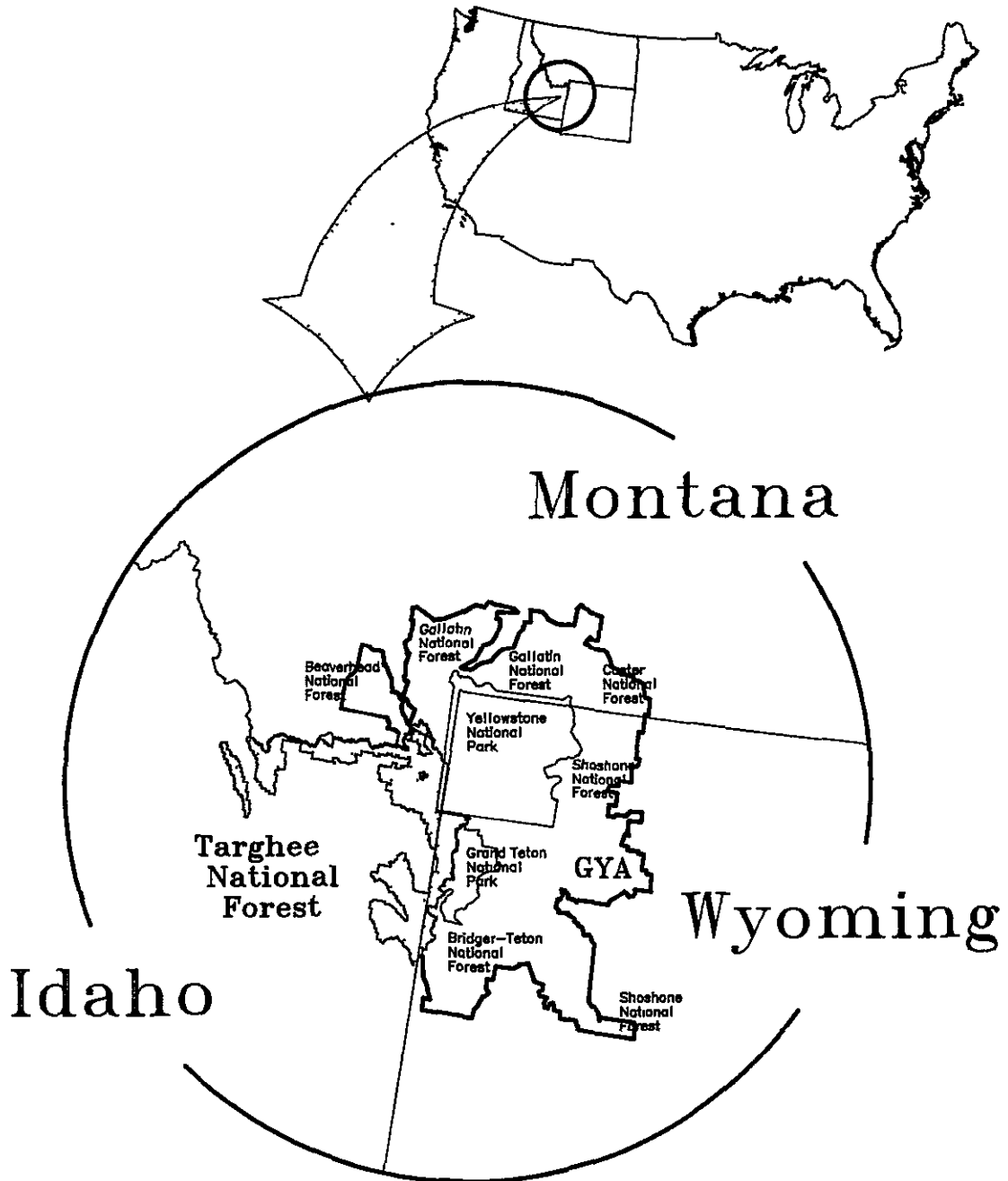


Figure I-1

Vicinity Map of the Targhee National Forest and the Surrounding Area

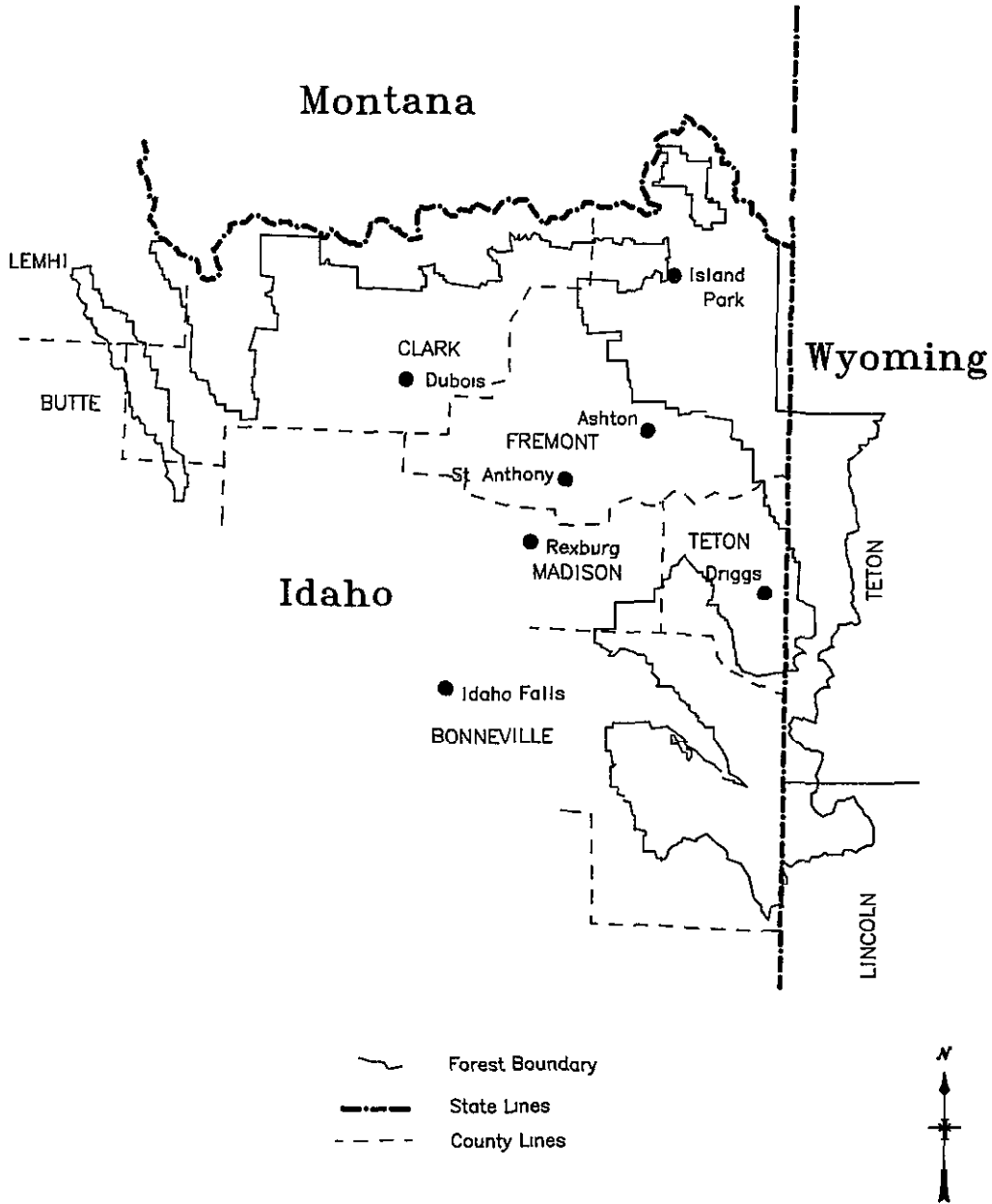
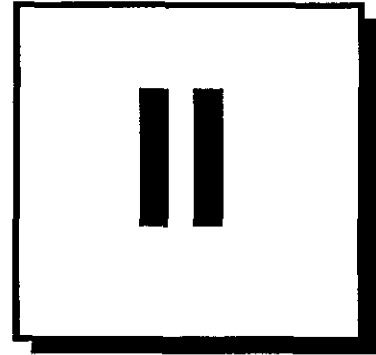
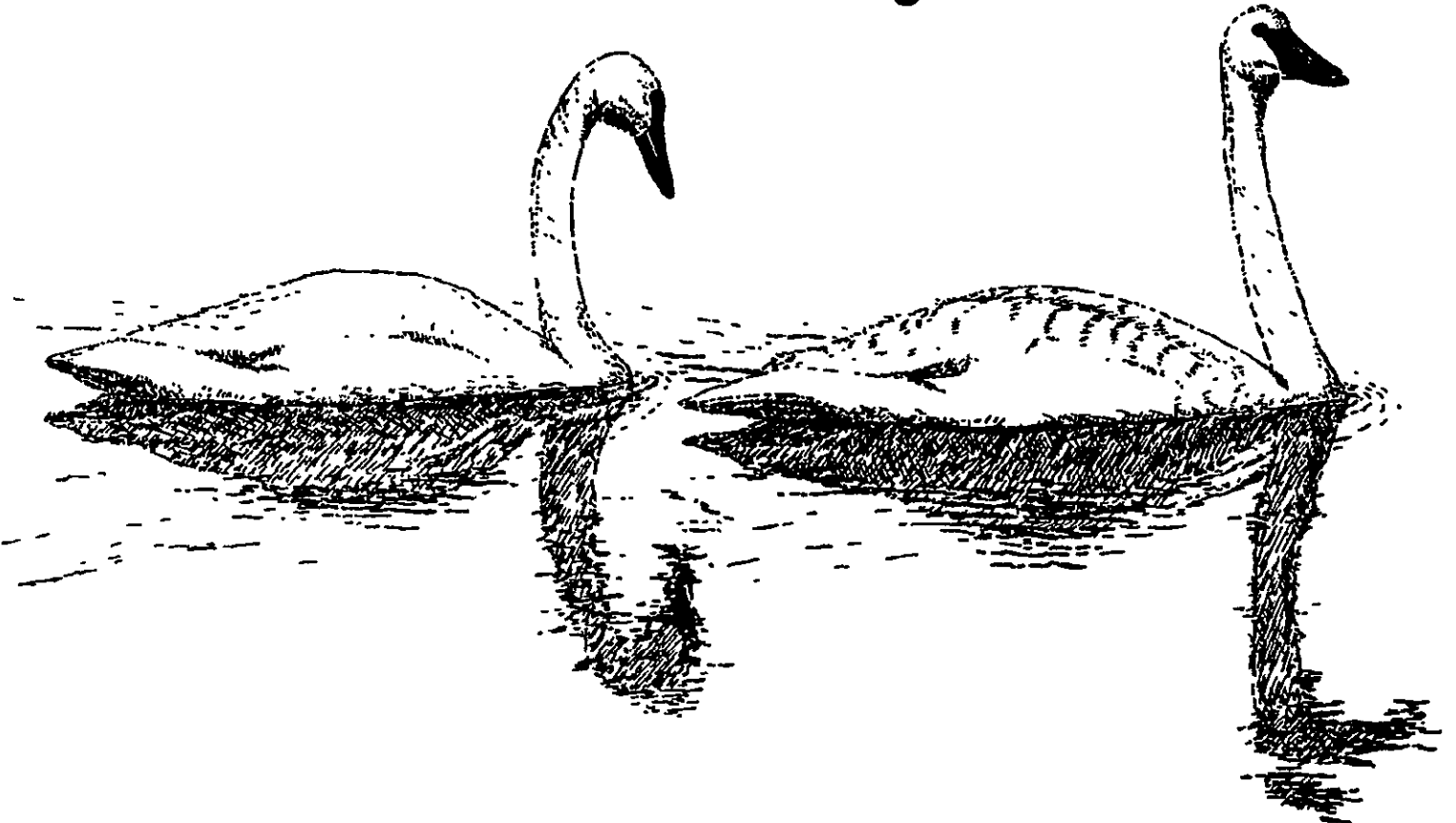


Figure I-2

Chapter



Summary of the Analysis of the Management Situation



CHAPTER II

SUMMARY OF THE ANALYSIS OF THE MANAGEMENT SITUATION

I. Introduction

This chapter summarizes the key information contained in the AMS and describes the need to revise the Targhee National Forest Land Management Plan.

II. Purpose of Preparing an AMS

The Revision process began by completing an AMS in 1992. A comprehensive review of the existing Plan identified changed conditions and new information, including new public issues and changed public attitudes and awareness, which affected the appropriateness of continuing with the management direction in the Plan.

A comprehensive review of the existing Plan is included in the AMS. This analysis: 1) described the present Forest condition, 2) defined the progress that has been made in implementing the Plan with respect to accomplishment of goals and objectives set forth in the Plan; and 3) showed how effective standards and guides were in achieving the desired future conditions described in the Plan.

III. Primary Emphasis of the Plan

A primary goal of the existing Plan was to harvest and reforest the thousands of acres of lodgepole pine that had been killed or damaged by the mountain pine beetle. To achieve this goal, species/product mix objectives were established. The objective for a mix of species was about 10 percent of the acres harvested were to be Douglas-fir and about 90 percent lodgepole pine. Another objective was to provide a product mix that was 40 percent sawtimber and 60 percent other products, such as posts, poles and firewood. A third objective limited the percent or number of acres within each Management Area that would be harvested.

IV. Results of Monitoring

The results of monitoring indicate the volume of timber actually harvested, for both lodgepole pine and Douglas-fir, is near planned levels. This volume was achieved from only 58% of the acres originally considered for harvest.

It was expected that standards and guidelines could be followed while operating at the Allowable Sale Quantity (ASQ) level. The Forest experienced difficulty in meeting many of the standards and guidelines. According to Forest Service direction, the ASQ is to be adjusted if standards and guidelines cannot be met.

The species mix objective was reached with the harvest of 11% Douglas-fir and 89% lodgepole pine. The product mix objective was not met. The product mix was 76% sawtimber and 24% other products which exceeded the 20% allowance set forth in the Plan.

Habitat effectiveness for big game and grizzly bear has been reduced through increases in road density and reduction of cover.

The standards and guidelines in the Plan have resulted in improvement of some degraded riparian habitats.

The Regional Forester and the U.S. Fish and Wildlife Service have increased the number of plant and animal species found on the Forest, listed as threatened and endangered, or sensitive from a total of 12 to 26.

V. Public Interaction and DFC

Social needs and desires have changed, as evidenced by the number of administrative appeals and lawsuits that challenge the application of current Forest management. The proposals most frequently challenged in the last four years have been timber harvests. Issues have centered on impacts to wildlife and, to a lesser extent, recreation and scenic values.

The existing Plan was designed by focusing primarily on capabilities of the land to produce commodities such as timber, recreation days, or livestock forage. The advent of ecosystem management (EM) requires that the Forest be managed for sustainability of all ecosystem components, many of which were not adequately addressed in the existing Plan (e.g., riparian systems).

Public comments and ideas received through scoping identified new public expectations as to what uses and benefits the Forest should provide. The new DFC which emerged could not be achieved under the existing Plan direction. They are grouped into ecologic, social, and economic components as described below.

Ecologic Component

- ◆ A mosaic of age classes and different types of vegetation, which can be sustained through time, exists across the landscape. Insects, disease, fires, plants, and animals are allowed to play their natural role in ecosystem dynamics to the extent compatible with other resource objectives.
- ◆ Native plant and animal species are favored and habitats are managed with the goal of delisting threatened and endangered species.
- ◆ The Forest serves as an important link within the Greater Yellowstone Ecosystem as well as to adjacent ecosystems, allowing free movement of wildlife.
- ◆ Aquatic and riparian ecosystems are healthy and productive. Aquatic systems are allowed to function naturally while protecting flows for downstream consumptive uses. Riparian area integrity contributes to productive fisheries and excellent water quality.

Social Component

- ◆ Growing and diverse recreational and cultural needs are accommodated within the capability of the ecosystem to sustain these uses. Increased recreation opportunities are managed to minimize conflicts with other forest uses and provides high levels of satisfaction.
- ◆ Year-round human access is managed to provide both motorized and nonmotorized recreation opportunities. A system of trails and support facilities exists which is compatible with resource capabilities.
- ◆ Roadless characteristics are preserved in existing roadless areas and proposed wilderness.
- ◆ Recreation sites, facilities and trails are well-maintained. Campgrounds provide an appropriate level of service.

- ◆Heritage resources are identified and protected. Enhancement and interpretation of historic properties takes place where appropriate.
- ◆The Forest features landscapes with a natural appearance.

Economic Component

- ◆Commodity production activities, such as timber harvest and livestock grazing, are conducted at sustainable levels and maintain the capability of the land to produce an even flow and variety of goods and services for future generations
- ◆Logging and grazing are tools used to achieve desired sustainable vegetation conditions.
- ◆The Forest provides economic opportunities, such as timber harvesting, mining, livestock grazing and recreation, to protect the social and economic values of local communities.
- ◆Forest products (e.g., firewood) are provided to address local community needs within limits which maintain ecosystem health.

VI. New Information

Another reason for embarking on the Revision is the need to review and incorporate new knowledge and techniques to improve sustainability of ecosystems. Recent studies and publications indicate, for example, that road density plays a more crucial role in habitat management for elk and grizzly bears than was assumed in the Plan. Much work has been done to develop standards for nesting and foraging habitat for goshawks and other raptors. EM efforts analyzing fish habitat in the Upper Columbia River Basin have suggested new ways of managing fisheries and aquatic ecosystems. These findings and other information have been reviewed for their applicability to habitat management on the Forest and incorporated where appropriate.

VII. Needs for Change

In total, the DFC, issues, and new information previously described provide the basis for revising the Plan. These needs for change are described below.

Ecologic Component

- ◆Manage to reduce elk vulnerability.

This need for change is prompted by new research indicating that motorized access density and hunter density are important factors contributing to elk vulnerability (EV). State Fish and Game Departments manage hunter densities, while the Forest Service manages motorized access. The accelerated timber harvest over the past decade has created many roads, and clearcutting in the lodgepole pine component has reduced cover. This combination resulted in high vulnerability for elk in some parts of the Forest. EV on winter range has also increased due to development on private lands adjacent to the Forest boundary and increasing levels of recreation use.

- ◆Encourage grizzly bear recovery.

During the last planning period, the Forest was charged with managing habitat to promote recovery of grizzly bear while implementing a large timber salvage program. The Forest complied fully with

the grizzly bear guidelines within the framework of habitat management as it was understood at the time. Direction from the U.S. Fish and Wildlife Service regarding management of grizzly bear habitat has changed since the Plan was developed. New information, accumulated over the last ten years, provides new insight and direction regarding effective management of access, vegetation manipulation, and human activities in grizzly bear habitat.

◆ **Improve the condition of riparian areas. Manage for more resilient riparian systems.**

New information developed in the last decade more precisely defines healthy, resilient riparian systems and indicates new approaches to management of aquatic influence zones. Stream channel stability and healthy riparian vegetation have become more important to the public in general, partly in the context of overall ecosystem health and resilience.

◆ **Manage for sensitive wildlife and plant species.**

Since the Plan was adopted/implemented, many species of wildlife and plants have been added to the sensitive species list. Management direction needs to be developed for these species. Also, additional information has become available regarding most of these sensitive species, and that knowledge may indicate new directions for management of the Forest.

Social Component

◆ **Manage human access to the Forest, integrating the needs of wildlife with the needs of people.**

The Plan allows cross-country motorized travel across much of the Forest and does not establish road density standards for any portion of the Targhee. New research indicates that many species of wildlife, including grizzly bear and elk, may require reduced motorized and nonmotorized human access. Recreational use of the Targhee has increased since the Plan was developed. For these two reasons, the Plan revision needs to address and balance the management of access to provide both secure habitat for wildlife and opportunities for human enjoyment of the Forest. In addition, questions have arisen about the appropriate mix of motorized versus nonmotorized access.

◆ **Protect the unroaded characteristics of existing roadless areas**

This need for change from current management is based on a shift away from lodgepole pine salvage toward less intensive management. During the last planning period some roadless areas were allowed by the Plan to be roaded as part of the salvage program. Some forest users are now calling for maintaining the roadless character of the remaining roadless areas on the Forest.

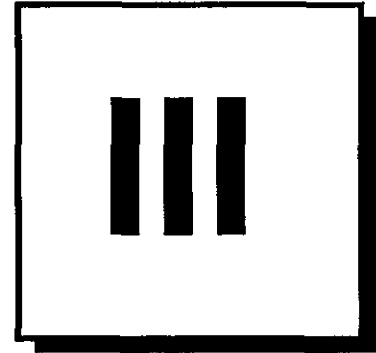
Economic Component

◆ **Harvest timber at or below sustainable levels. Balance timber harvest with the needs of wildlife.**
In the last planning period, large-scale salvage of dead and dying timber was conducted at levels that were outside of sustainable levels. During the planning period the Forest operated within legal direction that provided for departure from sustained-yield timber management to accomplish urgent salvage needs. Since the goals for the harvest of dead and dying timber have largely been met, the Forest will operate within the legal requirements for sustained-yield timber management in the next planning period.

In the Plan, timber production was emphasized over fisheries and wildlife habitat management. Now that the lodgepole pine salvage is completed, there is a need to provide for timber production while conserving biodiversity within all forest ecosystems.



Chapter



Forestwide Standards and Guidelines, Subsection Direction, and Prescriptions for Implementing the Preferred Alternative



**CHAPTER III
FORESTWIDE STANDARDS AND GUIDELINES,
SUBSECTION DIRECTION, AND PRESCRIPTIONS FOR
IMPLEMENTING THE PREFERRED ALTERNATIVE.**

FORESTWIDE STANDARDS AND GUIDELINES

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INTRODUCTION

The Forestwide Standards and Guidelines are organized by ecological groupings, as shown in the table of contents. These standards and guidelines for the management of the different forest resources apply to all or most areas of the Forest, and are used in conjunction with additional standards and guidelines included within each management prescription.

Goal, a concise statement that describes a DFC which normally is expressed in broad, general terms that are timeless, in that there is no specific date by which each goal is to be achieved.

Objective, a concise, typically time-specific statement of a condition, outcome, or purpose. Objectives are often measurable planned results that respond to goals.

Standards, describes a condition of land, normally a maximum or minimum condition, that is measurable. A standard can also be expressed as a constraint on management activities or practices. Standards are established on a forestwide, subsection, and management prescription area basis to promote achievement of the DFC and objectives. Deviation from compliance with a standard requires a Forest Plan amendment (except for emergency situations as explained below). (USDA Forest Service, 1993)

Guidelines, represent a preferred or advisable course of action that is generally expected to be carried out. Deviation from compliance with a guideline does not require a Forest Plan amendment, but the rationale for such a deviation shall be documented in the project decision document. Guidelines are established on a forestwide, subsection, and management prescription area basis to promote achievement of the desired future condition and objectives in an operationally flexible manner that responds to such variations as changing site conditions or changed management circumstances (USDA Forest Service, 1993)

The standards and guidelines in this section of the document are common to the entire Forest. Forestwide goals and (in some cases) objectives are provided for each resource area and/or activity. Following the goals and objectives, the specific standards and guidelines are presented. A standard is identified with an (S), and a guideline is identified with a (G). A diligent effort has been made to make these goals and objectives, and standards and guidelines specific to the Forest. This set of standards and guidelines is the result of many suggested changes made by our publics and employees.

These standards and guidelines are to be used in conjunction with Forest Service policy and direction from Forest Service Manuals and Handbooks. A summary of National program and regional policy and goals can be found in Appendix A

If an emergency event occurs on the Forest, deviation from these standards and guidelines may occur in order to protect human life, property values and structures, and forest resources. Activities in response to emergency events include such things as law enforcement, search and rescue, and fire.

ECOLOGICAL PROCESSES AND PATTERNS

Biodiversity

Goals

1. Biodiversity is maintained or enhanced by managing as much as possible for a "diverse" array of habitats tied to the natural occurrence and distribution of plant communities.

2. The biological diversity elements of structure, composition, and function are provided at appropriate landscape scales.

Objectives

1. By 2007, determine the range of natural variability of vegetation conditions by subsection for the Forest
2. Regenerate and maintain plant associations within the range of natural variability for each ecological subsection or watershed.
3. Provide dead and down woody material to meet habitat requirements for those species of wildlife, insects, fungi, and other microscopic plant and animal species associated with this type of habitat (see the Soils and the Wildlife Sections and standards and guidelines below for specific standards).
4. Obtain and document historical information on mountain mahogany communities.
5. Treat aspen plant communities to reduce encroaching conifers and maintain a balance of age classes for these communities.

Standards and Guidelines

1. Sagebrush/grassland habitats. Within big sagebrush (*Artemisia tridentata* & varieties)/grassland habitats strive for canopy coverage distributions on a subwatershed (generally 2,000 to 6,000 acres in size) basis of (G):

- Less than 5 percent of a subwatershed in a less than 5 percent canopy coverage class.
- 75 percent of a subwatershed in a well distributed mosaic of canopy coverage ranging from 5-30 percent
- 20 percent of a subwatershed in a greater than 30 percent canopy coverage class.

2. Forested successional stages. At this time, the range of natural variation is not known. Until more information is obtained, these guidelines will be applied. Maintain > 20% of the forested acres in a late successional stage in each ecological subsection. For the conifer forest types, the acres in late successional stages should be in blocks > 300 acres in size (a block can be comprised of a combination of late successional forest types). (G)

Forest Type	Age of Dominant Overstory Trees
Lodgepole Pine	80+
Douglas-fir	100+
Mixed Conifer	90+
Spruce/Fir	100+
Aspen	40+
Cottonwood	50+
Juniper/Mahogany/Mtn Brush	20+

3. Maintain, and where possible, increase unique or difficult-to-replace elements or habitats [such as whitebark pine and areas of high species diversity (e.g., aspen, riparian zones, etc.)]. (G)

4. **Dead and Down Material.** No more than 40 percent of the forested portion of an analysis area should fall below the Forestwide standards for down woody material (see Forestwide Soils and Wildlife). If more than 40 percent is below, then retain twice the amount of down woody material as required in the Forestwide standards in any new harvest units. Forested areas include regenerating stands, but exclude meadows, rock and water. Data may be lacking for this analysis, so managers can assume that any unmanaged stand meets Forestwide standards for down woody material. The analysis can be done in either of two ways. 1) Make sure that no more than 40 percent of each habitat type in the analysis area meets the standard. OR 2) Discern the dominant habitat type for the analysis area and ensure that no more than 40 percent of the analysis area falls below the standard. (S)

5. **Emphasize methods of vegetation treatment that emulate natural ecological processes and restore functioning ecosystems.** (G)

Insects and Disease

Goal

Insects and disease are allowed to play their natural role in ecosystem dynamics to the extent compatible with other resource objectives

PHYSICAL ELEMENTS

Soils

Goal

Long-term soil productivity is sustained by retaining fine organic matter and woody residue on activity areas.

Standards and Guidelines - Soil Quality (applicable only to current activity areas):

1. **Fine Organic Matter -** meets soil cover requirements. Generally strive to maintain fine organic matter over at least 50 percent of the area. The preference is for fine organic matter to be undisturbed, but if disturbed, it should be of sufficient quantity and quality to avoid detrimental nutrient cycle deficits. If the soil and potential natural plant community are not capable of producing fine organic matter over 50% of the area, adjust minimum amounts to reflect potential soil and vegetation capability. (G)

2. **Woody Residue Requirements.** Sustain site productivity by providing the following minimum amounts of woody residue dispersed on the site: (G)

Woody Residue Requirement (tons/acre) 1/	Forest Habitat Type	
3-5	Limber pine/curl-leaf mountain mahogany (Pifl/Cele) Douglas-fir/common juniper (Psmc/Juco)	Douglas-fir/mountain snowberry (Psmc/Syor) Lodgepole pine/heartleaf arnica (Pinc/Arco)
5-10	Douglas-fir/ninebark (Psmc/Phma) Douglas-fir/mountain maple (Psmc/Acgl) Douglas-fir/blue huckleberry (Psmc/Vagl) Douglas-fir/grouse whortleberry (Psmc/Vasc) Douglas-fir/common snowberry (Psmc/Syal) Douglas-fir/white spirea (Psmc/Spbe) Douglas-fir/pine grass (Psmc/Caru) Alpine fir/white spirea (Abla/Spbe)	Alpine fir/pine grass (Abla/Caru) Alpine fir/heartleaf arnica (Abla/Arco) Whitebark pine/ross sedge (Pial/Caro) Lodgepole pine/blue huckleberry (Pico/Vagl) Lodgepole pine/grouse whortleberry (Pico/Vasc) Lodgepole pine/white spirea (Pico/Spbe) Lodgepole pine/pine grass (Pico/Caru) Lodgepole pine/elk sedge (Pico/Cage)
10-15	Douglas-fir/mountain sweetroot (Psmc/Osch) Engelman spruce/softleaved sedge (Pien/Cadi) Alpine fir/ninebark (Abla/Phma) Alpine fir/blue huckleberry (Abla/Vagl) Alpine fir/grouse whortleberry (Abla/Vasc)	Alpine fir/mountain arnica (Abla/Aria) Alpine fir/common snowberry (Abla/Syal) Alpine fir/western meadow-rue (Abla/Thoc) Alpine fir/oregon grape (Abla/Bere)
15-20	Engelman spruce/sweetscented bedstraw (Pien/Gatr)	Alpine fir/baneberry (Alba/Acru) Alpine fir/mountain sweetroot (Abla/Osch)
1/ Woody residue for long-term site productivity includes all woody materials greater than or equal to 3" in diameter		

3. During site preparation treatments strive to avoid disturbing concentrated areas of soil wood. (G)

Standards and Guidelines - Slope Stability for Mineral Activities:

1. In areas of high mass instability, that have been ground verified, occupancy shall not be allowed. (S)
2. In areas identified as having a moderate rating of instability, and that are ground verified, occupancy would be allowed provided that it could show that the project design can prevent unacceptable resource damage. (G)

Caves

Standards and Guidelines

1. Restrict logging, road construction, and other uses of heavy equipment above or in the vicinity of a cave with a thin roof, or the course of such a cave, if there is a potential for damage. (G)
2. Retain vegetation in the vicinity of a cave or cave course if it is required to protect the cave's microenvironment. (G)
3. Fell trees away from the cave and its course if timber harvesting is permitted in the vicinity of a cave. (G)
4. Cave entrances will not be altered or used as disposal sites for slash, spoils, or other refuse and no action will be taken to prevent or hinder ingress or egress of cave-dependent wildlife. Gating of cave entrances will be allowed as long as physical alteration of the entrance is not needed to construct the gate. Wilderness values will also be considered prior to installing such structures. (S)

5. Management activities will not be permitted within any area draining into a cave if they are likely to affect the cave ecosystem through sedimentation, soil sterilization, the addition of nutrients or other chemicals (including pesticides, herbicides, and fertilizers) or by changing the cave's natural hydrology. (S)

6. Surface drainage will not be diverted into caves. (S)

Lands

Goal

The National Forest System lands set aside for utility corridors would be minimized to reduce fragmentation and minimize acres set aside to that use

Objectives

1. Locate new applications for utility corridors in existing corridors.
2. Remove utility facilities which are presently in avoidance or exclusion areas as it becomes practical to do so.

Minerals

Objectives

1. Oil and gas pipelines and other related utilities should be constrained to one utility corridor except as needed to meet other resource objectives.
2. Leasing decisions including identification of lands available for leasing will be made in the Forest Oil and Gas Leasing EIS and its associated Record of Decision.

Standards and Guidelines—Locatable and Mineral Materials

1. Common Minerals. Give priority to use of currently developed common mineral (natural gravel and hard rock) material sources over undeveloped sources. Exceptions should be made when existing sources are unable to economically supply the quality and quantity of material needed or when conflicts with other resource uses are found to be unacceptable. (G)
2. The Forest is open to exploration and development and production of locatable, leasable, and mineral material resources unless otherwise specified in the management prescriptions

BIOLOGICAL ELEMENTS

Aquatic, Riparian Resources, and Watersheds

Goals

1. For individual streams, channel stability would be rated at good to excellent, except where instability is due to natural causes (e.g., avalanche) and therefore unavoidable

2. Desirable habitat conditions, connectivity, biodiversity, and viable populations of native cutthroat trout would be achieved primarily as a result of the maintenance and restoration of natural ecological functions and processes.

3 Water quality would have improved on streams identified by the State of Idaho as having water quality concerns and they would be removed from the Water Quality Limited list

Objectives

1. By 2007, watershed improvement needs backlog would be completed in the Lemhi/Medicine Lodge, Big Hole/Palisades Mountains, Caribou Range Mountains Subsections. Watershed improvement needs identified in the Teton Basin Study would be verified. Watershed improvement needs would be inventoried on the Centennials, Madison Plateau, and Teton Subsections.

2. By 1998, all streams supporting native cutthroat trout would be inventoried, classified, and delineated in GIS database. Restoration activities would be planned and scheduled for stream reaches found to be in unsatisfactory condition.

Standard and Guideline - Watershed, General

Not more than 30 percent of any of the 39 principal watersheds and their subwatersheds should be in a hydrologically disturbed condition at any one time. (G)

Standards and Guidelines - Municipal Watersheds

1 Use fertilizers and pesticides (chemical or biological) only in emergency situations, and then only following close coordination with the municipality involved. (G)

2. Avoid use of fire retardants when other effective measures of fire control are available. When the use of fire retardants within domestic supply watersheds is necessary, all reasonable efforts will be made to avoid direct application into live streams Only fertilizer-based retardants will be used. (G)

3 Locate fire camps outside municipal supply watersheds. When timber sales or other operations are located within a municipal supply watershed, wastes (including domestic, human, oil from machinery, etc.) will be transported outside the watershed for disposal. (G)

Standards and Guidelines - Aquatic Resources

1 New special use permits or new Forest Service projects involving instream facilities, exclusive of facilities retrofitted to existing dams, must maintain Forest-specified minimum instream flows and, on fish-bearing streams, provide for fish passage and include screening devices to prevent accidental loss of fish. (S).

2. When reauthorizing existing special use permits or existing Forest Service projects involving instream facilities, exclusive of facilities retrofitted to existing dams, where feasible provide for Forest-specified minimum instream flows and, on fish-bearing streams, where feasible provide for fish passage and include screening devices to prevent accidental loss of fish (G).

Vegetation

Objective

Preserve unique formations within a landscape such as cliffs, bogs, talus slopes, warm or alkaline springs, pot holes, and rock outcroppings that provide habitat to plant species not common to the overall landscape, and contribute to the species diversity within the landscape.

Standard and Guideline - Plant Species Diversity

Native plant species from genetically local sources will be used to the extent practicable for erosion control, fire rehabilitation, riparian restoration, forage enhancement, road right-of-way seeding, and other revegetation projects. (G)

A. Areas planned for nonnative seedings or plantings of nonnative woody species need to be evaluated to determine the impacts to the native flora within the planning area and habitats adjacent to the planning area. (G)

B. Introduced species should be utilized in project seedings where native species would not meet the objectives of erosion control, such as in high use or impact areas, and where the effects on local, native flora is minimal; sites that are currently dominated by introduced species and use of nonnative species has not degraded the adjacent native flora; and sites where the management objectives is to utilize nonnative species in one area to prevent degradation of other natural areas. (G)

Objectives - Special Forest Products

1. Establish guidelines for commercial harvesting of special forest product species.
2. Provide for the historical, cultural, and recreational uses, as well as rights and privileges afforded Native Americans under treaties and agreements, before commercial uses of special forest products are allowed.

Wildlife

Goals

1. Wildlife biodiversity is maintained or enhanced by managing for a diverse array of habitats tied to the natural occurrence and distribution of plant communities.
2. Provide habitat to support the wildlife and hunting goals of the States of Idaho and Wyoming.

Standard and Guideline - General Habitat

1. Dead and Down Material. Provide dead and down woody material in activity areas by doing the following:
 - A. An average total of at least 20 logs per acre in decomposition classes 1, 2, and 3 (USFS, 1979) shall be retained in all project activity areas (e.g , timber harvest units). (S) Retain decomposition classes 4 and 5 where they occur. (G)

1. An average of 7 logs per acre should be maintained in each decomposition class 1, 2, and 3. If logs are not present in a given decomposition class, logs from lesser decomposition classes should be retained to substitute, e.g., classes 1 and 2 can substitute for class 3. (G)

2. Logs should be at least 7 inches in diameter at the small end, be at least 20 feet long, and have a volume of at least 10 cubic feet, e.g., a log averaging 9.5 inches in diameter and 20 feet long. (G)

a. Tree tops are not included in this volume estimate.

b. Smaller size logs may only be used in meeting this volume criteria if the area is incapable of producing larger trees, or the stand is too young to have 12" DBH trees. In these cases, logs representing the largest tree diameter class present in the stand should be retained and at least 200 cubic feet per acre of down logs shall be retained. This equals about 2.3 tons per acre.

c. For every area 2 acres in size, capable of growing sufficient trees, there should be at least 2 logs.

2. Raptor Nest Sites. Raptor Nest Sites in use should be protected by providing a minimum 2-tree height buffer around the nest area unless otherwise specified. (G)

3. Winter Feeding of Big Game. Allow no new permanent feed grounds for wintering big game animals. (S)

Objective - Snag/Cavity Nesting Habitat

Determine the biological potential for cavity nesting habitat on a watershed basis to enable management of some areas at higher levels of biological potential and some at lower levels of biological potential and meet the overall management prescription objectives.

Standards and Guidelines - Snag/Cavity Nesting Habitat

1. Retain snags within all management prescription areas allowing timber harvest (refer to the following Tables 1 & 2 for snag requirements of cavity nesting species; refer to the wildlife standards and guidelines in each management prescription for the specific biological potential to be achieved) (G)

Table 1. Snag requirements for 100 percent biological potential for woodpecker populations.

Species	Range in Snag DBH (inches)	Range in Snag Height (feet)	No of Snags per 100 Forested Acres for 100 Percent Biological Potential			
			Aspen	Cottonwood	Doug-fir Spruce/Fir	Lodgepole
Lewis's Woodpecker	12 to 27	5 to 170	101	101	101	NA
Yellow-bellied Sapsucker	9 to 47	15+	150	150	150	150
Williamson's Sapsucker	12 to 37	15+	NA	NA	150	150
Downy Woodpecker	6 to 14	6 to 50	300	300	300	300
Hairy Woodpecker	9 to 29	15+	180	180	180	180
Three-toed Woodpecker	7 to 19	15+	59	NA	59	59
Black-backed Woodpecker	8 to 17	6+	NA	NA	59	59
Northern Flicker	10 to 51	6+	38	38	38	38
Total Hard Snags per 100 acres			828	769	1037	936
NA indicates the species does not use this forest type.						

Table 2. Snag requirements for maintaining various percentages of biological potential for woodpecker populations (refer to Table 1 for snag dbh, snag height, and individual species requirements).

Percent of Biological Potential	Number of Hard Snags per 100 Forested Acres			
	Aspen	Cottonwood	Doug-fir Spruce/Fir	Lodgepole
100	828	769	1037	936
80	662	615	830	749
60	497	461	622	562
40	331	308	415	374
20	166	154	207	187

2. Retain live trees for future snag recruitment using the following guidelines to achieve various percentages of biological potential' (G)

Percent of Biological Potential	Number of Live Trees per Forested Acre				Total Tree/Acre
	>= 10 in dbh	>= 7 0-9 9 in dbh	>= 5 0-6 9 in dbh	< 5 0 in. dbh	
100	8	5	5	7	25
80	6	4	4	6	20
60	5	3	3	4	15
40	3	2	2	3	10
20	2	1	1	1	5

3. In analysis areas where snag numbers are low (at or approaching management minimums), no dead standing trees should be harvested. (G)

Goals - Grizzly Bear Habitat

1. Habitat conditions will be sufficient to sustain a recovered population of grizzly bears
2. Allow for uninhibited movement of bears (continuity with Yellowstone National Park and adjacent bear management units).

Objectives - Grizzly Bear Habitat

1. Meet recovery criteria in the Grizzly Bear Recovery Plan.
2. Implement guidelines developed by the Interagency Grizzly Bear Committee
- 3 Provide safe, secure sites for bears in trouble.
4. Implement the road density standards in the Bear Management Units (BMU's) within 3 years of the signing of the ROD in coordination with USFWS and State Wildlife agencies.

Standard and Guideline - Grizzly Bear Habitat

The grizzly bear education program will focus on; residents in residential and summer home areas, developed recreation site users, wilderness users, and hunters. (G)

Standards and Guidelines - Bald Eagle Habitat

In Occupied Nesting Zones (Zone I) and Primary Use Areas (Zone II) apply the following.

- A. Minimize all human activities from February 1 to August 1. (G)
- B. No new roads in Zone I. (S) Avoid building new roads in Zone II. (G)
- C. Manage human use on existing roads at levels which do not adversely affect use and productivity of the nest site. (G)

D. No new developed recreation sites or facilities in Zone I. (S) Avoid building new recreation sites or facilities in Zone II. (G)

E. Manage existing recreation use at levels which do not adversely affect use and productivity of the nest site. (S)

F. Use the "No Surface Occupancy" stipulation for all minerals activities. (S)

G. If eagles choose to establish new nest sites and use areas in an area already receiving human use, the human activities may be restricted or modified. Expanded human activity, however, should be discouraged. (G)

H. Use silvicultural techniques which maintain or promote mature and old growth timber stand characteristics in both the short and long term, but reduce the risks of insects and disease epidemics. (S)

I. Vegetation management can only occur between September 1 and January 31. (S)

J. Use "control" as the appropriate suppression response for wildfires to minimize loss of habitat. (G)

K. Allow no new structures that have the potential to cause direct mortality to bald eagles (e.g. power lines). (S)

L. Historic levels of livestock use are permitted as long as no adverse impacts (such as abandonment of nest territory or reproduction failures) occur related to this activity. Manage livestock to allow successful reproduction of cottonwood where applicable. (G)

M. Allow no wildlife management or predator control activity with the potential to cause mortality to bald eagles (e.g. exposed traps). (S)

N. Within Home Ranges (Zone III) follow existing site-specific management plans for each bald eagle territory (S)

Objective - Gray Wolf Habitat

All wolves found in the wild on the Forest will be considered nonessential experimental animals as defined in the FEIS for The Reintroduction of Gray Wolves to Yellowstone National Park and Central Idaho. (USDI Fish and Wildlife Service 1994 a and b)

Standards and Guidelines - Gray Wolf Habitat

1. Restrict intrusive human disturbances (motorized access, vegetation management, livestock grazing, etc.) within 1 mile around active den sites and rendezvous sites between April 1 and June 30, when there are 5 or fewer breeding pairs of wolves in the Yellowstone Nonessential Experimental Population Area (applies to the portion of the Forest east of Interstate 15) or the Central Idaho Nonessential Experimental Population Area (applies to the portion of the Forest west of Interstate 15). After 6 or more breeding pairs become established in each experimented population Area, land-use restrictions will not be needed. (USDI Fish and Wildlife Service 1994 a and b) (S)

2. The ability of individuals holding grazing permits on public land to harass adult wolves in an opportunistic, noninjurious manner will become part of their permit conditions so it is clearly understood exactly what can occur. There is a 7 day reporting requirement. (USDI Fish and Wildlife Service 1994 a and b) (S)

3. The following conditions and criteria will apply in determining the problem status of wolves. (USDI Fish and Wildlife Service 1994 a and b) (S)

A. Wounded livestock or some remains of a livestock carcass must be present with clear evidence that wolves were responsible for the damage and there must be a reason to believe that additional losses would occur if the problem wolf or wolves were not controlled. Such evidence is essential since wolves may simply feed on carrion they have found while not being responsible for the kill.

B. Artificial or intentional feeding of wolves must not have occurred. Livestock carcasses not properly disposed of in an area where depredations have occurred will be considered attractants. Removal or resolution of such attractants must accompany any control action. Livestock carrion or carcasses not being used as bait in an authorized control action (by agencies), must be removed, buried at least 2 feet underground, burned, treated with an acceptable chemical repellent, or methods approved by the District Ranger, such that the carcass(es) will not attract wolves.

C. Animal husbandry practices previously identified in existing approved Allotment Management Plans and annual operating plans for allotments must have been followed.

4. If additional livestock depredations are likely, proper animal husbandry practices are employed (proper disposal of livestock carcasses, etc.), artificial feeding does not take place, and AMP's are followed, the Forest may implement procedures to harass, capture, move, or kill wolves that attacked livestock (defined as cattle, sheep, horses, or mules only) on National Forest land. (G) Females with pups on National Forest land will be released on site before October 1. (USDI Fish and Wildlife Service 1994 a and b) (S)

Objective - Peregrine Falcon Habitat

Plan project activities to avoid adverse impacts to falcons and their habitats.

Standards and Guidelines - Peregrine Falcon Habitat

1. For proposed projects within 2 miles of known falcon nests consider such items as: 1) human activities (aircraft, ground and water transportation, high noise levels, and permanent facilities) which could cause disturbance to nesting pairs and young during the nesting period April 15 to August 31; 2) activities or habitat alterations which could adversely affect prey availability. (G)
2. Within 15 miles of all known nest sites, prohibit all use of herbicides and pesticides which cause egg shell thinning as determined by EPA labeling. (S)
3. Restrict climbing and other human disturbances when necessary to avoid adverse impacts at known falcon nest sites. (S).

Sensitive Species Habitat

Objective - Goshawk Habitat

Manage for all active and historic goshawk nesting territories.

Standard and Guideline - Goshawk Habitat

Management standards and guidelines for all forest types within active and historic goshawk nesting territories follow.

Attribute	Nest Area	Post-Fledging Family Area	Foraging Area
Number of areas (S) Suitable areas Replacement areas	6 Total 1/ 3 3	1	1
Size of each area (acres) (G)	>= 30 ea	>= 420	>= 5,400
Size-Class Distribution (%) (G) nonstocked/seedling sapling pole mature/old growth 2/	0 0 0 100	<= 20 <= 20 <= 20 >= 40	<= 20 <= 20 <= 20 >= 40
Rotation age (years) (G)	140 to 420	60 to 240	60 to 240
Maximum created opening (acres) (G)	0	<= 40	<= 40
Snags and Reserve Trees 3/ (G)	80-100 % of potential	80-100 % of potential	80-100 % of potential
Downed logs (average/acre) (G)	Forestwide S&G's	Forestwide S&G's	Forestwide S&G's
Management Season (S)	Oct-Feb	Oct-Feb	Year-long
Thinning (S)	Non-uniform 4/	Non-uniform	Non-uniform
Open Road Density 5/ (G)	No new system roads	No new system roads	<= Management Rx Density
<p>1/ Where possible, manage the 6 nest sites in a 180 acre contiguous area (G) 2/ Mature and old growth canopy closure for nest sites and post-fledging family areas should range between 75-100 percent (G) 3/ Refer to previous section on snag/cavity nesting habitat for explanation of biological potential 4/ Maximize diversity of structure 5/ Open roads in goshawk territories will be given priority for closure to meet management prescription (Rx) road density standards First priority will be to close roads in nest areas, second priority in post-fledging family areas; third priority in foraging areas Where possible, open road density should be zero in the nest areas and the post-fledging family areas.</p>			

Standard and Guideline - Flammulated Owl Habitat

Do not manipulate vegetation within a 30 acre area around all flammulated owl active and historic nest sites. (S)

Standards and Guidelines - Boreal Owl Habitat

1. Do not manipulate vegetation within a 30 acre area around all boreal owl active and historic nest sites. (S)

2. Maintain > 40 percent of the forested acres in late age classes within a 3,600 acre area around all boreal owl nest sites. (G)

Standards and Guidelines - Great Gray Owl Habitat

1. Do not manipulate vegetation within a 20 acre area around all great gray owl active and historic nest sites. (S)
2. Maintain > 40 percent of the forested acres in late age classes within a 1,600 acre area around all great gray owl nest sites. (S)
3. Do not allow the use of strychnine poison to control pocket gophers within a 1/2 mile buffer around all active great gray owl nest sites. (S)

Objective - Trumpeter Swan Habitat

1. Maintain habitat to support \geq 10 breeding pairs on the Forest.
2. Protect emergent vegetation along shorelines. Maintain riparian vegetation in desired vegetative condition.

Standard and Guideline - Trumpeter Swan Habitat

Maintain suitable trumpeter swan nesting habitat conditions including (but not limited to) the following lakes and ponds. Boundary Pond, Swan Lake, Lily Pond, Hatchery Butte, Railroad Pond, Mesa Marsh, Bear Lake, Upper Goose Lake, Long Meadows, Thompson Hole, Twin Lakes, Chain Lakes, Widgit Lake, Rock Lake, Indian Lake, Putney Meadows, Unnamed Pond (Sec. 19, T9N, R46E). (S)

- A. Change livestock grazing through management or fencing when grazing is adversely affecting trumpeter swan use or productivity. (G)
- B. No vegetation management will occur within 300 feet of the lake or pond shoreline unless necessary to improve riparian habitat conditions favorable for trumpeter swans. Management may occur after the swans have left the lake or pond. (S)
- C. Maintain constant water levels; allow no drawdowns from May 1 to September 30 when not in conflict with preexisting water rights. (G)
- D. Discourage dispersed recreation activity at these lakes and ponds between April 1 and September 30. Close these areas to recreation activity if this activity is adversely affecting trumpeter swan use or productivity. (G)
- E. Implement habitat improvement projects at these lakes and ponds, such as dredging to maintain proper water depths and aquatic vegetation control. (G)

Objective - Spotted Frog Habitat

Maintain riparian vegetation in desired vegetative condition.

Objectives - Common Loon Habitat

1. Evaluate the potential to provide and maintain suitable breeding habitat for common loons at these sites: Indian Lake, Thompson Hole, Bergman Reservoir, Junco lake, Fish Lake, Loon Lake, Moose Lake, Unnamed Pond (Sec. 9, T47N, R118W).
2. Develop common loon management plans for the above sites if the evaluation indicates there is potential to provide and maintain suitable breeding habitat.

Standard and Guideline - Harlequin Duck Habitat

Avoid establishing new trails, new roads, or new recreation facilities within 300 feet of any stream reach with documented harlequin duck breeding activity. (G)

Objective - Spotted Bat and Western Big-eared Bat Habitat

Develop management plans for any caves, mine shafts, and other suitable habitats where these bat species are found to be present.

FOREST USE AND OCCUPATION

Access

Goal

Road density standards in each area would be emphasized in grizzly bear habitat, and big game management prescriptions.

Objectives

1. Provide a cost effective road system that integrates human needs with needs for wildlife specifically elk and grizzly bear, and other resource values
2. Decrease elk vulnerability and increase bear security through effective road closures.
3. The net Forest Development road mileage will not increase.
4. Road density standards in each management prescription will be achieved as soon as practicable. (See grizzly bear habitat objective in the preceding section)
 - A. Three years for BMU's
 - B. Ten years for all other areas.

Standards and Guidelines

1. Road Closure

- A Road closures will be located and designed to effectively control use. (S)
- B. Restrict or reclaim roads not needed for future management as determined in site-specific analysis, at the end of project use Consider historic recreation use before closure (G)

2. Administrative Use on Restricted Roads, Trails and Areas

- A. The Open Road and Open Motorized Trail Route Density (OROMTRD) Standards prescribed for each prescription area are not intended to place restrictions on being able to respond to emergency events to protect human life, property values and structures, and forest resources Responses to emergency events include law enforcement, search and rescue, and fire suppression. (S)

B. Other administrative uses (such as planned project work) on restricted roads, trails or areas will only be allowed with the following standards (S)

1. Any motorized vehicle access on a restricted road or trail or area will be for official administrative business only, and approved by the Forest Supervisor or District Ranger.

2. When motorized vehicle access on a restricted road or trail or area is necessary, a sign will be posted while project work is being accomplished.

3. Motorized vehicle access on a restricted road or trail or area will be allowed by permit under the following conditions when approved by the Forest Supervisor or District Ranger:

a. Project work is 1 mile or 30 minutes walk or greater.

b. Equipment is being used that is unreasonable to carry to the project work site.

c. Contract inspectors working with contractors who have motorized equipment and vehicles which are necessary for the contract work.

C. During the big game hunting seasons, persons with disabilities may be permitted to use motorized vehicles, if needed for mobility, on restricted roads and trails which are authorized for such use, with an authorized Motor Vehicle Hunting Permit. These persons must have a Disabled Hunting Permit issued from the State Fish and Game Departments. (G)

Recreation

Goal - Winter Recreation

Provide a quality winter recreation experience while minimize impacts of winter recreation use on wintering big game.

Objectives - Winter Recreation

1. Establish a linear capacity for two-way snowmachine trails for purposes of safety and quality of the recreation experience.

2. Provide networks of marked, designated, and groomed snowmachine, cross-country ski, and other winter travel routes and trailhead facilities.

3. Provide winter recreation user information to educate users of wildlife needs and promote snowmachine safety.

4. Promote opportunities for backcountry winter recreation.

Objective - Wild, Scenic, and Recreation Rivers

The 249 miles of inventoried, eligible streams of the Forest will have suitability studies done by 2002 (based on funding). This would be done on a priority basis for approximately one-third of the streams at a time, starting with those in the South Fork-Snake River Basin. The remaining streams would probably be done in two additional studies - one for the Henry's Fork Basin, and a second for those streams in the Teton River Basin or watershed, and probably in that order of priority.

Objective - Visual Quality

Manage the visual landscape in accordance with the planned visual quality objective, as mapped in the Geographic Information System.

Standard and Guideline - Visual Quality

Timber

Harvest.

A. Lodgepole pine Slash not needed to meet other resource objectives should be disposed of by a combination of piling, firewood gathering, and burning in areas up to 200-250 feet either side of primary travelways, trails, and use areas which have high public concern for scenic quality as soon after harvest as possible. (G)

B. Lodgepole pine. Slash not needed to meet other resource objectives should be disposed of by piling, firewood gathering, or burning for 150-200 feet on either side of roads, trails, and areas which have moderate public concern for scenic quality. (G)

Standards and Guidelines - Winter Recreation

1. Develop or provide trailhead facilities to match the desired trail capacity. These facilities may be public or private depending on location. (G)
- 2 Management of winter trails should be done where feasible by cooperative agreements with agencies and groups (G)
3. Snowmachine, snowshoes, and dogsleds are prohibited within designated groomed cross-country ski trails Snowmachines and dogsleds are prohibited within designated cross-country ski areas. (S)

Objective - OHV

Provide a network of OHV trails while minimizing the effects of OHV use on soils.

Standards and Guidelines - OHV.

1. Discourage OHV use on slopes greater than 40%, except on designated routes and except for snowmachine use. Roads and trails, however, may cross slopes that exceed 40 percent. (G)
- 2 Areas with slopes of 25-40 percent may require travel restrictions if soil erosion factors warrant them. (G)
- 3 Restrict OHV use on identified areas of unstable soils (except for snowmobiles). (G)
4. No motorized vehicles > 50 inches wide are allowed on trails unless the trails are specifically designed for such vehicles. (S)

Objective - Developed Facilities

Maintain or slightly increase the Forest's developed site capacity.

Standards and Guidelines - Developed Facilities

1. Expand existing developed facilities to meet public needs. (G)

2. Phase out low use developments that have high operation and maintenance (O&M) costs consistently exceeding \$1 50 per Persons-at-one-time (PAOT) per day. (G)

3. Rehabilitate or provide heavy maintenance to facilities in Maintenance Class Two (MC 2) and Maintenance Class Three (MC 3) which cannot be brought up to Maintenance Class One (MC 1) through general maintenance. (G)

A. Developed facilities receiving heaviest use should receive first priority for maintenance (G)

B. Facilities that cannot be maintained to acceptable health and safety requirements will be closed until they can be brought up to standard. (S)

Objective - Dispersed Recreation Use

By 2007, address soil, water, and vegetation impacts to maintain the desirable recreation setting on approximately 100 campsite areas of the 300 identified dispersed recreation sites on the Forest, which are in greatest need of restoration. These sites would have limited developed facilities.

Standards and Guidelines - Dispersed Recreation Use

1. Dispersed Camping. Unless otherwise posted, motorized access is allowed for dispersed camping within 300 feet of roads and trails which are open for motorized use. (S)

2. Dispersed Camp Site Condition. Dispersed campsites should be managed according to the Frissell Condition Classification System. Actions (close, protect, or restore) should be taken to restore campsites that do not meet Class 3. In some areas, where it is necessary to prevent resource damage and protect public health, scale 2 facilities may be provided. (G)

3. Dispersed Use Area. Low-development-level facilities should be provided at undeveloped concentrated-use areas to prevent resource damage and protect public health and safety. (G)

Goal - Trails

1. Trails for motorized/mechanized use would be sufficient to sustain use over long periods of time and minimize requirements for maintenance or reconstruction. These conditions would be achieved within subsections in the following sequence: Big Hole/Palisades Mountains, Caribou Range Mountains, Lemhi-Medicine Lodge, Centennial Mountains, Madison-Pitchstone Plateaus, Island Park, and Teton Range.

2. Trails for nonmotorized/mechanized use would be sufficient to sustain use over long periods of time with minimal requirements for maintenance or reconstruction. These conditions would be achieved within subsections in the following sequence: Teton Range, Big Hole/Palisades Mountains, Centennial Mountains, and Caribou Range Mountains.

Objective - Trails

Complete an IDT review of 5-10% of the system trails each year to determine rehabilitation needs.

Objective - Outfitters and Guides

Establish use capacities using the process outlined in the AMS for outfitter and guide recreation opportunities prior to issuing new permits.

Standard and Guideline - Outfitters and Guides

Outfitter and guide facilities in dispersed nonwilderness areas should be built in less-frequented areas and be temporary. To prevent unacceptable resource damage or sanitation problems, facilities may be allowed at more heavily used locations. Only essential facilities should be provided at commercial outfitter camps in accordance with Greater Yellowstone Area Outfitter Policy camp standards (G)

Wilderness

The following goals, standards and guidelines apply to all congressionally designated Wilderness on the Forest. Presently that includes the Jedediah Smith and Winegar Hole Wilderness Areas.

Goal

Desirable wilderness conditions for the Jedediah Smith and Winegar Hole Wilderness would be within the Limits of Acceptable Change (LAC) process, as specified in the management prescriptions, which when implemented in accordance with the Wilderness Implementation Schedules and Monitoring Action Plan, constitute the complete Wilderness Management Plans.

Standards and Guidelines

1. Outfitter/Guide - Allow no new outfitter camps (i.e. hunter, fisherman, etc) until studies have been completed to determine site suitability and carrying capacity. (S)
2. Recreation - ROS Manage for a primitive to semi-primitive nonmotorized classification. (G)
3. Recreation - VQO. Manage for preservation. (S)

PRODUCTION OF NATURAL RESOURCES

Range

Goals

1. Upland and riparian plant communities meet desired vegetation conditions for site-specific areas.
2. Domestic livestock grazing is managed to promote the desired conditions of various resources including maintenance of adequate plant and litter ground cover, nutrient recycling, forage for wildlife species, seed production, and the restoration and maintenance of riparian communities.

Objectives

1. By 2007, improve the ecological status of 1,200 acres of riparian habitat presently reported as early seral stage to mid- or late-seral stage.
2. By 2007, improve 26,400 acres of uplands (nonriparian and nontimber plant communities) currently reported as unsatisfactory ecological condition to satisfactory condition.
3. By 2007, grazing systems will be implemented on all grazing allotments to meet range goals #1 and #2 above.

4. Within five years after the signing of the Record of Decision, establish a stream bank stability (trampling disturbance) standard correlated to stubble height at the hydric greenline (HGL)

Standards and Guidelines

1. Upland Forage Utilization Apply upland forage utilization standards to all allotments and/or management areas as shown in Table 1. These standards provide for maximum utilization levels regardless of which species of animal uses the forage or browse (S)

Table 1 Upland Rangeland Ecosystems - Percent Forage Utilization 1/				
	Season-long Grazing		Rotation Grazing	
	Unsatisfactory Condition	Satisfactory Condition	Unsatisfactory Condition	Satisfactory Condition
Grasses and Herbaceous Species	40%	50%	50%	60%
Shrubs	25%	35%	35%	35%

1/ The figures shown represent the best estimate of acceptable use levels which will provide for maintenance or improvement of these ecosystems. They shall be used as maximum use levels unless there is site specific information to show that these levels are incorrect. Percent use is based on a dry weight percentage.

2. Riparian Forage Utilization.

A. Riparian Woody Plant Utilization. No more than 30 percent use on riparian woody plant species (current year's growth) is allowed. Thirty percent is the maximum allowed use as recorded at the end of the grazing period. (S)

B. Riparian Vegetation Stubble Height Standard (these apply to all grazing systems). (S)

1. At the HGL, there will be at least 4 inches of stubble height remaining at the end of the grazing period, unless determined otherwise through the Interdisciplinary team process. A written rationale for any deviation is required. This standard applies to native and desirable nonnative hydric vegetation.

2. Away from the HGL, at least 3 inches of stubble will be left on the remainder of the herbaceous riparian vegetation at the end of the grazing period.

3. Allotment Management Planning (AMP)

A. Salt should be placed greater than 1/4 mile from water, or as far from water as practicable. Salting will also be placed at least 100 feet away from aspen regeneration and conifer plantations that are 5 years old or less. (G)

B. Allow no livestock grazing for at least two growing seasons after prescribed or natural fires and rangeland planting or seeding, or at least until vegetation is established. (G)

C. Allow livestock conversions based on resource needs (such as topography, water distribution, vegetation, wildlife, and recreation), capability, and management objectives and not solely based on the desires of the permittee (G)

1. Conversions may be made in accordance with an AMP, and current range analysis, and when all necessary range improvements structures are in place. (G)

2. All range improvements necessary for the conversion will be financed and constructed by the permittee. Construction will be in accordance with Forest Service standards. (S)

3. Do not convert from a cattle allotment to a sheep allotment within bighorn sheep habitat. (S)

4. All proposed livestock conversions will be evaluated by a qualified cadre of IDT Specialists including a hydrologist, fisheries biologist, wildlife biologist, range specialist, and soils scientist. Only those conversions meeting Forest Plan Objectives and desired vegetation conditions will be approved. (S)

D. Forest Service administrative site livestock pastures will comply with the Forestwide standards and guidelines for forage utilization and riparian management. (S)

E. All structural improvements directly required to implement the AMP will be installed and financed whereby the Forest Service provides approximately 50% of the cost and the permittee provides the remaining 50%. (G)

F. Permittees are allowed motorized access to maintain facilities. AMP's and annual operating plans will include direction that motorized access must be less than 1 to 2 vehicles per week. (This permitted access is not included in the OROMTRD.) (S)

G. Until a Memorandum of Agreement is developed between the Southern Idaho Forests and the Idaho State Historic Preservation Office, follow the process outlined in the National Programmatic Agreement, Option 2 (Criteria and standards for independent management).

Timber Management

Goal - General

Silvicultural techniques will be used as a tool to manage or manipulate vegetation for the purpose of achieving Forest Plan resource objectives. Emphasis will be placed on restoration of ecological function, structure and composition.

Standards and Guidelines

1. ASQ and Long Term Sustained Yield

A. Estimates of ASQ and long term sustained yield timber supply capacity are themselves based on estimates of volume available on timbered acres scheduled for harvest. Acres harvested are estimated to be 11,430 for the decade. The volumes are an estimated outcome of harvesting those acres. In the event volume estimates prove to be inaccurate, acreages harvested will not be adjusted to make up the difference. Total harvested acres for the decade may vary and will depend on site-specific project implementation to meet plan goals and objectives.

B. ASQ will not exceed 37 million board feet (MMBF) for the plan decade. (G)

2. Silvicultural System Guideline

Silvicultural System Guideline. The appropriate silvicultural systems to use, by forest cover type, are.
(G)

Forest Cover Type	Even-aged (1 or 2 age classes)	Uneven-aged (3+ age classes)
Lodgepole pine	CC, SW, OR, CT	GS <2 acre, CT
Douglas-fir	CC (mistletoe-infected stands only; <i>Hawksworth Class 4, 5, or 6</i>), ST, SW, OR, CT	GS, ITS, CT
Mixed Conifer	CC, ST, SW, OR, CT	GS, ITS, CT
Spruce-fir	SW, OR, CT	GS, ITS, CT
Aspen	CC, CT	
Abbreviations used in the Table:		
CC = Clearcut OR = Overstory Removal CT = <i>Commercial Thin</i> GS = <i>Group Selection</i> ST = Seed Tree ITS = Individual Tree Selection SW = Shelterwood		

3 Rotation Age Guideline. Following are the earliest rotation ages of each species group beginning at culmination of mean annual increment (G)

Species	Earliest Rotation Age (years)
Lodgepole Pine	60
Douglas-fir	100
Mixed Conifer 1/	80
Spruce-fir	100
Aspen	60
1/ Includes both MX (DF/LP) and MX3 (DF/LP with ES/AF).	

4. Minimum Stocking Guideline. Following is the minimum stocking allowed to occur before an area can be certified as stocked. (G)

Species	Minimum Stocking (Trees/Acre) 1/	Percent of Area Meeting Minimum Stocking
Lodgepole Pine	170	70
Douglas-fir	140	70
Mixed Conifer 2/	200	70
Spruce-fir	200	70
Aspen	300	70
1/ Aspen counts toward stocking 2/ Includes both MX (DF/LP) and MX3 (DF/LP with ES/AF)		

Goal - Precommercial Thinning

Thinning results in restoration of ecological structure, function and composition.

Objectives - Precommercial Thinning

1. Mimic tree densities and patch sizes within the range of variability over a landscape.
2. Provide for a variety of future resource products.

Goal - Slash Treatment

Fuel loading on activity areas meet site productivity for wildlife and fire objectives.

Objective - Slash Treatment

Slash treatment reduces fuels less than 3 inches in diameter and retain larger diameter fuels needed for sustaining soil productivity and providing for wildlife habitat needs.

Standards and Guidelines - Slash Treatment Guideline. 1/ 2/

Predicted and existing fuel loading under 3 inches dbh	Minimum Treatment	Maximum Fuel Patch Size
Under 5 Tons/Acre	No treatment necessary for fire hazard reduction	160 ac under 40% slope 100 ac. over 40% slope
5 to 10 Tons/Acre	Lop or crush to Regional Lopping Specifications	80 ac < 40% 40 ac > 40%
11 - 25 Tons/Acre	<u>Alternatives</u>	
	1 Reduce single entry loading to 10 tons/ac. or less by multiple entry thinnings Follow lopping stds above according to loading	Single entry loading < 5 Ton/Ac , use above stds for < 5 tons Loading 5-10 use above std for 5-10 T/Ac
	2 Reduce slash < 3 in to < 5 tons per ac by burning or chipping	160 Ac < 40% 100 Ac > 40%
	3 Reduce loading of lopped or crushed fuel < 3 in to 5 - 10 ton per acre by burning or chipping	80 Ac < 40% 40 Ac > 40%
	4 Rehabilitate by piling, burning, and reforestation	160 Ac < 40% 100 Ac > 40%
5 No treatment	N/A	
1/ When down woody fuels constitute 30% or more of the total loading under 3 inches, the values in this column may be increased by 3 tons per acre		
2/ Make sure mechanical treatments meet Forestwide soils standards		

Objective - Size of Harvest Units and Adjacent Leave Blocks/Strips

Design timber management projects to simulate the range of natural variation for patch sizes, patch shapes, connectivity, and species composition and age class diversity.

Standard and Guideline

Created Opening. A harvested area of commercial forest land will not be considered a created opening for silvicultural purposes when stocking surveys indicate that minimum stocking is achieved and at least 7 feet high. When other resource management considerations (such as wildlife habitat, watershed needs, or visual requirements) prevail, a created opening will no longer be considered an opening when the vegetation in it meets a particular management objective stated in the applicable *management prescription*. (S)

Standards and Guidelines - Logging Systems

1 Slopes 40 percent or less will normally be harvested using ground-based logging equipment (tractors, rubber-tired skidders, low ground pressure equipment, etc). Slopes greater than 40 percent, but less than 60%, will normally be harvested using advanced logging systems like shortspan cable systems, longspan cable systems, or aerial systems. (G)

2. Rutting in skid trails should not exceed 6 to 8 inches in depth (wet condition) over more than 10 percent of a designated skid trail system. No yarding operations should take place when ground conditions are wet enough that there is a risk of such rutting. (G)

Goal - Fuelwood

A sustainable level of fuelwood would be available.

Objective - Fuelwood

Conduct inventory for determining sustainable level of fuelwood.

Standards and Guidelines - Fuelwood

1. Allow permitted fuelwood gathering in designated areas only. (S)

2. Select designated fuelwood areas that have an excess of dead and down woody material which is in excess of that required for ecological function, structure and composition. (G)

SUBSECTION DESCRIPTIONS

The ECOMAP unit of the Forest Service has developed a National Hierarchical Framework of Ecological Units to improve consistency in developing and sharing resource data and information at multiple geographic scales and across administrative and jurisdictional boundaries

An Ecological Unit is defined as "A mapped landscape unit designed to meet management objectives, comprised of one or more ecological types." (FSM 2060.05) These ecological units are designed to exhibit similar patterns in: Potential Natural Communities; Soils; Hydrologic Function; Landform and Topography, Lithologies; Climate, Air Quality; and Natural Processes for Cycling Plant Biomass and Nutrients

As of this writing, ECOMAP has described four levels in the National Hierarchy of Ecological Units: Domains, Divisions, Provinces, and Sections. A map of the United States (1:7,500,000 scale) has been developed displaying these four levels. The land area of the Forest falls within three of those sections. The National Hierarchical Framework of Ecological Units is shown below in its particular application to the Forest, as adjusted by Revision and Ecological Unit Inventory personnel.

Domain - Described by broad climatic zones or groups. The Forest is within the Dry Domain (which covers most of the Intermountain Region). This is an area of water deficit where the potential annual water losses through evaporation exceed annual water gains through precipitation.

Division - Described by regional climatic types, vegetation affinities, soil order. The Forest is within the Temperate Steppe Regime Mountains Division (M330).

Province - Described by potential natural vegetation, highlands or mountains with complex vertical climate-vegetation-soil zonation. The Forest is within two Provinces:

- M331 - Southern Rocky Mtn. Steppe - Open Woodland - Coniferous Forest - Alpine Meadow
- M332 - Middle Rocky Mtn. Steppe - Coniferous Forest - Alpine Meadow

Sections - Described by geomorphic province, geologic age, stratigraphy, lithology; regional climatic data; phases of soil orders, suborders or great groups; potential natural vegetation (PNV); potential natural communities (PNC). The Forest lies within three Sections:

- M331A - Yellowstone Highlands Section
- M331D - Overthrust Mountains Section
- M332E - Beaverhead Mountains Section

Subsections - Described by geomorphic process, surficial geology, lithology; phases of soil orders, suborders or great groups; subregional climatic data; PNC - formation or series. The Forest lies within seven Subsections:

- M332E-1 - Lemhi/Medicine Lodge (Subsection comprising two noncontiguous parts)
- M332E-2 - Centennial Mountains
- M331A-1 - Island Park
- M331A-2 - Madison Plateau
- M331D-2 - Teton Range
- M331D-1 - Big Hole/Palisades Mountains
- M331D-19- Caribou

Figure III-1 displays the locations of the seven subsections. Figure III-2 displays watershed boundaries on the Forest. Following these figures are individual descriptions and maps of each subsection.

Subsection Overlay on the Targhee National Forest and the Surrounding Area

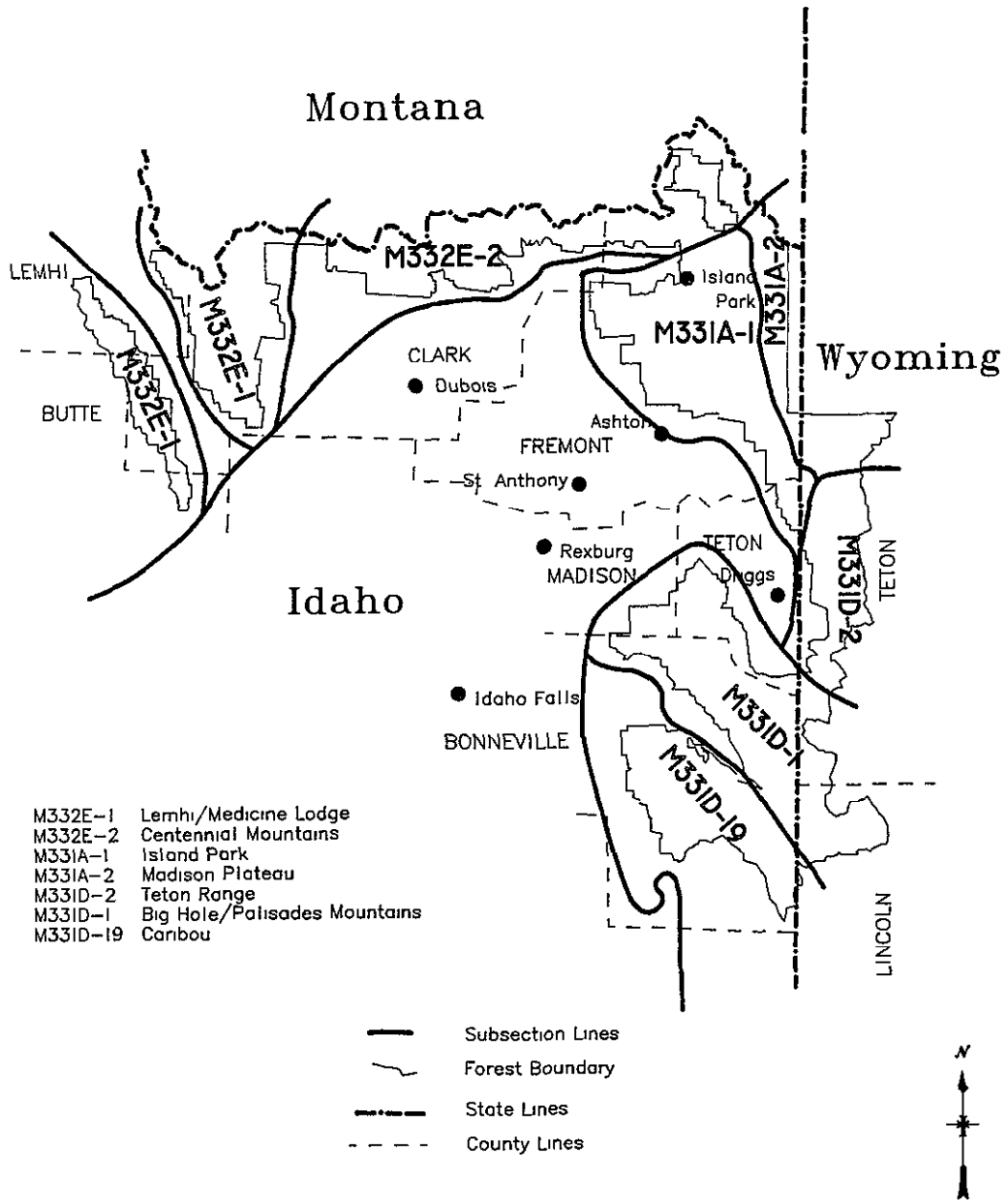


Figure III-1

Targhee National Forest Principal Watersheds

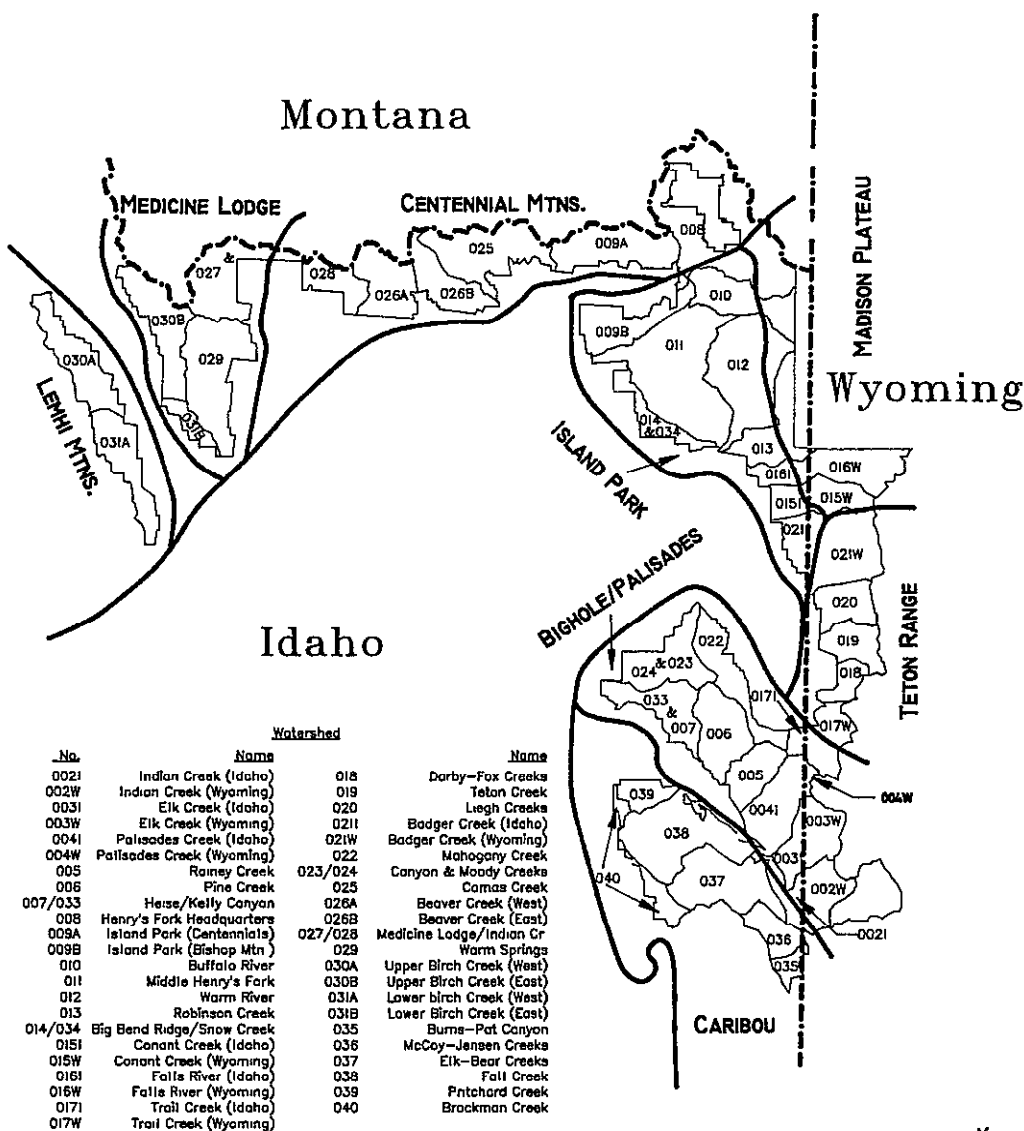


Figure III-2

Not To Scale

LEMHI/MEDICINE LODGE SUBSECTION (M332E-1A/M332E-1B)

SETTING

This subsection includes the Lemhi Mountains and the Medicine Lodge/Beaverhead Mountains. A variety of vegetation exists with forested communities dominated by Douglas-fir and limber pine. Sagebrush/bunchgrass and mountain mahogany communities are common on the lower elevation and strong southerly exposures. Limber pine communities and alpine meadows exist at the high elevations. This subsection is rich in mining history with old mining sites and remnants of town sites. Located in the Birch Creek Valley are four preserved brick adobe Charcoal Kilns. Sixteen were originally built to furnish charcoal to the Nicholia Mine. This area contains some of the most significant Native American sites on the Forest. This area also contains the Continental Divide National Scenic Trail, a recommended wilderness (Italian Peaks) and most big game species.

Although only 37 percent of this subsection is forested, this is more forest land than occurred historically. Information from the early 1900's indicates that in some areas Douglas-fir has become established on lands that were formerly dominated by grasses and sagebrush. Some riparian communities also appear to have more conifers than they did historically.

Approximately 90 percent of the forested land is in a mature age class, indicating a lack of age class diversity in the subsection. With 90 percent of the forests in Douglas-fir there is also a lack of tree species diversity. Many of the Douglas-fir stands are densely stocked. The uniformity of tree species and age classes, as well as the dense stocking, make this area's forests more susceptible to ecosystem disturbances such as insects, diseases and large fires. An example of the latter was the Gallagher Peak Fire which burned 37,230 acres in 1979. This was the largest fire in the last twenty years on the Forest.

Aspen acreage has declined since the early twentieth century due to fire suppression. This is of concern since aspen provides important habitat for many wildlife species, and is a critical factor in the scenic beauty of the Forest. Aspen is declining in this Subsection.

Existing biological potential for woodpeckers is 26 to 34 percent. This indicates that larger size snags are not abundant nor well distributed in this subsection at this time, even though a very high percentage of the forests are in mature and older successional stages.

Figure III-3 displays this subsection along with the major prescription areas.

DESIRED FUTURE CONDITION

This area provides quality motorized and nonmotorized dispersed recreation, livestock forage, elk and deer winter range, and Italian Peaks is managed as a proposed wilderness.

Ecological conditions include social and economic requirements associated with hunting big game.

GOALS AND OBJECTIVES

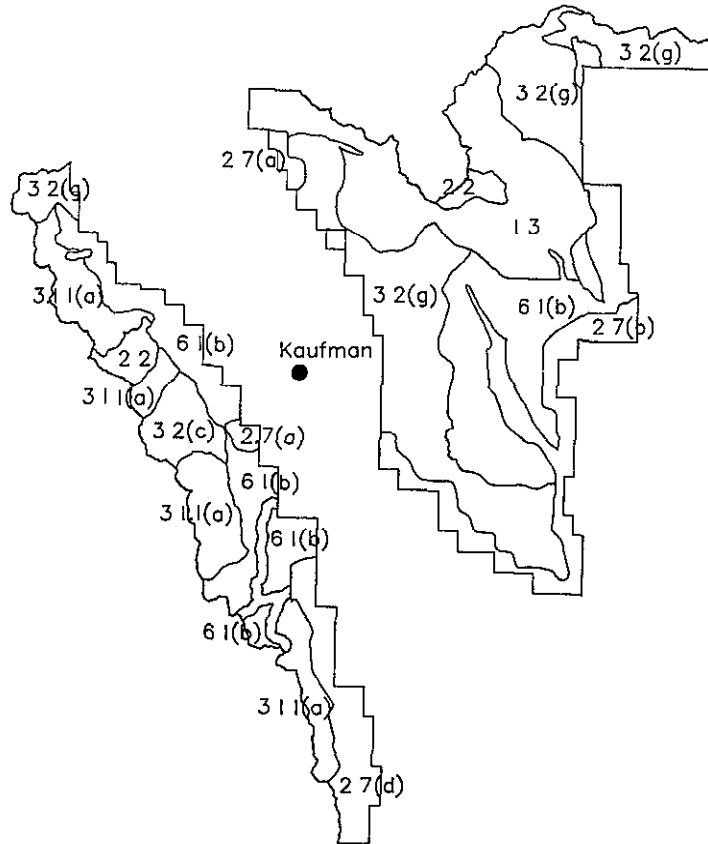
Biodiversity - Objective

Manage where possible for a diverse array of habitats tied to the natural occurrence and distribution of plant communities. Regenerate and maintain plant associations within the range of variability.

Aquatic & Riparian Ecosystems - Objective

Improve stream channel stability ratings to good or excellent by 2007 on Divide Creek and Webber Creek.

Lemhi/Medicine Lodge Subsection (M332E-1)



RX	Lemhi M332E-1A	Med Lodge M332E-1B	TOTAL
1 3	0	47,440	47,440
2 1 1	302	0	302
2 2	3,713	3,011	6,724
2 7(a)	14,448	1,536	15,984
2 7(b)	0	22,173	22,173
2 8 3	7,710	15,603	23,313
3 1 1(a)	26,202	7,179	33,381
3 2(c)	7,356	0	7,356
3 2(g)	6,895	40,550	47,445
4 1	12	13	25
4 3	6	0	6
5 1(b)	0	1,669	1,669
6 1(b)	24,611	49,164	73,775
8 1	7	47	54
PRV	329	2,199	2,528
Total	91,591	190,584	282,175



Figure III-3

Recreation - Objective

Provide increased designated motorized road and trail access in a managed low impact method.

Heritage Resources - Objective

Provide opportunities for scientific studies of significant archaeological sites

STANDARDS AND GUIDELINES

Recreation

Restrict motorized use to designated routes only, except for snowmobiles. (G)



CENTENNIAL SUBSECTION (M332E-2)

SETTING

This subsection covers the Centennial Mountains between the east fork of Irving Creek and Reas Pass to the east. The Centennials, which form part of the Continental Divide, are a scenic mountain range with high mountain meadows scattered through spruce/fir and Douglas-fir forests. At lower elevations sagebrush/grasslands grade into Douglas-fir and lodgepole pine forests. Lionhead, in the northeast portion of the subsection, is a recommended wilderness in Montana. The major travel corridors are Highways 20 and 87, and a portion of Interstate 15. The Yale-Kilgore road is a more minor travel route connecting Island Park to Kilgore and Dubois. In the northeast portion of the subsection is Henry's Lake, a world-renowned fishery.

This subsection is dominated by sagebrush/grasslands and Douglas-fir communities. The Centennial Mountain Subsection has had substantial timber management activities. Also in the Centennial Mountains the wildland/urban interface has significantly increased due to the development of the private lands within the forest protection boundary. This increases the risk of a fire spreading between the forest and private lands.

The landscape is dominated by forested communities which cover 71 percent of the subsection. Approximately 51 percent of the forested acres are Douglas-fir. Lodgepole pine (21%) is found in pockets on low productivity soils. Mixed lodgepole pine/Douglas-fir (13%) and other mixed conifers (10%) are also well-represented. The presence of mixed stands indicates that later successional species such as Douglas-fir and subalpine fir are becoming established as stands move toward later seral stages through succession. Aspen comprises 4% of the forested acres, which is less than was historically present. Fire suppression has allowed conifers to take over areas that were previously rangeland, tall forb communities, and aspen. Conifers have also encroached into riparian areas through the process of succession.

Mature forests cover 79 percent of the subsection, indicating a lack of diversity in age classes. Diversity of tree species appears to be high as forests move from early to later successional species. In this transition phase both early and late successional tree species are present. Decreasing diversity however is associated with the loss of aspen over time. Severe fires, insects and diseases are concerns in this subsection, mainly because of the large component of mature forests.

The subsection contains portions of two subunits within the Henry's Lake BMU.

Existing biological potential for larger woodpeckers is 33 to 52 percent. Larger size snags are not abundant nor well distributed in this subsection either, even though 79% of the forests are in mature and older successional stages.

Figure III-4 displays this subsection along with the major prescription areas.

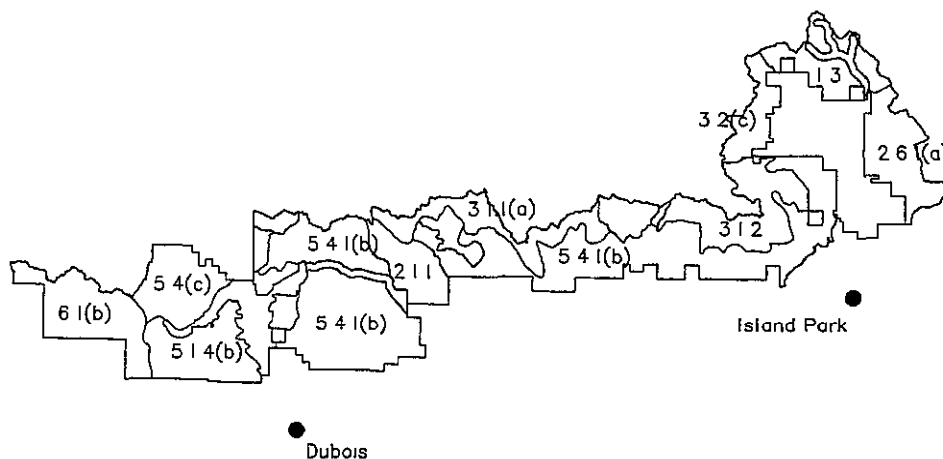
DESIRED FUTURE CONDITION

This subsection is one of the most diverse and complex subsections on the Forest. It offers the greatest opportunity for vegetation treatments. This opportunity will be to move the landscape toward the range of variation while reducing the risk of catastrophic incidents outside the range of natural variation.

The interaction between dispersed motorized recreation and the Lionhead roadless area will be managed to still maintain access for snowmobiles while recommending the core area for wilderness.

Any activities will need to address concerns associated with grizzly bear management and big game management as well as reducing the risks with insects, disease, and fire.

Centennial Mountain Subsection (M332E-2)



RX	TOTAL	RX	TOTAL
13	13,073	513(a)	14,363
211	12,284	514(b)	84,005
23	3,519	521	925
24	1,076	522	10,925
25	2,629	535	30,006
261(a)	17,416	54(c)	15,238
27(b)	1,869	61(b)	26,449
283	32,136	81	376
311(a)	41,109	PRV	7,424
32(c)	9,220	STA	5,870
32(g)	1,137	Water	1,052
41	275	Total	332,692
42	113		
43	203		



Not To Scale

Figure III-4

GOALS AND OBJECTIVES

Biodiversity - Goal

Move the spatial distribution patterns and ages of vegetation toward sustainable conditions based on the range of variation.

Biodiversity - Objective

Develop a fire plan which allows for prescribed natural and management ignited fire, where compatible with other resource objectives.

Aquatic & Riparian Ecosystems - Objective

Improve stream channel stability ratings to good or excellent by 2007 on Allan Canyon Creek, McGarry Canyon Creek, Moose Creek, Dairy Creek, Long Creek, E. Rattlesnake Creek, E. Three-mile Creek and W. Dry Creek.

Wild and Scenic River - Objective

Complete the suitability studies for rivers that are eligible for wild and scenic river designation.

STANDARDS AND GUIDELINES

Lands (Special Uses)

The Leon Petersen cabin and associated facilities will be treated as an isolated cabin rather than a recreation residence, since the cabin is not within an approved recreation residence tract. The permit will be changed to a "life tenure" permit by 1998. This cabin permit will not be transferable. Upon the expiration of the permit, the cabin will be evaluated and its historical qualifications determined. If the cabin is found to have historic value, it may be moved from the site, or the Forest may issue a special use permit to a Historical Association for maintenance of the cabin. (S)

Range

Domestic sheep grazing will be phased out over time on an opportunity basis. An opportunity is defined as a suitable or favorable time to abolish or close an allotment because of nonuse violations, term permit waivers where the permit is waived back to the government, resource protection, or permit actions resulting in cancellation of the permit. If opportunities do not arise, then efforts will be made to relocate or accommodate sheep to other areas. (G)



ISLAND PARK SUBSECTION (M331A-1)

SETTING

This subsection includes the west half of Island Park, Ashton, and the northwest portion of Teton Basin Ranger Districts. The dominant landscape feature of this subsection is a large caldera. Highway 20 is the only major highway that travels through this subsection. Among the many scenic attractions are Upper and Lower Mesa Falls, the last major undisturbed falls on the Columbia River system. The Mesa Falls Scenic Byway, established in 1989, provides motorists with a breathtaking view of the Teton Mountain Range and accesses the two falls. The Island Park Subsection offers excellent trout fishing at Island Park Reservoir and along the Henry's Fork, Buffalo River, Warm River, Fall River and Birch Creek. The Island Park subsection is also known for its many snowmobile and cross-country ski trails. The area shows signs of large scale timber harvesting due to salvage efforts following the mountain pine beetle epidemics in the 1960's and 1970's. Harriman State Park lies in the heart of the Harriman Wildlife Refuge, with 16,000 acres of forest, meadows, lakes and streams.

A small portion of the Winegar Hole recommended wilderness falls along the eastern border of this subsection.

The landscape is dominated by forested cover types, which blanket 93% of the area. Forested areas are primarily lodgepole pine types (70%) that contain small pockets of aspen, sagebrush/grass, grass meadows and mountain brush. Douglas-fir (10%) and mixed lodgepole pine/Douglas-fir (15%) cover types provide some diversity in the area. Lodgepole pine occupies the floor of the Island Park Caldera and Douglas-fir cover types are concentrated on the Caldera rim. On the Caldera rim, aspen and sagebrush areas are being encroached upon by Douglas-fir, through the process of succession.

Currently 61 percent of the forests are in a mature or older age class provide suitable nesting sites. Since 93 percent of this subsection is forested, creation of young forest age classes probably increases the amount of suitable foraging habitat. Currently 26 percent of the forested acres are in nonstocked and seedling conditions which provide foraging habitat.

Salvage harvesting has shifted 46 percent of the lodgepole pine into the nonstocked, seedling and sapling classes. Active management of aspen, as well as aspen sprouting in lodgepole pine clearcuts, has moved 34 percent of the aspen into these young classes. Other cover types are concentrated in the mature age group.

Mature Douglas-fir on the caldera rim experienced outbreaks of spruce budworm and Douglas-fir beetle in the past decade. These have now subsided, but could easily occur again given the mature condition of the Douglas-fir and the presence of multiple-storied stands. Due to fuel reductions and young age classes associated with timber harvest, fire is less of a concern here than in most other subsections.

Figure III-5 displays this subsection along with the major prescription areas.

DESIRED FUTURE CONDITION

Forested conditions and roading densities will support the Forestwide objectives for grizzly bear management and elk vulnerability. This will include road closures and vegetation treatments aimed at improving cover and maintaining forest health.

This area will have improved recreation access and quality, particularly in the Highway 42-Mesa Falls Scenic byway and for snowmobile use linked to West Yellowstone.

Island Park Subsection (M331A-1)

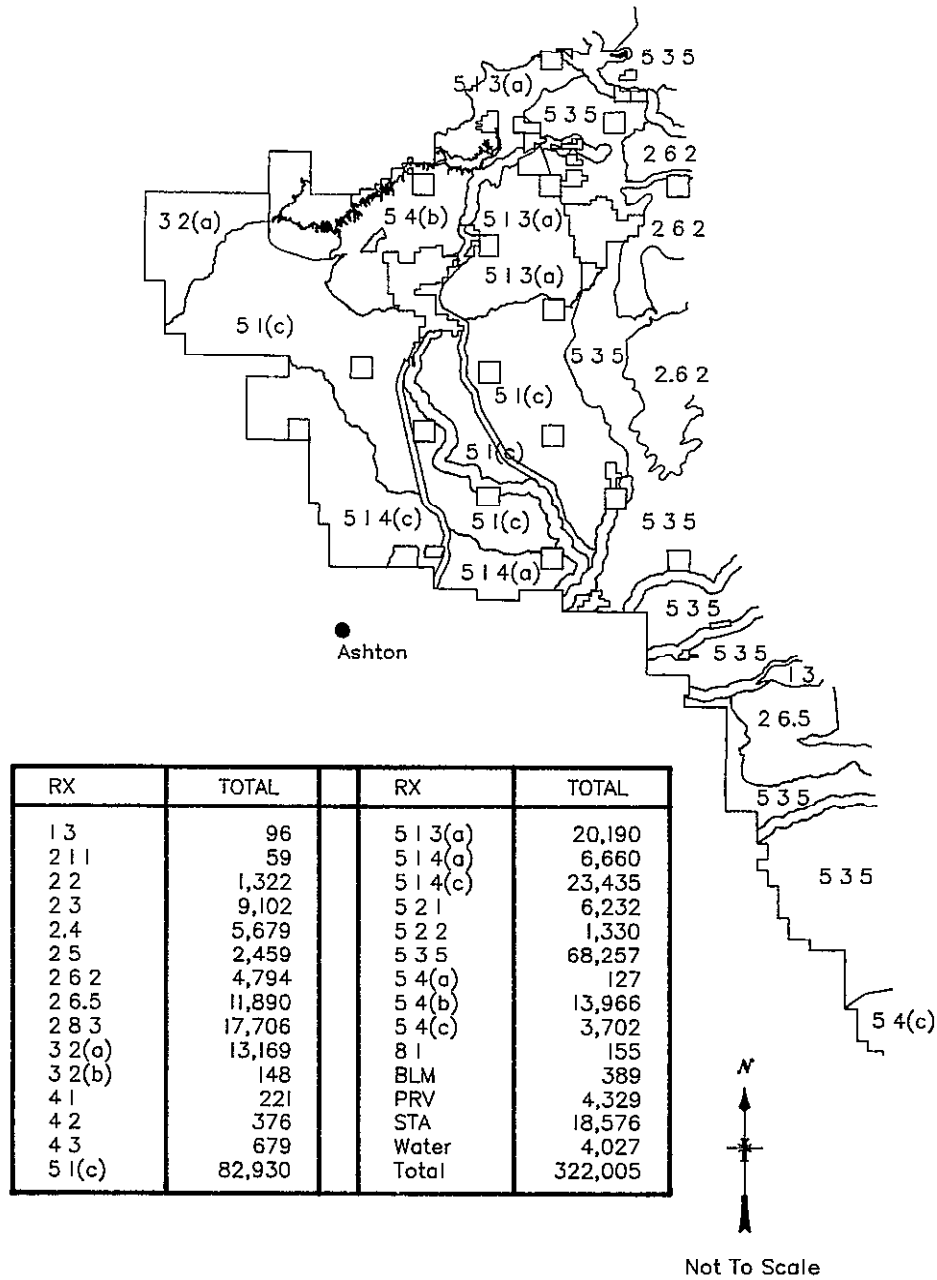


Figure III-5

GOALS AND OBJECTIVES

Biodiversity - Goal

Move toward patch sizes that better reflect historical patterns and frequencies of disturbance. Manage forest structure to reflect historic patterns.

Fire - Objective

Use management-ignited fire where possible to meet resource objectives.

Recreation - Objectives

Maintain visual quality and visitor interpretation facilities along the Highway 47 Mesa Falls byway.

Wild and Scenic River - Objective

Complete the suitability studies for rivers that are eligible for wild and scenic river designation.

STANDARDS AND GUIDELINES

Waterfowl Nesting Areas

Goose Neck Bay on Island Park Reservoir. Area closed to motorized vehicle-use April 1 to June 15; open to motorized vehicle use remainder of the year. (S)

MADISON PLATEAU SUBSECTION (M331A-2)

SETTING

The largest portion of the Madison Plateau Subsection is actually in Yellowstone National Park. The portion on the Forest lies within the Island Park and Ashton Districts next to Yellowstone National Park. The Winegar Hole Wilderness is within this subsection and portions of the Jedediah Smith Wilderness and the recommended wilderness portion of Winegar Hole in Idaho. The Ashton-Flagg Ranch Road and Fish Creek Road are the major access routes in this area. Grassy Lake is a 320-acre lake created when a dam was built by the Bureau of Reclamation in 1937-1939. Grassy Lake, as well as other lakes and streams in the area, are popular fishing areas and are accessed by the Flagg Ranch road. Several organized youth camps exist throughout this subsection. The Cave Falls road is the only motorized access to the southwest portion of Yellowstone Park.

The landscape is dominated by forests which comprise 97% of the area. Lodgepole pine is the most common forested cover type (76%), with mixed stands of lodgepole pine and Douglas-fir making up the remaining forested area (24%). Relatively minor amounts of aspen and various mixed conifers provide some diversity. The southern portion of the subsection is unique in that there are many wet meadows and small lakes intermingled with the forests.

The 1988 North Fork Fire scorched 17,700 acres in the northern part of this subsection. In numerous locations, the fire stimulated aspen suckering. Past timber harvesting also occurred primarily in the north half of the subsection. These two events have shifted 39% of the lodgepole pine into the nonstocked, seedling and sapling age classes. Active management of aspen has also provided some age class diversity.

Due to fuel reductions and young age classes associated with past harvest and the North Fork Burn, fire is less of a concern here than in many other areas. However, conditions in the southern portion of the Madison Subsection are presenting some fire risks as conifers become mixed with aspen and lodgepole pine stands convert to Douglas-fir through succession. Mature subalpine fir and Douglas-fir in this southern area experienced outbreaks of western balsam bark beetle and Douglas-fir beetle in the past decade. These conditions have subsided, but could easily occur again since vegetation conditions have not changed.

Currently 63 percent of the forests are in a mature or older age classes and provide suitable nesting sites. Since 97 percent of this subsection is forested, creation of young forest age classes increases the amount of suitable more open, foraging habitat. Currently 23 percent of the forested acres are in nonstocked and seedling conditions which provide foraging habitat.

There are currently two designated wilderness areas on the Forest. These are the Jedediah Smith Wilderness (123,451 acres) and the Winegar Hole Wilderness (10,715 acres). The Jedediah Smith is mostly in the Teton Range Subsection with the balance in the Madison Plateau Subsection. Winegar Hole is totally within the Madison Plateau Subsection. Winegar Hole is largely primitive with very little use. This is mostly due to access difficulty, since there are only four miles of trail in the area. Use of this area is mostly for hunting big game. The Jedediah Smith is intensively used in the summer with approximately 60,000 visits (hiking, backpacking and horseback riding). This is a spectacular mountainous area on the west slope of the famous Teton Mountain Range. These wilderness areas are two of twelve designated in the greater Yellowstone Area; which totals 3.8 million acres.

Figure III-6 displays this subsection along with the major prescription areas

DESIRED FUTURE CONDITION

Because of the intensive timber salvage efforts in the past, plus the North Fork Burn, there is limited opportunity for vegetation treatment in this area while still meeting grizzly bear management and elk vulnerability objectives. This subsection will be managed to provide for grizzly bear management objectives, primitive to semi-primitive recreation opportunities, and vegetation management to reduce insect and disease, and fire threats to remaining habitat. Roads will be closed to improve security for grizzly bears and other wildlife.

GOALS AND OBJECTIVES

Aquatic Ecosystem - Goal

Effective rehabilitation of the North Fork Fire burn area to stabilize slopes and reduce sediment delivery to streams

Biodiversity - Goal

Bring the area back toward the range of variability with a full mix of age classes, larger patch sizes and connectivity between stands

Fire - Goal

Use management-ignited and natural fire to meet resource objectives. Comply with the Jedediah Smith Wilderness Fire Management Plan.

Wild and Scenic River - Objective

Complete the suitability studies for rivers that are eligible for wild and scenic river designation.

STANDARDS AND GUIDELINES

Wilderness

Implement the Winegar Hole Wilderness Plan, which consists of the specific wilderness prescription management direction and the Wilderness Implementation Schedule. (G)

TETON RANGE SUBSECTION (M331D-2)

SETTING

This area encompasses the west slope of the Teton Mountains. The Teton Range is a spectacular line of high peaks rising abruptly along the west side of Jackson Hole. The landscape is a diverse mix of forested and open vegetation. The Jedediah Smith Wilderness traverses the upper portions of the west slopes of the Teton Mountains. The Grand Targhee Ski Resort is a major tourist attraction within this subsection. Two organized youth camps are present. This area is known for its many backcountry trail systems, which are accessible by horse or foot. Highway 22 runs along the southern boundary and is a popular route for visitors crossing Teton Pass.

The landscape is a diverse mix of forested (57%) and open (43%) community types. Lodgepole is mixed with Douglas-fir in 31 percent of the forested area, indicating that the pine is converting to Douglas-fir through succession. Open Douglas-fir forests, mountain brush, aspen, and sagebrush pockets are found predominately on south and west aspects. Aspen is being encroached upon by conifers as succession proceeds, and the amount of aspen has declined compared with historic levels due to fire suppression. Upper elevations are characterized by dense mixed conifer forests, open grass/forb meadows, and talus slopes. Conifers are moving into riparian areas and mountain meadows due to fire suppression.

Since much of the Teton Range Subsection is designated wilderness, timber harvest has been limited. Because of this and fire suppression, only 1% of the forested acres are in the nonstocked, seedling or sapling age classes. The 97 percent of mature or older forests make this area susceptible to insect infestations, diseases and large-scale fires. In recent years western balsam bark beetle has been active in the subalpine fir. Douglas-fir beetle has killed pockets of Douglas-fir in the past decade, but beetle populations have declined since 1992.

The Jedediah Smith Wilderness (123,451 acres) is mostly in the Teton Range Subsection with the balance in the Madison Plateau Subsection. The Jedediah Smith is intensively used in the summer with approximately 60,000 visits for hiking, backpacking and horseback riding.

The Bechler - Teton BMU is also partially within the subsection.

Teton Valley has been experiencing a development boom recently and urban interface is a growing concern for the forest.

Figure III-7 displays this subsection along with the major prescription areas.

DESIRED FUTURE CONDITION

The Teton Range Subsection is dominated by the lands inside the Jedediah Smith Wilderness. Over 73% of the subsection is wilderness where the focus is to provide Opportunity Class I wilderness experiences. The description of the potential experience is described in prescriptions 1.1.7 and 1.1.8.

The Grand Targhee Ski Area, provides a safe and enjoyable winter sports experience.

The Bechler - Teton BMU provides for a high degree of security for grizzly bear.

The remaining lands in the subsection provide for motorized recreation and big game winter range improvement. Management of these lands reduces or eliminates conflicts with adjacent wilderness.

Teton Range Subsection (M331D-2)

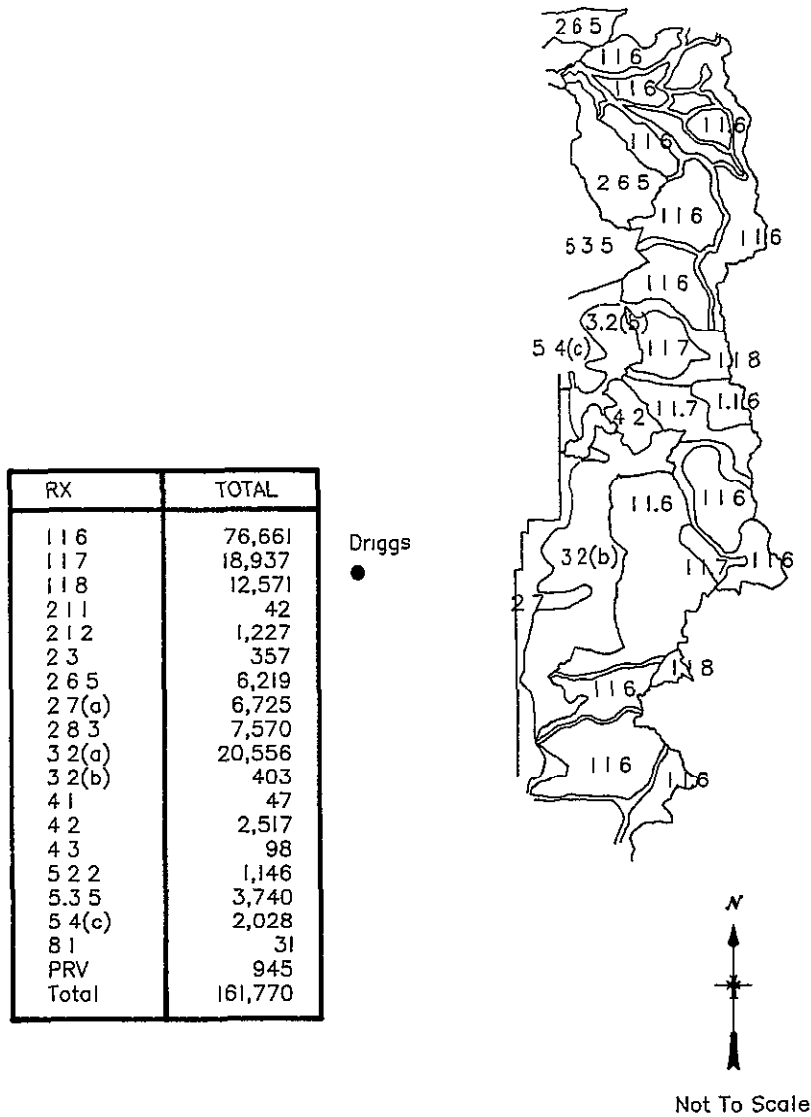


Figure III-7

Of critical importance to this subsection is the high amount of mature and over-mature vegetation. Careful treatment will be required to achieve the conditions for all of the management prescriptions since little of this area will be available for silvicultural treatment.

GOALS AND OBJECTIVES

Aquatic - Objective

Improve stream channel stability ratings to good or excellent by 2007 where natural conditions allow on Teton Creek, N. Leigh, S. Leigh, Moose Creek, Trail Creek, Fox Creek, and Kiln Creek where instability is management-caused.

Wildlife - Objective

Maintain or improve big game winter range.

Recreation - Objective

Maintain remaining roadless areas in their roadless condition.

Wild and Scenic River - Objective

Complete the suitability studies for rivers that are eligible for wild and scenic river designation.

STANDARDS AND GUIDELINES

Wilderness

I. Implement the Jedediah Smith Wilderness Management Plan which consists of the specific wilderness prescription management direction and the Wilderness Implementation Schedule and Monitoring Action Plan.(G)

II. Implement the Jedediah Smith Wilderness Fire Management Plan.(G)

Range

Domestic sheep grazing will be phased out over time on an opportunity basis. An opportunity is defined as a suitable or favorable time to abolish or close an allotment because of nonuse violations, term permit waivers where the permit is waived back to the government, resource protection, or permit actions resulting in cancellation of the permit. If opportunities do not arise, then efforts will be made to relocate or accommodate sheep to other areas. (G)

Restrict domestic sheep bands to not closer than 3 miles of bighorn sheep range in the Fossil Mountain, Mount Jedediah Smith, and Darby Creek area (these areas are used by bighorn sheep in the spring, summer, and fall). (G)

BIG HOLE/ PALISADES SUBSECTION (M331D-1)

SETTING

This subsection takes in all National Forest lands between Highway 33 in Idaho and Highway 22 in Wyoming on the north and the South Fork of the Snake River to the south. Several major highways provide access: Idaho Highways 26, 31 and 33, and Highway 22 in Wyoming. Highway 31 is a State Scenic Byway over Pine Creek Pass. Vegetation consists of mountain brush, grass/forb openings, aspen, and forests of Douglas-fir and lodgepole pine. The area has a variety of recreational opportunities including Kelly Canyon Ski Resort and backcountry hiking. Palisades Reservoir and its many boat ramps are used by water sports enthusiasts.

The landscape is a combination of community types, with 65% of the landscape forested and 35% nonforested. The most common forest type is mixed lodgepole pine and Douglas-fir, comprising 47% of the forested acres. Aspen, pure Douglas-fir and pure lodgepole pine each account for roughly 15% of the forest. Mountain brush is common; consisting of mountain mahogany on south slopes and hawthorne, chokecherry, serviceberry, antelope bitterbrush and Rocky Mountain maple on various slopes/aspects depending on elevation. Grass/forb meadows and sagebrush are also present in significant amounts. The northwestern boundary of the subsection extends into the cottonwood type along the Snake River.

Only 4% of the forested stands are in the nonstocked, seedling or sapling age category. These are concentrated in the north end of the subsection where timber harvest has occurred.

Most of the shrublands are also in late age classes or seral stages. There is concern about the lack of cottonwood regeneration along the Snake River, due to a lack of historic river flood levels.

Currently 95 percent of the subsection is in a mature age class which provides suitable habitat for a variety of interior wildlife species. This creates hazards for large fires, insect infestations and disease problems. In the north end of the subsection Douglas-fir beetle and western balsam bark beetle caused damage in the late 1980's and early 1990's, but tapered off in 1994. Insect information is not available for the southern portion. Due to fire suppression and lack of disturbance over the years, conifers have encroached into some sites that were historically nonforested. This has reduced overall vegetative diversity in the subsection.

The Wyoming portion of the Palisades Roadless Area was designated by Congress as a Wilderness Study Area in 1984. The Study Area contains 132,000 acres. Of these acres, over 79,800 are administered by the Bridger-Teton National Forest. In addition, there are 110,520 acres of this roadless area in Idaho which have had no action or recommendation taken on them. The studies on the Wyoming portion have not been conducted, and are planned to be done with the Bridger-Teton as the lead Forest at the time of their Plan Revision.

Figure III-8 displays this subsection along with the major prescription areas.

DESIRED FUTURE CONDITION

This subsection will be managed to provide high quality motorized recreation opportunities both summer and winter with a signed system of roads and trails for OHV and full-sized vehicles while protecting resources.

On suitable lands silvicultural management will focus on reducing the risks of insect and disease while improving big game security and summer range. Prescribed fire will be used on the remainder of the subsection to help obtain healthy ecosystems and improve wildlife winter ranges.

The recreational use on the South Fork of the Snake River will continue but be balanced with the needs of wildlife

This subsection has similar ecosystem management conditions, but has two different management goals and objectives. The Big Hole portion of the subsection will be managed to provide a wide variety of resources and recreation opportunities. This area will have special management emphasis to provide *quality motorized recreation opportunity with signed system of roads and trails for motorized use*. Resource protection will be planned and accomplished by restricting motorized use to designated routes and by locating routes along planned and selected routes.

The Palisades subsection portion will be managed for more primitive motorized and nonmotorized recreation opportunities. Emphasis will be placed on quality backcountry experience for these type users along appropriate designated trails. The Forest will recommend the Idaho portion of the Palisades roadless area for wilderness designation and maintain the wilderness area status for the Wyoming portion.

GOALS AND OBJECTIVES

Biodiversity - Objective

1. Continue cooperation with other agencies in conducting research and implementing management actions to regenerate cottonwood along the South Fork of the Snake River.
2. Develop a fire management plan which considers summer home development and risk around the Palisades Reservoir.

Aquatic & Riparian Ecosystems - Objective

1. Improve stream channel stability ratings to good or excellent by 2007 where natural conditions allow on South Fork, Packsaddle, Horseshoe, Superior, North Fork Mahogany, Main Mahogany, Henderson, Patterson, and Murphy Creeks.
2. Channel stability would be rated at good to excellent for individual streams.

Recreation - Objective

1. Continue to place emphasis on winter recreation for the Big Hole portion of the subsection by continuing a grooming program for snowmachines, which is orientated towards family opportunities; continuing to work with user groups for X-country skiing opportunities in the Kelly area.
2. Continue to improve the quality of the summer time OHV use in the Big Hole area and protect resource values by locating and maintaining trails on suitable locations.

Heritage - Resources

Complete heritage resources inventory of this subsection by 2010.

Wild and Scenic River - Objective

Complete the suitability studies for rivers that are eligible for wild and scenic river designation.

Visuals - Objective

Manage the Pine Creek Scenic Byway (Highway 31) and Highway 22 over Teton Pass for visual quality.

Range - Objectives

Continue to recognize the value of grazing on the Kelly Ski hill for forage control and fire protection. Coordination for grazing timing and duration will continue to be coordinated between grazing permittees, ski hill permittee and Forest Service.

STANDARDS AND GUIDELINES

Winter Feeding of Big Game

Phase out Rainey Creek feed grounds for big game animals in cooperation with the State Fish and Game Departments within 5 years of the Record of Decision for the Forest Plan Revision. (S)

Access

In the Table Rock area, the OROMTRD standard of ≤ 2.0 mi./sq.mi. does not apply (S)

Winter Recreation

Kelly Canyon/Hawley/Buckskin-Morgan Ridge. This area is closed to snowmachines except on designated routes. (S)

Lands (Special Uses)

The Therold Buckland isolated cabin will continue as a life tenure permit and will not transferred. Upon the expiration of the permit, the cabin will be evaluated and its historical qualifications determined. If the cabin is found to have historic value, it may be moved from the site, or the Forest may issue a special use permit to a Historical Association for maintenance of the cabin. If no historical value is found the cabin will be removed. (S)

CARIBOU SUBSECTION (M331D-19)

SETTING

This subsection is the portion of the Caribou National Forest administered by the Targhee. It lies south of the South Fork of the Snake River. Steep mountain slopes and canyons dominate the landscape. The Palisades Reservoir is shared by this subsection and the Big Hole/Palisades Subsection. Vegetation forms a patchwork of tall sagebrush/grass openings, aspen, and mixed Douglas-fir/lodgepole pine forests. Recreation use is very similar to the Big Hole/Palisades Subsection with high trail and backcountry use as well as hunting, fishing and water sports both on the reservoir and the Snake River. This area has several summer home divisions and two organizational camps. Forest lands are visible from U.S Highway 26, the major travel corridor before Idaho Falls, Idaho and Jackson, Wyoming. Only very limited logging has occurred in the past. Both cattle and sheep are grazed.

Mixed conifers and sagebrush/grass communities dominate the subsection. Minimal timber management has occurred in the Engelmann spruce/subalpine fir type. Recreation use here may increase the chance for human-ignited fires.

The Caribou Subsection is 60% forested and 40% nonforested. The primary forest types are aspen (31%) and mixed lodgepole and Douglas-fir (47%). The interspersion of forests with sagebrush, grass/forb meadows and mountain brush provides for good diversity of plant species. The northeastern boundary area of the subsection includes cottonwood forests along the Snake River.

Age class diversity is limited, as in many other areas of the forest. Because virtually no vegetation management has taken place in this subsection and fires have been suppressed for many years, only 1% of the forests are in young age classes. Most of the shrublands are also in late age classes or seral stages. Risks of large fires, insects and diseases are high due to these vegetative conditions. The insect situation in recent years has been similar to that in the Big Hole/Palisades Subsection. Douglas-fir is becoming more predominant as it encroaches on stands of lodgepole pine, aspen or shrubs. It is likely that there is more Douglas-fir here now, and less aspen, lodgepole pine and shrubland, than existed historically. The Snake River cottonwood stands are also uniformly in the mature age class due to lack of disturbance, which they need in order to regenerate, caused by flooding control by Palisades Dam.

Establishing natural regeneration of both Douglas-fir and lodgepole pine following harvest has been a problem in this subsection, and most sites have required planting.

Currently 99 percent of the conifer forests are in a mature or older age class, and the biological potential for woodpecker populations ranges from 59 to 74 percent.

Figure III-9 displays this subsection along with the major prescription areas

DESIRED FUTURE CONDITION

This subsection will be managed to provide high quality nonmotorized and dispersed camping recreation opportunities.

On suitable lands silvicultural management will focus on reducing the risks of insect and disease while improving big game winter range conditions. Prescribed fire will be used on the remainder of the subsection to help obtain healthy ecosystems

The recreational use around Palisades Reservoir and the South Fork of the Snake River will continue but be balanced with the needs of wildlife.

Caribou Subsection (M331D-19)

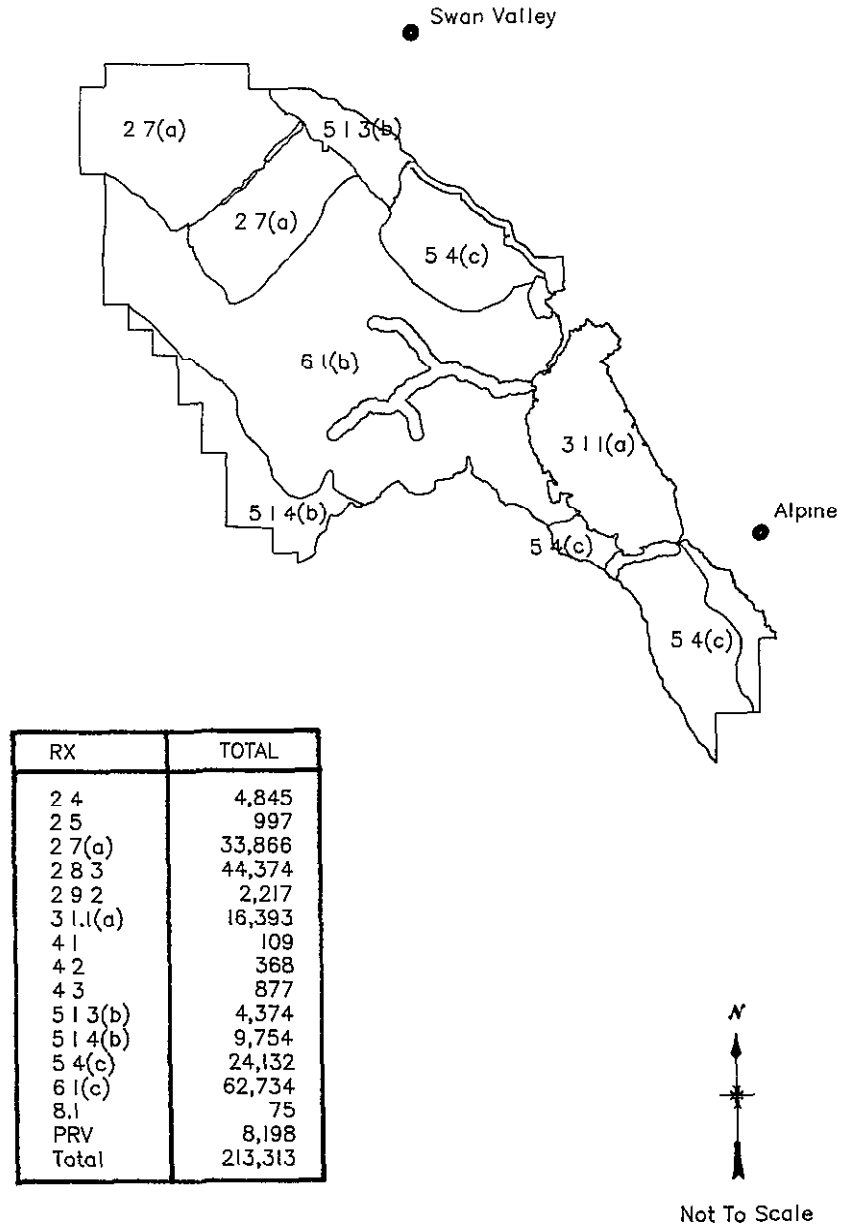


Figure III-9

This subsection will be managed to provide a variety of resource opportunities for the permitted and general public. Quality range management practices will continue on this subsection. Protection of high valued big game winter range in the Fall Creek area will be maintained or improved. Recreational opportunities with emphasis on dispersed recreation opportunities with a quality motorized opportunity on designated trails

GOALS AND OBJECTIVES

Biodiversity - Objective

1. Continue cooperation with other agencies in conducting research and implementing management actions to regenerate cottonwood along the South Fork of the Snake River
2. Develop a fire plan which allows for prescribed natural fire
3. Develop a fire management plan which allows for natural fire and which considers summer home development and risk around the Palisades Reservoir.

Heritage Resources

Complete heritage resource inventory of this subsection by 2010.

Recreation

1. Continue to improve the quality of the summer time OHV use in this Subsection and protect resource values by locating and maintaining trails on suitable locations.
2. Continue to place emphasis on winter recreation for this subsection by continuing a grooming program for snowmachines which is orientated towards family opportunities, and providing shelter facilities (warming huts) continuing to work with user group for X-country skiing opportunities in the Kelly area.

Wild and Scenic River Objective

Complete the suitability studies for rivers that are eligible for wild and scenic river designation.

STANDARDS AND GUIDELINES

Waterfowl Nesting Areas

Salt River on Palisades Reservoir. Area closed to snowmachines from December 1 to March 31.
Area closed to all wheeled vehicles March 15 to July 31 except on designated routes

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INTRODUCTION

A management prescription is a composite of the specific multiple-use direction applicable to all or part of a management area that generally includes, but is not limited to, goals, objectives, standards and guidelines, and probable management practices.

The terms goals, objectives, standards and guidelines were defined in the Introduction of this Chapter. The goals, objectives, standards and guidelines in this section are specific to each management prescription.

This set of management prescriptions is the result of many suggested changes made by our publics and employees to previous sets.

Each management prescription has a motorized access density standard established for it. Roads or trails are frequently used as a convenient geographic feature to identify management prescription area boundaries. When roads or trails are used to identify a management prescription area boundary where the TMARD (Total Motorized Access Route Density) or OROMTRD (Open Road and Open Motorized Trail Route Density) is 0.0 miles/square mile, the road or trail miles are not counted in the TMARD or OROMTRD for that particular prescription area. The road and trail miles are included in the TMARD and OROMTRD calculations in the adjacent management prescription areas. The road and trail miles are included when calculating environmental effects, such as elk vulnerability, grizzly bear cumulative effects, etc.

1.1.6 DESIGNATED WILDERNESS - OPPORTUNITY CLASS I

Description

This prescription applies to the Winegar Hole Wilderness and areas of the Jedediah Smith Wilderness, which are managed as Opportunity Class I.

The effects of human activities are not noticeable to most visitors. Camping activities are not evident, although facilities may be present to assist recovery of T&E species (e.g., bearproof storage boxes). User-created routes and nonsystem trails may exist but they appear as game trails and are not shown on maps or trail guides.

Opportunities exist for individuals or small groups to experience a high quality wilderness dependent education experience. A low level of recreation use occurs in these remote areas which often contain rugged terrain. There is a lack of system trails, a lack of signing, and information about the area is not distributed. Trailhead facilities for these areas are minimally developed to encourage low levels of use. There is a low level of outfitter/guide use.

Low use levels allow for meeting the user's expectations of finding a climbing or caving experience with a high degree of solitude. Evidence of the user's passing are not evident. Opportunity for discovery may exist.

Goals

1. The maintenance of the natural diversity of wildlife species is given the highest priority and is dominant over other uses. There is no great alteration of wildlife behavior or use of crucial habitat by wildlife as a result of human activities.
2. Human activities are managed so there is no appreciable modification of natural succession. Any vegetation loss resulting from camping recovers within one growing season

3. There is no measurable downward trend in plant species composition and plant diversity due to livestock grazing. Utilization levels are compatible with maintaining or enhancing ecological condition. The range is managed so that plant communities are at or trending towards potential natural community status except where natural disturbance, and not livestock or recreation use, determines the lower seral condition.

4. There are outstanding opportunities for solitude, self-reliance, and challenge. Users do not normally see or hear other users.

5. A very minor amount of human-caused bare soil persists from year-to-year in localized areas. No great human-caused soil erosion occurs.

6. Opportunities are provided for research that do not require permanent instrumentation or direct contact with visitors.

Objectives

1. Cooperate with the State Game and Fish Departments to prepare a Wilderness fishery management plan by the year 1999, with consideration of the State's existing fishery management plan for wilderness fisheries.

2. Implement a wilderness education program for all users, which could include. yearly contacts with local schools; yearly programs with organizational camps; information available at Forest and District offices for distribution to the public, periodic contacts at trailheads by Forest Service personnel with Wilderness users; ethics orientation for Wilderness use presented to permittees and Forest Service personnel; and information about grizzly bears.

3. Cooperate with the Wyoming Game and Fish Department in the annual census of bighorn sheep, including lamb survival and ram harvest.

4. Cooperate with other agencies to determine if the Teton Crest bighorn sheep population should be augmented to improve genetic heterogeneity.

5. Reduce competition, disease and parasite exchange potential between domestic and wild sheep by lessening the overlap of their ranges. Phase out domestic sheep grazing within 3 miles of bighorn sheep habitat.

6. Natural and manager-ignited fires are allowed to burn under predetermined prescriptive conditions as described in the Fire Management Action Plan.

7. Manage as trailless areas. Any existing trails will be abandoned and allowed to regress to a natural state unless needed to prevent resource damage.

8. Manage for a low level of outfitter/guide use.

9. Within the grizzly bear recovery zone, domestic sheep grazing will be phased out over time on an opportunity basis.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is as follows:

Physical Elements

Heritage Resources

Evaluate and protect these resources in the context of a setting where there is little public visibility. (G)

Biological Elements

Fish and Other Aquatic Resources

Fish stocking for recreational fishing is permitted with species native to the Wilderness in waters previously stocked (prior to Wilderness designation) by the Game and Fish Department. (G)

Fish stocking for reestablishment of native species may occur. (G)

Wildlife

Grizzly Bear - No new trails or campsites will be developed within the grizzly bear recovery zone within Opportunity Class I areas. (S)

Harlequin Duck - No new trails or campsites should be developed within 300' of streams which provide harlequin duck habitat (G)

Peregrine Falcon - Restrict recreational climbing activities in Teton Canyon (or any other cliff occupied by nesting peregrines) from March 15 through July 31, should a conflict arise between nesting peregrine falcons and recreational climbers. (G)

Forest Use and Occupation

Access (S)

		Cross Country Travel	Road and Trail Travel 1/
	Pedestrian	Yes	No
	Horse/Pack Stock	Yes	No
	Mtn Bike/Mechanized	No	No
	Motorized, <50" wide	No	No
	Motorized, >50" wide	No	No
	OROMTRD 2/	N/A	0.0 mi/sq.mi.
	Winter Nonmotorized	Yes	No
	Snowmachine	No	No
<p>1/ These areas are managed as trailless; there are no maintained trails. Motorized use is prohibited, except for emergencies or valid uses specified in the law.</p> <p>2/ OROMTRD = Open road and open motorized trail route density' includes all open roads and open motorized trails. (See Roads in Glossary for more information)</p>			

Recreation

Dispersed - No dispersed facilities are provided, except facilities may be present for recovery of T&E species. Existing bear-proof food storage boxes in Opportunity Class I zones installed prior to 1993 may remain, but no additional boxes or other facilities will be installed in these areas. (S)

- No signing. (S)

- No distribution of information about these areas (S)

ROS - Manage for a primitive classification. (S)

VQO - Manage for a preservation classification. (S)

Trails/Bridges - Trailhead facilities for these areas are minimally developed to encourage low levels of use. (G)

Production of Natural Resources

Range

Opportunities to resolve domestic sheep/grizzly bear and domestic sheep/bighorn sheep conflicts over time are defined as a suitable or favorable time to abolish or close an allotment because of nonuse violations, term permit waivers where the permit is waved back to the government, resource protection, or permit actions resulting in cancellation of the permit. If opportunities do not arise, then efforts will be made to relocate or accommodate sheep to other areas (G)

1.1.7 DESIGNATED WILDERNESS - OPPORTUNITY CLASS II

Description

This prescription applies to the portions of Jedediah Smith Wilderness which will be managed as Opportunity Class II.

The effects of human activities are somewhat evident to visitors. Camping activities are set back from trails and water. Trail treads are evident but the trail may be brushy and its location blends well with the natural topography. Trails are maintained to protect the resource.

Opportunities exist for individuals and moderate sized groups to experience a quality wilderness related educational experience.

A moderate level of recreation use occurs. Bridges generally are not provided except where needed for resource protection. Directional and resource protection signs may be provided. Campsite facilities may be present for recovery of T&E species. Trailheads used by those accessing these areas contain bulletin boards and may provide undeveloped areas for overnight camping. There may be a high level of outfitter/guide use.

There is a moderate to high opportunity for solitude during July-September. Opportunities for solitude are high at other times. Users may experience a moderate degree of self-reliance and challenge. Users normally do not see other users but may occasionally hear other groups.

Moderate use levels may result in other users seeing or hearing some evidence of caving and climbing activities. Fixed anchors at rappel stations, impacts on approach and descent routes, and some protection left by previous parties notifies users that others have gone before.

Goals

1. The maintenance of the natural diversity of wildlife species is given high priority. There is no displacement of wildlife during critical periods (winter and birthing), and only temporary displacement during noncritical periods.
2. Human activities are managed so there is only limited modification of natural succession at campsites, trails, and grazed areas. Some vegetation loss persists from year-to-year at identified campsites.
3. There is no measurable downward trend in plant species composition and plant diversity due to livestock grazing. Utilization levels are compatible with maintaining or enhancing ecological condition. The range is managed so that plant communities are at or trending towards potential natural community status except where natural disturbance, and not livestock use or recreation use, determines the lower seral condition.
4. Some bare soil persists from year-to-year due to human activities. Human-caused soil erosion may occur.
5. Research opportunities may include a minor amount of instrumentation and only occasional contact with visitors.

Objectives

In addition to the Objectives 1-6 and 9 in opportunity Class I (1.1.6), also add the following

1. Install signs at Wilderness portals advising users they may encounter a variety of other legitimate wilderness uses including sheep and cattle grazing and llama trekking.
2. Natural and manager ignited fires are allowed to burn under predetermined prescriptive conditions as described in the Fire Management Action Plan.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below:

Physical Elements

Heritage Resources

Evaluate and protect these resources in the context of a setting where there is some public visibility. (G)

Biological Elements

Fish and Other Aquatic Resources

Same as 1.1 6 Designated Wilderness Opportunity Class I.

Wildlife

Grizzly Bear - In the event future trails or campsites are developed within the grizzly bear recovery zone, avoid locations within 1/2 mile of key habitat areas such as white bark pine stands, huckleberry patches, riparian areas and wet meadows, avalanche chutes, seasonal insect feeding sites. (G)
Harlequin Duck - Avoid locating new trails or campsites within 300' of streams which provide harlequin duck habitat. (G)

Peregrine Falcon - Restrict recreational climbing activities in Teton Canyon (or any other cliff occupied by nesting peregrines) from March 15 through July 31, should a conflict arise between nesting peregrine falcons and recreational climbers. (G)

Forest Use and Occupation

Access (S)

		Cross Country Travel	Road and Trail Travel 1/
	Pedestrian Horse/Pack Stock Mtn Bike/Mechanized	Yes Yes No	Yes Yes No
	Motorized, <50" wide Motorized, >50" wide OROMTRD 2/	No No N/A	No No 0.0 ml/sq mi.
	Winter Nonmotorized Snowmachine	Yes No	Yes No
<p>1/ Individual trails are designated open or closed in the annual Forest Plan Travel maps. Motorized use is prohibited, except for emergencies or valid uses specified in the law. (FSM 2326.03)</p> <p>2/ OROMTRD = Open road and open motorized trail route density: includes all open roads and open motorized trails. (See Roads in Glossary for more information)</p>			

Recreation

Dispersed - Additional food storage boxes may be provided in Opportunity Class II zones for protection of the grizzly bear. (G)

- Directional and resource protection signs may be provided. (G)

Trails/Bridges

Trails have evident tread but may be brushy. Bridges generally are not provided except where needed for resource protection. (G)

Trailhead facilities contain bulletin boards and may provide undeveloped areas for overnight camping (G)

ROS - Manage for a primitive to semi-primitive nonmotorized classification. (G)

VQO - Manage for a preservation classification. (S)

Production of Natural Resources

Range

Same as 1.1.6 Designated Wilderness - Opportunity Class I.

1.1.8 DESIGNATED WILDERNESS - OPPORTUNITY CLASS III

Description

This prescription applies to areas of the Jedediah Smith Wilderness which will be managed as Opportunity Class III.

The effects of human activities are evident to most visitors but blend in with the natural setting. Camping is set back from trails and water. Trail treads are very evident.

Education Opportunities exist for individuals and large groups to experience a quality educational experience.

Recreation use is relatively high. Bridges are provided where needed for resource protection or visitor safety. Directional, informational and regulatory signs may be provided. Campsite facilities may be present for recovery of T&E species. Trailheads used by those accessing these areas may contain information stations, undeveloped and developed areas for overnight camping and stock facilities. There may be a moderate level of outfitter/guide use.

There is a low to moderate opportunity for solitude during July-September. Opportunities are high at other times. Users may experience a low to moderate degree of challenge and self reliance. Users may see or hear other groups especially during July-September.

High use levels at peak times may result in other users seeing and hearing climbers. Cavers and climbers may encounter other groups, which may slow their progress and may impact their solitude expectations. Fixed anchors at rappel sites are evident. Approach and descent trails are evident, and their impacts are managed to control erosion. Fixed protection anchors on climbs may be evident to hikers at the base of cliffs, but not those on system trails.

Goals

1. The maintenance of the natural diversity of wildlife species is given high priority but does not dominate other uses except where measures are needed to recover T&E species. Temporary displacement of non-T&E species may occur except on crucial ranges but there is no permanent displacement. Some habituation of species may be evident. Opportunities exist for "Watchable Wildlife" program in wilderness setting.

2. Human activities are managed so that modification of natural succession only occurs at campsites, trails, and grazed areas. Moderate vegetation loss persists from year-to-year at identified campsites.

3. There is no measurable downward trend in plant species composition and plant diversity due to livestock grazing. Utilization levels are compatible with maintaining or enhancing ecological condition. The range is managed so that plant communities are at or trending towards potential natural community status except where natural disturbance, and not livestock or recreation use, determines the lower seral condition.

4. A moderate amount of bare soil may persist from year-to-year due to human activities. A moderate amount of human-caused soil erosion may occur.

5. Research opportunities may include some instrumentation and moderate contact with visitors.

Objectives

In addition to the Objectives 1-6 and 9 in Opportunity Class I (1.1.6), also add the following.

1. Signs will be installed at Wilderness portals advising users they may encounter a variety of other legitimate wilderness uses including sheep and cattle grazing and llama trekking.
2. Natural and manager ignited-fires are allowed to burn under predetermined prescriptive conditions as described in the Fire Management Action Plan.
3. Manage for a moderate level of outfitter/guide use.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Physical Elements

Heritage Resources

Evaluate, protect and interpret these resources in the context of a setting where there is moderate human influence and public visibility. (G)

Biological Elements

Fish and Other Aquatic Resources

Stocking of native and nonnative fish is permitted only in waters previously stocked by Game and Fish Department. (S)

Fish stocking for reestablishment of native species may occur. (G)

Wildlife

Grizzly Bear - In the event future trails or campsites are developed within the grizzly bear recovery zone, avoid locations within 1/2 mile of key habitat areas such as white bark pine stands, huckleberry patches, riparian areas and wet meadows, avalanche shoots, seasonal insect feeding sites (G)

Harlequin Duck - Avoid locating new trails or campsites within 300' of streams which provide harlequin duck habitat. (G)

Peregrine Falcon - Restrict recreational climbing activities in Teton Canyon (or any other cliff occupied by nesting peregrines) from March 15 through July 31, should a conflict arise between nesting peregrine falcons and recreational climbers. (G)

Forest Use and Occupation

Access(s)

Same as 1.1.7 Designated Wilderness Opportunity Class II

Recreation

Dispersed - Food storage boxes may be provided in Opportunity Class III zones for protection of the grizzly bear. (G)

- Directional, informational, regulatory and resource protection signs may be provided. (G)

Trails/Bridges - Trails are well defined and brushed out. Bridges are provided where needed for resource protection and visitor safety. (G)

Trailhead facilities contain information stations, undeveloped and developed areas for overnight camping and stock facilities. (G)

ROS - Manage for a primitive to semi-primitive nonmotorized classification. (G)

VQO - Manage for a preservation classification (S)

Production of Natural Resources

Range

Same as 1.1.6 Designated Wilderness Opportunity Class I.

1.2 WILDERNESS STUDY AREA

Description

This prescription applies to the Wyoming portion of the Palisades and Teton Basin Ranger Districts, which was designated as a Wilderness Study Area by the Wyoming Wilderness Act of 1984.

The 1984 Act provided the area be administered to "maintain its present existing wilderness character and potential for inclusion in the National Wilderness Preservation System." (AMS, Roadless Areas, Page 7) The Act provided that oil and gas exploration and development be allowed in accordance with laws and regulations generally applicable to nonwilderness lands in the National Forest system, and that snowmobiling should continue to be allowed in the same manner and degree as was occurring prior to the date of enactment of the Act

This is a mostly pristine area of the Forest where you find little sign of people away from trails or camping areas. They are undeveloped lands retaining their primeval character and influence, and are managed so as to preserve their natural condition. They generally appear to be have been affected primarily by the forces of nature and therefore offer an excellent opportunity for solitude or a primitive and unconfined type of recreation. Occasionally, however, a visitor may see effects of human activity such as primitive campsites, rustic bridges, trails, signs, or primitive roads. A visitor may also encounter livestock, mining, or a snowmobile.

You may find areas of the forest where recent burns, insect activity, or blowdowns dominate the landscape. You would not expect to encounter mechanized equipment, except snowmobiles.

Goal

Protect and perpetuate wilderness character.

Objectives

1. Insects and disease are allowed to play, as nearly as possible, their natural ecological role in the environment.
2. Trails and bridges are constructed/maintained to a level to accommodate heavy foot and horse traffic.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes

Fire/Fuels

Minimum Impact Suppression Tactics will be employed to the maximum extent possible. (G)

Allow prescribed fires from both natural and management-ignition when they meet the objectives of the Wilderness Study Area. (G)

Insects and Disease

Insect and plant disease epidemics may be controlled to prevent unacceptable damage to resources on adjacent lands or an unnatural loss to the Wilderness Study Area resource due to exotic pests. (G)

Physical Elements

Soil and Water

Watershed restoration will be done primarily where deteriorated soil or hydrologic conditions are caused by humans, or where their influences create a serious threat or loss of the Wilderness Study Area values (G)

Promote natural healing where a definite hazard to life or property or important environmental qualities outside and within the Wilderness Study Area are not imminent; or where natural vegetation would return in a reasonable time. (G)

Use indigenous species to reestablish vegetation as the first choice. Where native species are unlikely to succeed, use appropriate self-extirpating naturalized species. (G)

Permit emergency burned area rehabilitation only if necessary to prevent an unnatural loss of wilderness-like resources or to protect life, property, and other resource values outside the Wilderness Study Area. (S)

Maintenance or reconstruction of existing water development structures is allowed if it does not change the location, size, or type, or which does not increase the storage capacity of a reservoir. (G)

Minerals/Geology

Locatable - Withdraw from mineral entry, or remove from mineral entry through the notation rule, subject to valid existing rights (G)

Mineral Material - This area is not available for mineral material entry. (S)

Heritage Resource

Remove structures that do not qualify for the National Register of Historic Places, or allow them to deteriorate naturally unless they are: (G)

1. Deemed necessary to support public purposes of the Wilderness Study Area, or
2. Serve administration purposes.

Interpretation of cultural resources located in the Wilderness Study Area shall be done outside the area. (S)

Biological Elements

Fish and Other Aquatic Resources

Fish stocking of nonexotic species is allowed where it existed prior to establishment of the Wilderness Study Area. Stocking will normally be accomplished by nonmotorized means, such as horse or mule. (G)

Wildlife

Reintroduce wildlife species only if the species was once indigenous to the area and was eliminated by human-induced events. (S)

Wildlife habitat manipulation can only occur if: (S)

- 1 The condition needing change is a result of abnormal human influence.
2. The project can be accomplished with assurance that there will be no serious or lasting damage to wildernesslike value
3. There is reasonable assurance that the project will accomplish the desired objectives.

Forest Use and Occupation

Access (S)

		Cross Country Travel	Road and Trail Travel 1/
	Pedestrian Horse/Pack Stock Mtn Bike/Mechanized	Yes Yes Yes	Yes Yes Yes
	Motorized, <50" wide Motorized, >50" wide OROMTRD 4/	No 2/ No 2/ N/A	Yes 3/ No 0.0 mi/sq.mi. 3/
	Winter Nonmotorized Snowmachine	Yes Yes 3/	Yes Yes 3/

1/ Individual roads and trails are designated open or closed in the annual Forest Plan Travel Maps.

2/ Motorized use is prohibited, except for emergencies or valid uses specified in the law.

3/ Indian Creek. Open to motorized vehicles < 50 inches wide on designated routes, and snowmachines anywhere.

4/ OROMTRD = Open road and open motorized trail route density: includes all open roads and open motorized trails. (See Roads in Glossary for more information)

Roads

Roads are allowed only to the extent they already exist. (S)

Recreation

ROS - Manage for primitive or semi-primitive nonmotorized classification. (G)

VQO - Manage for a preservation classification. (S)

Production of Natural Resources

Timber

Trees may be cut only for valid mining claims under specific conditions, when emergency conditions such as fire, insect and disease arise, for protecting public safety, or when administrative use make it necessary. (G)

1.3 RECOMMENDED/PROPOSED WILDERNESS

Description

This prescription applies to areas that are recommended for addition to the Wilderness Preservation System. They will be managed in their present condition (including existing road use and snowmachine use, as long as existing uses will not degrade Wilderness resources) until Congress takes action on that recommendation.

These are mostly pristine areas of the Forest where you find little sign of people away from trails or camping areas. They are undeveloped lands retaining their natural condition. They generally appear to have been affected primarily by the forces of nature and therefore offer an excellent opportunity for solitude or a primitive and unconfined type of recreation. Occasionally, however, a visitor may see effects of human activity such as primitive campsites, rustic bridges, trails, signs or primitive roads. A visitor may also encounter livestock or mining activity.

You may also find areas of the forest where recent burns, insect activity, or blowdowns dominate the landscape. You may encounter mechanized equipment on designated trails during the summer or snow-machine use during the winter.

Goal

Protect and perpetuate wilderness character.

Objective

Within the grizzly bear recovery zone, an active education program will be implemented each year, including patrols during the fall hunt. (S)

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

The Standards and Guidelines for this prescription are the same as 1 2 (Wilderness Study) except: Recreation. (Developed and Education). Differences are shown as follows:

Forest Use and Occupation

Access (S)

Same as 1.2 Wilderness Study Area, except motorized use.

2/ Motorized use is controlled as follows:

Idaho Portion of Winegar Hole: Motorized use will be managed according to direction in adjacent management prescription areas.

Lionhead. Closed to all motorized vehicles, except snowmachines are allowed during the period Dec. 15 to April 1.

Italian Peak: Open to two wheeled motorized vehicles only on designated routes, and snowmachines anywhere.

Palisades. The Idaho portion is open to snowmachines, but closed to all other forms of motorized use, except for Indian Creek which is as follows:

Indian Creek. Open to motorized vehicles < 50 inches wide on designated routes, and snowmachines anywhere.

Recreation

Developed - Developed, hardened campsites are generally not allowed. (G)

2.1.1 SPECIAL MANAGEMENT AREAS

Description

This management prescription applies to areas with unique cultural, geologic, botanical, or zoological resource values, and sites which are listed or eligible for the National Register of Historic Places.

Vegetation will vary depending on the objectives of each special area. A mix of age class distributions, openings, and horizontal/vertical diversity may be present. In general, vegetation will appear natural in the special management areas; however, exceptions may exist for some areas, and some human-caused vegetation manipulation will occur depending on the objectives of each special area.

Facilities may or may not be present to manage the special areas. Access will range from black top roads, to trails, to no access at all. Administrative sites could have a variety of facilities such as buildings, roads, trails, microwave towers, boat ramps and pasture for the livestock used by Forest Service personnel to manage the Forest.

The amount of human activity apparent in special areas will vary, depending upon the management objectives of each area.

Special management areas may provide some forage for livestock. Timber harvest may be rare or not at all. Restricted livestock grazing and timber activities can be expected to provide additional protection to the special values in the area. Surface facilities for leasable minerals, such as oil and gas, will not be found within a special management area. To protect the values within a special management area, restrictions can be expected for valid existing rights to develop locatable minerals, such as precious metals and high value industrial minerals.

Because of the unique characteristics of these special management areas, these lands may provide economic opportunities for outfitter and guides, educational opportunities for the public and research opportunities for resource managers and academia. These areas will provide a spectrum of recreational opportunities from developed sites containing comfort facilities and visitor centers in a natural setting to sites with no access at all in a pristine setting

Goal

Manage and protect the unique cultural, historic, botanical, geological, and/or zoological resources.

Objectives

1. Maintain or enhance the inherent values associated with each special interest area.
2. Allow insects and disease to play their natural role in ecological succession, except where resource values will be adversely affected.
3. Maintain or enhance the inherent wildlife habitat values associated with each special management area

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes

Fire/Fuels

Prescribed fire, utilizing both management-ignited and natural ignitions, may be used to maintain fire-dependent characteristics of the area (G)

Physical Elements

Soil & Water

Watershed restoration will be done primarily where deteriorated soil or hydrologic conditions are caused by humans. (G)

Promote natural healing where natural vegetation would return in a reasonable time. (G)

Use indigenous or appropriate naturalized species to reestablish vegetation where there is no reasonable expectation of natural healing. (G)

Permit emergency burned area rehabilitation only if necessary to prevent an unnatural loss of resources (S)

Lands

Establish exterior boundaries of sites when necessary for protection (G)

Minerals/Geology

Same as 1.2 Wilderness Study Area.

Heritage Resource

Multiple user interpretive sites may be provided Avoid indoor interpretative sites unless warranted by special circumstances. (G)

Forest Use and Occupation

Access (S)

		Cross Country Travel	Road and Trail Travel 1/
	Pedestrian Horse/Pack Stock Mtn Bike/Mechanized	Yes 2/ Yes 2/ No	Yes Yes Yes
	Motorized, <50" wide Motorized, >50" wide OROMTRD 3/	No No N/A	Yes Yes <= 0.5 m/sq.mi.
	Winter Nonmotorized Snowmachine	Yes 2/ Yes 2/	Yes Yes
<p>1/ Individual roads and trails are designated open or closed in the annual Forest Plan Travel Maps.</p> <p>2/ There may be site-specific exceptions.</p> <p>3/ OROMTRD = Open road and open motorized trail route density: includes all open roads and open motorized trails In 2.1.1 prescription areas <= 1 sq mi. in size, OROMTRD does not apply. (See Roads in Glossary for more information)</p>			

Roads

New road construction may occur if needed to meet the management objectives for the special management area. (G)

Recreation

Dispersed - Minimal recreation facilities may be provided (such as trails, board walks, toilets, etc). Generally, such recreation facilities are not encouraged, and are only provided to protect resource values. (G)

ROS - Primitive to roaded natural. (G)

VQO - Retention to partial retention. (G)

Production of Natural Resources

Timber

These areas are removed from the suitable timber base. They are not part of the ASQ (S)

Generally, no timber harvesting will be allowed in special management areas. Exceptions to this may occur on a site-specific basis for such things as public safety, visual quality, long term maintenance of vegetation conditions, etc. (G)

Range

Livestock grazing and associated developments (such as fencing) are permissible as long as they do not adversely affect the unique resources of the special management area (G)

2.1.2 VISUAL QUALITY MAINTENANCE

Same as 5.2.2 - Visual Quality Maintenance, except: No motorized cross country travel, No ASQ.

2.2 RESEARCH NATURAL AREAS

Description

These management prescription areas are important ecological or natural areas established for non-manipulative research, education, and to maintain natural diversity on National Forest system lands. They also may assist in carrying out provisions of special acts, such as the Endangered Species Act and the monitoring provisions of the National Forest Management Act. Research natural areas are identified and recommended by a steering committee.

These areas are good examples of physical or biological units in which current natural conditions are maintained insofar as possible. These conditions are ordinarily achieved by allowing natural physical and biological processes to prevail without human intervention. (FSM 4063.05).

Nonmanipulative research activities occur in these areas. Some scientific instrumentation may be present. Since these areas are also used for education purposes, occasional groups of people may be present observing and being instructed about the area.

Generally, there are no developed facilities on site. Interpretation of special features will generally be done off site. A road or trail may be present to provide access primarily for research and education purposes. Recreation use is not promoted in these areas, and may be reduced or eliminated if adverse impacts are occurring.

Generally, timber harvesting and other vegetation manipulation is not done. Livestock grazing may occur if not detrimental to the ecological processes of the area. There is no mineral activity.

Goal

Maintain the natural ecological processes inherent in each research natural area.

Objectives

1. Allow insects and disease to play their natural role in ecological succession, except where resource values will be adversely affected.
2. In cooperation with the Intermountain Research Station, develop a research plan and monitoring plan for each research natural area.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed as follows:

Ecological Processes

Fire/Fuels

Use Minimum Impact Suppression Tactics (MIST) as appropriate (G)

Prescribed fire, utilizing both management-ignited and natural ignitions, may be used to maintain fire dependent ecological processes and to provide for a natural range of fuels, understory vegetation, and successional stages. (G)

Physical Elements

Soil & Water

Watershed restoration will be done primarily where deteriorated soil or hydrologic conditions are caused by humans. (G)

Promote natural healing where natural vegetation would return in a reasonable time (G)

Use indigenous species to reestablish vegetation where there is no reasonable expectation of natural healing. (G)

Permit emergency burned area rehabilitation only if necessary to prevent an unnatural loss of resources. (S)

Lands

Establish exterior boundaries of research natural areas when necessary for management/protection purposes. (G)

Minerals/Geology

Same as 1.2 Wilderness Study Area.

Biological Elements

Fish and Other Aquatic Resources

Fish habitat will exist/evolve with natural ecological processes No fish habitat improvements allowed. (S)

Wildlife

Wildlife habitat will exist/evolve with natural ecological processes. No wildlife habitat improvements allowed (S)

Forest Use and Occupation

Access (S)

		Cross Country Travel	Road and Trail Travel 1/
	Pedestrian	Yes 2/	Yes
	Horse/Pack Stock	Yes 2/	Yes
	Mtn Bike/Mechanized	No	Yes
	Motorized, <50" wide	No	Yes
	Motorized, >50" wide	No	Yes
	OROMTRD 3/	N/A	3/
	Winter Nonmotorized	Yes 2/	Yes
	Snowmachine	Yes 2/	Yes
<p>1/ Individual roads and trails are designated open or closed in the annual Forest Plan Travel Maps.</p> <p>2/ There may be site-specific exclusions</p> <p>3/ OROMTRD = Open road and open motorized trail route density: includes all open roads and open motorized trails. The acres in this prescription area and the OROMTRD will be included in the calculations with the acres and OROMTRD in adjacent prescription areas. (See Roads in Glossary for more information)</p>			

Roads

No new road construction. (S)

Recreation

Dispersed - These activities will be managed, and if necessary restricted, to maintain natural ecological processes. (G)

- No bear baiting. (S)

Trails - No new trails. (S)

ROS - Primitive to semi-primitive motorized. (G)

VQO - Preservation. (S)

Outfitter/Guide

No outfitter/guide campsites allowed. (S)

Production of Natural Resources

Timber

These areas are removed from the suitable timber base. They are not part of the ASQ. (S)

No timber harvesting of any kind will be allowed in research natural areas. (S)

Range

Existing livestock grazing permits and fencing are permissible as long as they do not adversely affect the ecological processes of the research natural area. No salting, water developments, vegetation manipulation, or other range improvements are allowed. (S)

2.3 ELIGIBLE WILD RIVER

Description

The purpose of this prescription is to maintain and protect the free-flowing character and the "outstandingly remarkable" values which qualify the river to be considered eligible as a Wild River in the National Wild and Scenic Rivers System pending a suitability determination. This prescription shall also be applied to a river determined to be suitable as a Wild River and to a river designated as a Wild River until such time as a Wild River Management Plan can be adopted.

Wild Rivers are intended to remain as a "vestige of primitive America" with the river corridor, within at least 1/4 mile of the ordinary high water mark on each side of the river, essentially natural and unmodified. Management maintains or improves this undeveloped character, and prevents the degradation or loss of the fish and wildlife, scenic, recreational, cultural, historic, ecologic, or other values which are determined to be outstandingly remarkable. This management prescription provides recreation opportunities that afford a high degree of independence, closeness to nature and self-reliance in an unmodified natural setting.

Interaction between users is infrequent and evidence of resource management activities and other users is minimal. Motorized use within the area is generally not compatible with this designation. Access is usually cross-country or on constructed trails.

The forest presents a natural appearance. A variety of forest successional stages may be present, ranging from areas with recent wildfires to old growth habitat. Firewood is available for camping, but is not available for home use. Outfitter and guiding activity may be present. Domestic livestock grazing may be present in some areas, and you may see limited range improvements such as fencing. A variety of nonforested rangeland successional stages may be present.

Goal

Maintain and protect the free flowing character and the outstandingly remarkable values of the river and corridor which qualify it as a wild river.

Objective

Insects and disease are allowed to play, as nearly as possible, their ecological role in the environment.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Elements

Fire/Fuels

Employ Minimum Impact Suppression Tactics to the maximum extent possible. (G)

Insects & Disease

Insect and plant disease epidemics may be controlled to prevent unacceptable damage to resources on adjacent lands or an unnatural loss to the wild river resource due to exotic pests. (G)

When control is necessary, it shall be carried out by measures that have the least adverse impact on the wild river resource and are compatible with wild river management objectives. (S)

Physical Elements

Soil & Water

Watershed restoration will be done primarily where deteriorated soil or hydrologic conditions are caused by humans or their influences create a serious threat or loss of wild river resource values. (G)

Promote natural healing where a definite hazard to life or property or important environmental qualities outside and within this prescription area are not imminent; or where natural vegetation would return in a reasonable time. (G)

Use indigenous or appropriate naturalized species to reestablish vegetation where there is no reasonable expectation of natural healing. (S)

Permit emergency burned area rehabilitation only if necessary to prevent an unnatural loss of wild river resource values, or to protect life, property, and other resource values outside the area. (S)

Lands

Retain National Forest lands. Acquire private inholdings as opportunities arise. (G)

Minerals/Geology

Locatable - These areas are recommended for withdrawal from mineral activity, or, should be removed from mineral entry through the Notation Rule, subject to valid existing rights. For valid existing claims, design mineral exploration, and development activities to be compatible with this prescription. Apply the following management practices to reduce resource impacts: (G)

1. Design mineral management activities to maintain the present and continued productivity of fish habitat.
2. Take maximum advantage of topographic and vegetation screening when locating mining facilities and equipment.
3. Haul away, bury, burn, or scatter vegetation removed from the project area when vegetation is located adjacent to sensitive travel routes.
4. Minimize the scale of spoil/disposal areas in relation to the surrounding landscape as seen from sensitive viewpoints.
5. Use colors that simulate those found in the characteristic landscape. Avoid use of reflective materials in project facilities.
6. Apply timing restrictions to instream construction as needed to protect fisheries habitat and mitigate adverse disturbance of stream sediments.
7. Use sedimentation traps as needed to mitigate adverse stream sedimentation and meet State and Federal water quality regulations.
8. Design reclamation plans so minerals activities leave a natural appearing condition.
9. Shape landform modifications to simulate naturally occurring forms.

10. Revegetate disturbed areas in accordance with project plans.

Mineral Material - These areas are not available for mineral material entry.

Heritage Resource

Remove structures that do not qualify for the National Register, or allow them to deteriorate naturally unless they are' (G)

1. Deemed necessary to support public purposes of wild rivers, or
2. Serve administration purposes.

Interpretation of heritage resources located in wild river corridors shall be done outside the corridor. (S)

Biological Elements

Fish and Other Aquatic Resources

Fish habitat will exist/evolve with natural ecological processes. Fish habitat manipulation can only occur if: (S)

1. The condition needing change is a result of abnormal human influence.
2. The project can be accomplished with assurance that there will be no serious or lasting damage to wild river values.
3. There is reasonable assurance that the project will accomplish the desired objectives.

Fish stocking of nonexotic species is allowed where it existed prior to establishment of the Wild River. (S)

Stocking will normally be accomplished by nonmotorized means, like horse or mule. (G)

Wildlife

Reintroduce wildlife species only if the species was once indigenous to the area and was eliminated by human-induced events. (S)

Wildlife habitat will exist/evolve with natural ecological processes. Wildlife habitat manipulation can only occur if: (S)

1. The condition needing change is a result of abnormal human influence.
2. The project can be accomplished with assurance that there will be no serious or lasting damage to wild river values
3. There is reasonable assurance that the project will accomplish the desired objectives.

Forest Use and Occupation

Access (S)

		Cross Country Travel	Road and Trail Travel 1/
	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	No	Yes
	Motorized, <50" wide	No	No 2/
	Motorized, >50" wide	No	No 2/
	OROMTRD 3/	N/A	0.0 mi/sq.mi.
	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes 4/	Yes

1/ Individual roads and trails are designated open or closed in the annual Forest Plan Travel Maps.

2/ This use may be allowed where currently existing and it does not degrade the outstandingly remarkable river values.

3/ OROMTRD = Open road and open motorized trail route density. includes all open roads and open motorized trails. (See Roads in Glossary for more information)

4/ Within grizzly bear BMU's, cross-country snowmachine travel is only allowed from December 15 to April 1.

Recreation

Dispersed - Recreation facilities will be of a very primitive nature, using a pack-it-in, pack-it-out philosophy. (G)

ROS - Primitive to semi-primitive nonmotorized. (G)

VQO - Retention. (S)

Outfitter/Guide

Permanent caches or nonnative improvements are not allowed unless they existed prior to the establishment of the wild river and have not been phased out. Upon designation of a Wild River, any existing caches will be phased out within two years. (S)

Production of Natural Resources

Timber

Lands are removed from the suitable timber base. No ASQ is calculated from these lands. (S)

Cutting of trees will not be allowed except when needed in association with a primitive recreation experience (such as clearing for trails and protection of users) or to protect the environment (such as control of fire). (S)

Range

Minimize conflicts with recreation use. (G)

Range developments (water tanks, fences, etc) that do not detract from the overall objectives of the area are acceptable. (G)

Manage allotments at FRES levels A , B, C, or D. (G)

2.4 ELIGIBLE SCENIC RIVER

Description

The purpose of this prescription is to maintain and protect the free-flowing character and the "outstandingly remarkable" values which qualify the river to be considered eligible as a Scenic River in the National Wild and Scenic Rivers System pending a suitability determination. This prescription shall also be applied to a river determined to be suitable as a Scenic River and to a river designated as a Scenic River until such time as a Scenic River Management Plan can be adopted.

Proposed Scenic Rivers are managed to protect and enhance the outstandingly remarkable fish and wildlife, scenic, recreational, historic, cultural or other values identified for the river, within, as a minimum, 1/4 mile of the ordinary high water mark on each side of the river. Moderate levels of existing development, including roads which cross the river but are generally screened from the river banks, are allowed. New development and uses must not degrade the values which qualify the river for consideration as eligible. Recreation facilities of a rustic design, including boat access, cabins, access roads leading to the river and trails are appropriate. The area is managed to provide a waterway and associated shorelines where activities are not visually evident to the casual observer. The Scenic River management prescription may provide recreation opportunities which meet high expectations for scenic quality associated with an essentially natural appearing environment and a free flowing river.

Administrative and recreation facilities are screened from the river. Nonrecreation special use structures may occur if they meet visual quality objectives and do not degrade the outstandingly remarkable values. Recreation facilities are designed to be compatible with the visual quality objectives of the river and corridor. Recreation opportunities range from roaded natural to primitive. Outfitter and guiding activity may be present.

No development of hydroelectric power facilities is permitted. New structures that would have a direct adverse effect on river values are not authorized.

Lands are open to mineral entry subject to regulations prescribed by the Secretary of Agriculture to protect the free-flowing character and outstandingly remarkable values of the river. Existing and new activity must minimize surface disturbance, sedimentation, air pollution, visual impairment, and meet applicable State Water Quality Standards. Reasonable access is permitted.

Fish and wildlife habitat improvement may occur and is designed to be visually compatible with the scenic qualities of the river and corridor.

Roads are generally screened from the river and infrequent road and trail crossings (bridges) may be present. Trails paralleling the river are acceptable.

Domestic livestock grazing may be present in some areas. Range improvements may occur and are designed to be visually compatible with the scenic qualities of the river and corridor.

Forested lands are classified as unsuitable; no scheduled timber harvesting is allowed. Personal use wood cutting is compatible with this land use designation provided that management objectives are met

Goal

Maintain and protect the free flowing character and the outstandingly remarkable values of the river and corridor which qualify it as a Scenic River.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes

Fire/Fuels

Employ Minimum Impact Suppression Tactics to the maximum extent possible. (G)

Insects & Disease

Allow sanitation and salvage of infested timber as long as such practices are carried out in such a way that there is no substantial adverse effect on the river and its immediate environment. (G)

Physical Elements

Soil & Water

Watershed restoration will be done primarily where deteriorated soil or hydrologic conditions are caused by humans or their influences create a serious threat or loss of Scenic River resource values. (G)

Promote natural healing where a definite hazard to life or property or important environmental qualities outside and within this prescription area are not imminent, or where natural vegetation would return in a reasonable time. (G)

Use indigenous or appropriate naturalized species to reestablish vegetation where there is no reasonable expectation of natural healing. (S)

Permit emergency burned area rehabilitation only if necessary to prevent an unnatural loss of Scenic River resource values, or to protect life, property, and other resource values outside the area. (S)

Lands

Retain National Forest lands. Acquire private inholdings as opportunities arise. (S)

Minerals/Geology

Same as 2.3 Eligible Wild River

Biological Elements

Wildlife

Other - Reintroduce wildlife species only if the species was once indigenous to the area and was eliminated by human-induced events. (S)

Wildlife habitat will exist/evolve with natural ecological processes. Wildlife habitat manipulation can only occur if generally (S)

1. The condition needing change is a result of abnormal human influence
2. The project can be accomplished with assurance that there will be no serious or lasting damage to Scenic River values.
3. There is reasonable assurance that the project will accomplish the desired objectives.

Forest Use and Occupation

Access (S)

		Cross Country Travel	Road and Trail Travel 1/
	Pedestrian Horse/Pack Stock Mtn Bike/Mechanized	Yes Yes Yes	Yes Yes Yes
	Motorized, <50" wide Motorized, >50" wide OROMTRD 3/	No No N/A	Yes 2/ Yes 2/ 3/
	Winter Nonmotorized Snowmachine	Yes Yes 4/	Yes Yes
<p>1/ Individual roads and trails are designated open or closed in the annual Forest Plan Travel Maps.</p> <p>2/ Motorized use is allowed unless it needs to be prohibited or restricted to protect the river values</p> <p>3/ OROMTRD = Open road and open motorized trail route density does not apply to this prescription area.</p> <p>4/ Within grizzly bear BMU's, cross-country snowmachine travel is only allowed from December 15 to April 1.</p>			

Roads

No new roads may be constructed or road improvements made that would change or modify the classification for which the river was designated. (S)

Recreation

Dispersed - Comfort and convenience facilities, such as fireboxes and shelters may be provided as necessary within the river area. These should harmonize with the surroundings and be managed so they do not adversely affect spawning grounds. (G)

Maintain existing dispersed campsites that do not degrade the outstandingly remarkable values. (G)

Trails - Trails and bridges paralleling or crossing the river are acceptable, provided VQO and ROS objectives for the river and corridor are maintained. (G)

No new trails may be constructed or trail improvements made that would change or modify the classification for which the river was designated (S)

ROS - Primitive to semi-primitive motorized. (G)

VQO - Retention. (S)

Outfitter/Guide

Permanent caches or improvements are allowed if they meet the visual quality management objectives for the river and corridor and are within the Greater Yellowstone Area Outfitter Plan. (G)

Production of Natural Resources

Timber

Lands are not included in the suitable timber base. They do not contribute toward the ASQ. (S)

Personal use wood cutting is allowed with restrictions to protect the outstanding remarkable values. (G)

Range

Range management is permitted to the extent it is currently practiced and does not degrade river values. (G)

Range developments (water tanks, fences, etc.) that do not detract from the overall objectives of the area are acceptable. (G)

Manage allotments at FRES levels B, C, or D. (G)

2.5 ELIGIBLE RECREATION RIVER

Description

The purpose of this prescription is to maintain and protect the essentially free-flowing character and the outstandingly remarkable values which qualify the river to be considered eligible as a Recreational River in the National Wild and Scenic Rivers System pending a suitability determination. This prescription shall also be applied to a river determined to be suitable as a Recreation River and to a river designated as a Recreation River until such time as a Recreation River Management Plan can be adopted.

Proposed Recreational Rivers are managed to protect the outstandingly remarkable fish and wildlife, scenic, recreational, historic, cultural or other values identified for the river, within, as a minimum, 1/4 mile of the ordinary high water mark on each side of the river. The area may include significant human development, residences, roads and highways, and minor existing modifications to the waterway, including diversion dams. Major water resource projects are not authorized. The area may include landscapes in a variety of visual conditions. Activities and structures may be dominant in some areas, but harmonize and blend with the generally natural-appearing environment to provide a pleasing setting for recreation activities. This management area prescription may provide recreation opportunities where the interaction between users may be moderate-to-high with evidence of current and past use prevalent. Roads are designed for conventional motorized vehicles. Facilities may exist for boat or aircraft use.

Allowed motorized use within the area may include boats, aircraft, snowmachines, construction and maintenance of needed facilities. Motorized land travel for recreation purposes may be restricted. All scheduled resource management activities are integrated in such a way that the recreation and water quality values remain paramount.

Administrative and recreation facilities are located and designed to complement and facilitate area management. Recreation opportunities range from semi-primitive nonmotorized to rural Outfitter and guiding activity may be present.

To the extent of Forest Service authority, no development of hydroelectric power facilities is permitted. New structures that would have a direct adverse effect on river values are not authorized.

Lands are open to mineral entry subject to regulations prescribed by the Secretary of Agriculture. Existing and new activity must minimize surface disturbance, sedimentation, air pollution, visual impairment, and meet applicable State Water Quality Standards. Reasonable access is permitted.

Forested lands are classified as unsuitable; no scheduled timber harvesting is allowed. Personal use woodcutting is compatible with this land use designation provided that management objectives are met.

Design and location of roads and facilities provide for conventional motorized use. User safety and opportunities for nonmotorized recreation activities may be provided by restricting motorized use to designated routes and areas. Both motorized and nonmotorized trail opportunities may be provided.

Fish projects may be identified and implemented which create or improve fishing opportunity. Wildlife habitat emphasis is on maintaining healthy and productive habitat conditions for indigenous species and improving wildlife viewing opportunities.

Domestic livestock grazing may be present in some areas. Range improvements may occur and are designed to be compatible with the recreational qualities of the river and corridor.

Goal

Maintain and protect the outstandingly remarkable values of the river and corridor which qualify it as a Recreational River.

Objectives

1. Maintain or improve forest health through silvicultural activities to protect the values of Recreational Rivers.
2. Fish habitat improvement projects will emphasize recreational fishing opportunities

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes

Fire/Fuels

All activity fuels will be treated to meet the partial retention VQO in foreground within one season following timber harvest. (G)

Insects & Disease

Encourage hazard tree management in high use areas. (G)

Physical Elements

Soil & Water

Watershed restoration will be done primarily where deteriorated soil or hydrologic conditions are caused by humans or their influences create a serious threat or loss of Recreational River resource values. (G)

Promote natural healing where a definite hazard to life or property or important environmental qualities outside and within this prescription area are not imminent; or where natural vegetation would return in a reasonable time. (G)

Consider the use of indigenous or appropriate naturalized species to reestablish vegetation where there is no reasonable expectation of natural healing. (G)

Permit emergency burned area rehabilitation only if necessary to prevent an unnatural loss of Recreational River resource values, or to protect life, property, and other resource values outside the area. (S)

Lands

Retain National Forest lands. Acquire private inholdings as opportunities arise. (G)

Minerals/Geology

Same as in 2.3 Eligible Wild River.

Biological Elements

Fish and Other Aquatic Resources

Fish stocking of nonexotic species is allowed where it existed prior to establishment of the Recreational River. (S)

Forest Use and Occupation

Access(S)

		Cross Country Travel	Road and Trail Travel 1/
	Pedestrian Horse/Pack Stock Mtn Bike/Mechanized	Yes Yes Yes	Yes Yes Yes
	Motorized, <50" wide Motorized, >50" wide OROMTRD 3/	No No N/A	Yes 2/ Yes 2/ 3/
	Winter Nonmotorized Snowmachine	Yes Yes 4/	Yes Yes

1/ Individual roads and trails are designated open or closed in the annual Forest Plan Travel Maps.

2/ Motorized use is allowed unless it needs to be prohibited or restricted to protect the river values.

3/ OROMTRD = Open road and open motorized trail route density does not apply to this prescription area.

4/ Within grizzly bear BMU's, cross-country snowmachine travel is only allowed from December 15 to April 1.

Recreation

Dispersed - All forms of recreation facilities may be provided, such as boat access points, trails, toilets, fire rings, grills, garbage collection, etc. Facilities are designed to be compatible with the ROS and VQO of the river and corridor and should be managed so they do not adversely affect spawning grounds. (G)

Trails - Trails and bridges paralleling or crossing the river are acceptable, provided VQO and ROS objectives for the river and corridor are maintained. (G)

- Both motorized and nonmotorized trail opportunities may exist. (G)

- New trails could be constructed on one or both river banks. There can be several bridge crossings and numerous river access points. (G)

ROS - Semi-primitive nonmotorized to urban. (G)

VQO - Partial retention VQO in the foreground as seen from the river, roads, trails and recreational facilities. (S)

- Modification to maximum modification for all other areas within the corridor (G)

Outfitter/Guide

Permanent caches or improvements are allowed if they meet the visual quality management objectives for the river and corridor and are within the Greater Yellowstone Area Outfitter Plan. (G)

Production of Natural Resources

Timber

Lands are not included in the suitable timber base. They do not contribute toward the ASQ (S)

Personal use wood cutting is allowed with restrictions to protect the outstandingly remarkable values. (G)

Range

Range developments (water tanks, fences, etc.) that do not detract from the overall objectives of the area are acceptable (G)

Manage allotments at FRES levels B, C, or D. (G)

2.6.1 (a-b) GRIZZLY BEAR HABITAT (NO ASQ, NO CROSS-COUNTRY, NO SHEEP)

Same as 5.3 5 except:

Production of Natural Resources

Timber

Lands are not included in the suitable timber base. They do not contribute toward the ASQ. (S)

Range

No domestic sheep grazing. (S)

2.6.2 GRIZZLY BEAR - PLATEAU BMU DIRECTION - CORE AREA

Description

The core area is defined as an area that provides a predictable refuge in space and time for a bear population segment or family unit. This area is consistently available and provides for use by wary bears while activities occur elsewhere. The core area contains moderate to high quality bear foods, provides predictable and consistently available space to meet seasonal bear habitat needs, and achieves the lowest mortality risk possible due to human activities for a period not less than 11 years. Management activities shall follow established rules, and in general, do not occur during the period of time that grizzly bears are active (outside dens). The primary emphasis for this area is on providing secure habitat for grizzly bears.

This is a refugium of high quality habitat available to bears where management activities do not occur during the period bears are active. Habitat conditions provide space that is consistently available and predictably locatable to bears. This area provides a portion of the foraging requirement for a reproductive female and a female offspring for spring, summer, and fall foraging away from human activities. Secure habitat exists, and mortality risk to bears is low.

Objectives

1. A fire management plan will be developed (and will be coordinated with any adjacent wilderness fire plans) to address wildfires.
2. Insects and diseases are allowed to play their natural role in ecosystem development.
3. Any nonfederal lands within this area will be a high priority for acquisition.
4. Manage dispersed recreation to minimize grizzly conflicts with humans.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

The Interagency Grizzly Bear Guidelines for Management Situation 1 Habitat apply to this management prescription.

Ecological Processes

Fire/Fuels

No prescribed fire is allowed. (S)

In the event of a fire that warrants suppression, only minimum impact suppression techniques will be allowed. (S)

Physical Elements

Lands

Activities which adversely affect grizzly bear populations and/or their habitat will not be allowed. (S)

No special use permits or operating plans are allowed. (S)

Minerals/Geology

Same as 2 3 Eligible Wild River.

Heritage Resource

No new interpretation/enhancement of cultural sites. (S)

Biological Elements

Wildlife

No wildlife habitat improvement projects are allowed (S).

Forest Use and Occupation

Access (S)

		Cross Country Travel	Road and Trail Travel 1/
	Pedestrian Horse/Pack Stock Mtn Bike/Mechanized	Yes Yes Yes	Yes Yes Yes
	Motorized, <50" wide Motorized, >50" wide TMARD 2/ OROMTRD 2/	No No N/A N/A	No No 0 0 mi/sq mi. 0.0 mi/sq.mi.
	Winter Nonmotorized Snowmachine	Yes Yes 3/	Yes Yes
<p>1/ Individual roads and trails are designated open or closed in the annual Forest Plan Travel Maps.</p> <p>2/ TMARD = Total motorized access route density: includes all open and restricted roads and motorized trails. (see Roads in Glossary for more information). OROMTRD = Open road and open motorized trail route density: includes all open roads and open motorized trails. (See Roads in Glossary for more information)</p> <p>3/ Cross-country snowmachine use is only allowed from Dec. 15 to April 1.</p>			

Roads

All roads will be reclaimed, as soon as possible. (S)

Recreation

Special Uses - No special uses are allowed from April 1 to December 15. (S)

Trails - No new trails. (S)

ROS - Primitive to semi-primitive nonmotorized (G)

VQO - Retention. (S)

Outfitter/Guide

No outfitter and guide permits are allowed from April 1 to December 15 (S)

Production of Natural Resources

Timber

Lands are not included in the suitable timber base. They do not contribute toward the ASQ. (S)

No vegetation management of any kind will occur. (S)

Range

No livestock grazing permits of any kind are allowed. (S)

2.6.5 GRIZZLY BEAR - SECURITY AREA

Description

This area is consistently available and provides for use by wary bears while activities occur elsewhere. This area contains moderate to high quality bear foods, provides predictable and consistently available space to meet seasonal bear habitat needs, and achieves the lowest mortality risk possible due to human activities for a period not less than the planning period. Management activities shall follow established rules, and in general, do not occur during the period of time that grizzly bears are active (outside dens). Emphasis for this area is on providing secure habitat for grizzly bears.

This is an area of high quality habitat available to bears where management activities are limited during the period bears are active. Habitat conditions provide space that is consistently available and predictably locatable to bears. This area provides a portion of the foraging requirement for a reproductive female and a female offspring for spring, summer, and fall foraging.

Objectives

1. A fire management plan will be developed (and will be coordinated with any adjacent wilderness fire plans) to address wildfires.
2. Insects and diseases are allowed to play their natural role in ecosystem development.
3. Any nonfederal lands within this area will be a high priority for acquisition.
4. Activities which adversely affect grizzly bear populations and/or their habitat will not be allowed.
5. No new special use permits.
6. Wildlife habitat improvement projects will maintain or improve grizzly bear habitat.
7. Manage dispersed recreation to minimize grizzly conflicts with humans.
8. Domestic sheep grazing will be phased out over time on an opportunity basis.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

The Interagency Grizzly Bear Guidelines for Management Situation 1 Habitat apply to this management prescription.

Ecological Processes

Fire/Fuels

Prescribed fire is not usually allowed. (G)

Physical Elements

Minerals/Geology

Same as 2 3 Eligible Wild River

Heritage Resource

No new interpretation/enhancement of cultural sites. (S)

Biological Elements

Wildlife

Activity Areas - Inventory, monitoring, and short duration activities such as trail maintenance, spraying weeds, range maintenance activities, wildlife habitat improvement, etc., should be concentrated in time and space. Activities should be concentrated in one consecutive 30-day period each year, between April 1 and September 15. (G)

Forest Use and Occupation

Access (S)

		Cross Country Travel	Road and Trail Travel 1/
	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
	Motorized, <50" wide	No	No
	Motorized, >50" wide	No	No
	TMARD 2/	N/A	0.0 mi/sq.mi 2/
	OROMTRD 2/	N/A	0.0 mi/sq.mi 2/
	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes 3/	Yes

1/ Individual roads and trails are designated open or closed in the annual Forest Plan Travel Maps.

2/ TMARD = Total motorized access route density; includes all open and restricted roads and motorized trails. (See Roads in Glossary for more information)

OROMTRD = Open road and open motorized trail route density; includes all open roads and open motorized trails. (see Roads in Glossary for more information).

Two roads are designated open through this prescription area: the Ashton/Flagg Ranch Road (#261) and the Jackass Loop Road (#264).

3/ Cross-country snowmachine use is only allowed from Dec. 15 to April 1.

Roads

No new roads. (S)

All nondesignated roads will be reclaimed by year 2000. (S)

Recreation

Special Uses - No new special uses are allowed from April 1 to December 15. (S)

Trails - No new trails. (S)

ROS - Primitive to semi-primitive motorized. (G)

VQO - Retention. (S)

Outfitter/Guide

No new outfitter and guide permits are allowed from April 1 to December 15 (S)

Production of Natural Resources

Timber

Lands are not included in the suitable timber base. They do not contribute toward the ASQ. (S)

Range

Opportunities to phase out domestic sheep grazing are defined as a suitable or favorable time to abolish or close an allotment because of nonuse violations, term permit waivers where the permit is waived back to the government, resource protection, or permit actions resulting in cancellation of the permit. If opportunities do not arise, then efforts will be made to relocate or accommodate sheep to other areas. (G)

Cattle grazing is allowed. Allotment Management Plan will specify measures to meet agency grizzly goals and objectives. (S)

Permittee's full compliance in meeting grizzly bear management goals and objectives for grizzly bear habitat will be a condition of the permit. In addition, the following will be required: (S)

1. Temporary cessation or modification of permitted livestock grazing activities will occur to resolve grizzly bear conflicts with humans or livestock.
2. Livestock carcasses will be disposed of or rendered unattractive to bear within 24 hours after they are discovered. Disposal may include removing the carcass from the area, burying it at least 2 feet underground, burning, using an acceptable chemical repellent, or other methods approved by the District Ranger. Disposal shall be in accordance with other governing agencies (e.g., Wyoming Department of Fish and Game) in order to determine cause of death for reimbursement purposes.
3. Human food, refuse, and prepared livestock/pet foods associated with the livestock operation will be made unavailable to grizzlies through proper storage, handling, and disposal. Proper storage includes a) inside a bear-proof container, b) suspended horizontally from adjacent posts or trees, c) stored in a hard-sided vehicle or trailer, or d) other methods approved by the District Ranger. The exception is when the food is being eaten or prepared for eating, or when food and similar organic matter is being transported. Unburned human foods, garbage or other refuse will be carried off the Forest as often as practical.
4. High quality food production areas for grizzlies (i.e. wet alpine and subalpine meadows, stream bottoms, aspen groves, and other riparian areas) will receive special grazing direction such as light, once-over grazing, special utilization standards, or complete closure. These sites and their corresponding direction will be identified in the Annual Operating Plan.

5. Livestock depredation believed to be associated with bears will be reported within 24 hours after they are discovered to the District Ranger and the proper State agencies.

6. Any observation of grizzly bear or grizzly bear sign will be reported to the District Ranger as soon as practical.

7. Any action taken by the permittee or their agents which violates the Endangered Species Act will be grounds for cancellation of their grazing permit.

2.7 (a-b) ELK & DEER WINTER RANGE

Description

This management prescription emphasizes management actions and resource conditions which provide quality elk and deer winter habitat. Habitats are managed for multiple land use benefits, to the extent these land uses are compatible with maintaining or improving elk and deer winter habitat.

These areas are "crucial mid-to-late" natural winter ranges for deer and elk. These are the winter range areas which are considered to be the determining factor in a population's ability to maintain itself at a certain level over the long term. Moose and antelope may also be present.

Vegetation management occurs to maintain or improve winter habitat conditions. Winter range forage is abundant, includes a good mixture of grasses, forbs, and shrubs, and is well distributed throughout the area. Cover is maintained and distributed within the range of natural variability which historically occurred in the area.

Access is managed or restricted to provide security for wintering elk and deer. Area closures are emphasized where terrain and vegetation allow OHV use, with motorized use occurring only on designated routes.

Livestock grazing, timber management, recreation, and other resource management activities can occur as long as good winter range conditions are being maintained.

Goal

Provide quality elk and deer winter range.

Objectives

1. Minimize forage use conflicts between big game and livestock on the winter range.
2. Forested vegetation is managed to maintain or improve cover or forage conditions needed for wintering deer and elk.
3. Nonforested vegetation is managed to maintain or improve forage production needed for wintering deer and elk.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed as follows.

Ecological Processes

Fire/Fuels

Prescribed fire is allowed to maintain or improve winter habitat and enhance ecological conditions (G)

Physical Elements

Heritage Resource

No new interpretation/enhancement of cultural sites. (S)

Forest Use and Occupation

Access (S)

2.7 (a)

		Cross Country Travel	Road and Trail Travel 1/
	Pedestrian	No 2/	Yes
	Horse/Pack Stock	No 2/	Yes
	Mtn Bike/Mechanized	No 2/	Yes
	Motorized, <50" wide	No	Yes
	Motorized, >50" wide	No	Yes
	OROMTRD 3/	N/A	<= 2.0 mi/sq.mi.
	Winter Nonmotorized	No	Yes 4/
	Snowmachine	No	Yes 4/

1/ Individual roads and trails are designated open or closed in the annual Forest Plan Travel Maps.

2/ These uses are generally allowed from April 1 through Dec. 15, except where noted on annual Forest Travel Plan Maps.

3/ OROMTRD = Open road and open motorized trail route density: includes all open roads and open motorized trails (See Roads in Glossary for more information)

In 2 7 (a) prescription areas <= 4.0 sq.mi. in size, OROMTRD does not apply.

In the Table Rock area (Palisades Ranger District), OROMTRD does not apply.

4/ Snowmachines, cross-country skiing, dogsleds, etc., will be restricted to 50 feet on either side of a designated road or trail.

2.7 (b) - The (b) access standards are the same as (a) above, except that cross country travel is allowed without seasonal restrictions for pedestrians, horse/pack stock, mountain bikes/mechanized Only snowmachine use is restricted to 50 feet on either side of a designated road or trail

Game Retrieval - Use of All Terrain Vehicles (ATV's) is permitted cross-country and on restricted roads and trails during the big game hunting seasons for retrieval of legally harvested big game animals (G)

The following guidelines should be followed. (G)

1 An ATV is defined as three or four wheeled vehicles (< 50" wide) that have low tire pressure (less than 10 psi) and large tire surface on the ground This does not include motorcycles, dirt bikes or conventional 4-wheel drive vehicles.

2 A permit to retrieve the legally harvested big game animal (s) must be obtained from a Ranger District Office.

3. Use of the ATV to retrieve the animal (s) must occur between noon and dark.

4. No firearms are allowed on ATV's while retrieving legally harvested big game animals

Recreation

Dispersed - Manage recreation sites to maintain winter habitat conditions. Minimal recreation facilities may be provided (such as hitch rack, rudimentary toilets, etc.). Generally, recreation facilities are not encouraged. (G)

ROS - Semi-primitive nonmotorized to roaded natural. (G)

VQO - Retention to modification (G)

Production of Natural Resources

Timber

These areas are not part of the suitable timber base. They are not part of the ASQ. (S)

2.8.3 AQUATIC INFLUENCE ZONE

Description

This prescription applies to the aquatic influence zone associated with lakes, reservoirs, ponds, perennial, and intermittent streams, and wetlands (e.g., wet meadows, springs, seeps, and bogs). These areas control the hydrologic, geomorphic, and ecological processes that shape the various water types mentioned above and directly affect aquatic life. They also provide unique habitat characteristics which are important to those plant and animal species which rely on aquatic, wetland, or riparian ecosystems for all or a portion of their life cycle. Many such habitats are locally rare or are sensitive to disturbance (e.g. fens and thermal springs). Overall, these areas serve as important reservoirs of biodiversity; critical linkages for the interchange of plant and animal genetic material, and specialized areas of nutrient cycling and freshwater filtration, storage, and transport.

Management emphasis is directed at the application of ecological knowledge to restore and maintain the health of these areas in ways that also produce desired resource values, products, protection, restoration, enhancement, interpretation, and appreciation of these areas.

These aquatic influence zones provide a high level of aquatic protection and maintain ecological functions (e.g., sediment transport, micro-climate control, nutrient regulation, and connectivity within the watershed) and processes (e.g., stream channel formation, plant community development, recruitment of organic material including large wood, and hydrologic cycles) necessary for the restoration and maintenance of habitat for aquatic and riparian dependent organisms. They also maintain future management options.

This Management Prescription is defined on the ground using boundary widths which may vary by water type, and geographic characteristics. The actual boundaries of the aquatic influence zone, as determined by a person having current knowledge of fluvial geomorphology of stream-riparian ecology, or both, could be narrower or wider than the prescribed boundary widths.

The five basic water types found on the Forest are:

- 1 Fish-bearing Stream Reaches,
2. Perennial Non-fish-bearing Stream Reaches,
3. Lakes,
4. Reservoirs, Ponds and Wetlands Greater than One Acre,
5. Intermittent Streams, and Wetlands Less Than One Acre

Goals

- 1 *Riparian, wetland and aquatic ecosystems are managed to promote their health and function within the range of variation, where feasible.*
2. Minimize adverse effects to aquatic and riparian dependent species from past, existing and proposed management activities.
3. Endemic levels of insects and disease are allowed to play their natural role in ecological succession, compatible with other resource objectives.

Objectives

1. Within three years of the Record of Decision, all existing roads, trails, culverts, fords and stream crossings within these lands will be inventoried and evaluated as to whether they meet management prescription goals. Those that do not meet management prescription goals will be scheduled for restoration.
2. Establish the range of variability for aquatic influence zone characteristics.
3. Manage wood residue (natural and human-made), including fuelwood, to maintain or restore ecological health and function.
- 4 Coordinate with Idaho Fish and Game, Wyoming Game and Fish, and other interested individuals or groups, to identify and evaluate potential beaver re-introduction sites. Support re-introductions into areas that would benefit from beaver activity and where conflicts with other uses have been resolved.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Boundary widths for the five water types apply until a site-specific analysis is completed. The slope distances specified for boundary widths in the five water types will vary by ecological subsection. Following are the slope distances of boundary widths, in feet, by ecological subsection. (G)

BOUNDARY WIDTHS OF WATER TYPES, BY SUBSECTIONS

Water Type	Subsections*		
	3;4	2	1;5;6;7
Fish-bearing Stream Reaches 1/	150	200	300
Perennial Nonfish-bearing Stream Reaches 1/	75	75	150
Lakes 2/	150	200	300
Reservoirs, Ponds, Wetlands Greater than One Acre 3/	75	75	150
Intermittent Streams, Wetlands Less Than One Acre 4/	75	75	100
<p>*Subsections 1 - Lemhi/Medicine Lodge 2 - Centennial Mountains 3 - Island Park 4 - Madison Plateau 5 - Teton Range 6 - Big Hole/Palisades Mountains 7 - Caribou</p>			
<p>1/ The boundary width is the slope distance on both sides of the stream, in feet, measured from the edge of the stream, or the area from the edge of the active stream channel to the outer edges of the riparian vegetation, whichever is greater.</p> <p>2/ The boundary width is the slope distance specified, in feet, measured from the high water mark of the lake; or the area from the high mark of the lake to the outer edge of the riparian vegetation or seasonally saturated soil, whichever is greater.</p> <p>3/ The boundary width is the slope distance specified, in feet, measure from the edge of the body of water (edge is defined as the maximum pool elevation of the water body); or the wetland area to the outer edges of the riparian vegetation, whichever is greater.</p> <p>4/ The boundary width is the slope distance on both sides of the intermittent stream, in feet, measured from the edge of the stream; or the wetland area to the outer edges of the riparian vegetation, whichever is greater.</p>			

Ecological Processes

Fire and Fuels

Avoid locating bases, camps, helibases, staging areas, helispots, hazardous material storage facilities, and other centers for incident activities within these lands. If the only suitable location for such activities is within this area, an exception may be granted following a review and recommendation by a resource advisor. The resource advisor will prescribe the location, use conditions, and rehabilitation requirements. (G)

Avoid application of chemical retardant, foam, or additives in these areas. Exceptions may be warranted in situations where over-riding safety situation exist, or following a review and recommendation by a resource advisor, when an escape would cause more long-term damage. (G)

Prescribed fire activities on adjacent lands must be compatible with management prescription goals (S)

Use minimum impact suppression methods (G)

Insects and Disease

Where catastrophic insect and disease damage results in degraded riparian conditions, unscheduled timber harvest (salvage and commercial fuelwood cutting) is allowed where needed to attain the Goals of this Management Prescription providing other Goals of this Management Prescription are not adversely affected (G)

Physical Elements

Minerals/Geology

Adequate reclamation plans and bonds are required in mining plans of operation. These bonds must cover the full costs of removing facilities, equipment, and materials; recontouring disturbed areas to near pre-mining topography; isolating and neutralizing or removing toxic or potentially toxic materials; salvaging and replacing topsoil; and preparing seedbeds and revegetating to meet Management Prescription Goals. (S)

Do not locate permanent structures or facilities within these lands (S)

Do not locate waste dumps, leaching pads, and other facilities within these lands where other alternatives are available. If no other alternative exists, ensure that safeguards are in place to prevent release or drainage of toxic or other hazardous materials onto these lands. (S)

Discourage mineral material extraction (subject to valid permitted rights, or where permitted by plans of operation). (G)

Plans of operation will be consistent to the extent possible with management prescription goals. (G)

Biological Elements

Wildlife

Strive to maintain dead and defective tree habitat at a level capable of supporting 100% potential populations of the management indicator species for primary cavity excavators. (G)

Forest Use and Occupation

Access(S)

		Cross Country Travel 2/	Road and Trail Travel 1/
	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
	Motorized, <50" wide	No 4/	Yes
	Motorized, >50" wide	No 4/	Yes
	OROMTRD 3/	N/A	3/
	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes 5/	Yes

1/ Individual roads and trails are designated open or closed in the annual Forest Plan Travel Maps.

2/ When cross country travel is found to result in soil displacement in excess of 15 percent of an activity area, or alternation of natural stream channel morphology, reduce impacts through education, use limits, more intensive maintenance, facility modification, and/or closures

3/ OROMTRD = Open road and open motorized trail route density: includes all open roads and open motorized trails. The acres in this prescription area and the OROMTRD will be included in the calculations with the acres and OROMTRD in adjacent upland prescription areas. (See Roads in Glossary for more information)

4/ Motorized access to dispersed campsites and for picnicing is allowed

5/ Within grizzly bear BMU's, cross-country snowmachine travel is only allowed from December 15 to April 1.

Roads and Trails

No new roads, trails, or landings will be constructed within these lands until appropriate standards for construction, maintenance, and operations are in place. (G)

Improve; seasonally close; close and relocate and stabilize; or obliterate roads and trails that have been identified as posing a high risk of causing unnaturally high levels of sediment input into fish spawning areas. Action to be taken will be determined based upon travel management needs, terrain, the need for the road or trail, and resource priorities. (G)

Roads and trails or sections of them that have been identified as inhibiting riparian, wetland or aquatic ecosystem processes and/or functions (e.g., plant community development, sediment transport, and stream channel development) will be improved, relocated, or obliterated. The decision to improve, relocate, or obliterate will be based on the potential environmental impact, the ecological condition of the riparian, wetland and aquatic resources affected, and the need for the road or trail. (G)

Culverts and stream crossings found to pose a risk to riparian, wetland or aquatic conditions will be improved to accommodate at least a 50-year flood, including associated bedload and debris (G)

New stream crossings will be constructed and maintained to prevent diversion of streamflow out of the channel and down the road in case of failure. In locations found to have high potential for failure, the roadway will be hardened to further lessen the chance of roadway failure or severe erosion should the crossing over-top (G)

Constructed temporary stream crossings, such as log and culvert installations, may be allowed if temporary crossings will be constructed and used in such a way as to minimize sediment input and to provide for fish passage. They will be maintained during use and removed and rehabilitated as soon as they are no longer needed. (G)

Construct, reconstruct, and maintain all road crossings of streams which currently or historically bear fish to provide for fish passage. Exceptions are allowed where it is necessary to restrict fish movements in order to protect native or desirable nonnative fish populations. (G)

During construction and maintenance activities, sidecast loose material away from these lands or transport it to a suitable disposal site if on-site disposal is not practical. (G)

Recreation and Outfitter/Guide

When dispersed recreation is found to result in displacement in excess of 15 percent of an activity area, or alteration of natural stream channel morphology, address impacts through education, use limits, more intensive maintenance, facility modification, and /or closures. (G)

Recreational grazing must meet Range Standards for utilization of riparian vegetation. (S)

Permitted stock holding, watering, and handling facilities within riparian vegetation (does not include the entire boundary) are allowed only if appropriate mitigation measures are implemented to reduce negative impacts. (S)

ROS - Primitive to urban (G)

VQO - Retention to modification. (G)

Production of Natural Resources

Timber

These lands are not included in the suitable timber base. They are not part of the ASQ. (S)

Where needed to attain Management Prescription Goals, design silvicultural prescriptions and allow prescribed burning and stocking control, as well as the re-establishment and culturing of stands to attain desired vegetation characteristics. (G)

Fell hazard trees that pose an unacceptable safety risk and leave on site unless adequate levels of woody debris already occur on site. (G)

Mechanized treatment of wood residue is minimized. (G)

Burning of mechanized treated wood residues within the bankfull channel is prohibited. (S)

Where catastrophic events such as fire or windstorms result in degraded riparian conditions, unscheduled timber harvest (salvage and commercial fuelwood cutting) may be selected as the most desirable management practice (G)

Range

Incorporate into AMP's, objectives for attainment of desired vegetation conditions for riparian plant community seral stage development and stream channel condition. (G)

Proposed livestock watering facilities, corrals, and holding pastures within these lands are allowed only if appropriate mitigation measures are implemented to reduce negative impacts. (S)

Existing livestock watering facilities, corrals, and holding pastures within these lands are allowed at permit issuance only if mitigation measures are implemented to reduce negative impacts. (G)

2.9.1 SOUTH FORK ELIGIBLE SCENIC RIVER

Description

This prescription applies to the portion of the South Fork of the Snake River that has been determined to be an eligible scenic river, consisting of the water surface, islands, sand bars, riparian vegetation, and adjacent uplands.

Within this corridor are campgrounds, picnic sites, boating sites/ramps, and other facilities such as trailheads, scenic and wildlife viewing areas, fishing access points and inventoried National Forest Recreation sites selected for potential development. Development ranges from native material roads and campsites, with nonflush toilets, to a high degree of site modification with comfort and convenience facilities including paved roads, water systems, flush toilets, and boat launches.

Overall, you notice signs of people, generally oriented toward water use. Beginning at Palisades Dam in a boat and drifting downstream, you notice roads, buildings, picnic tables, camping spots and, occasionally, people fishing along the river bank. You hear sounds of vehicles and other human activity. You will see powerlines across the river from time to time. Other stretches of river have few roads or developments and provide a relatively quiet, peaceful, natural setting.

As you float you often see stands of cottonwood, most of them mature. In and around these cottonwood stands you may see bald eagles or peregrine falcon perched in trees, or great blue heron on the ground. During the winter you may see elk, moose, and deer on adjacent slopes.

During the summer, livestock may be seen grazing next to the river and on nearby slopes.

The management direction contained in the Snake River Activity/Operations Plan, as developed between the U. S. Forest Service and the Bureau of Land Management and signed in February 1991, applies to this area. This management direction will be adjusted (if necessary) to reflect direction from the required suitability study, which will not be done until after completion of the Forest Plan Revision

Goals

1. Maintain the river's scenic values, particularly in the South Fork Canyon from Conant Valley powerline to Riley Diversion.
2. Maintain or enhance critical nesting, foraging and wintering areas for bald eagles, maintain big game winter range and improve unsatisfactory big game habitat. Maintain heron rookeries and improve goose nesting opportunities.

Standards and Guidelines

Manage this area according to the standards and guidelines established in the Snake River Activity/ Operations Plan (U.S. Forest Service & Bureau of Land Management, February 1991), except for the access direction shown below. (S)

Physical Elements

Minerals/Geology

Same as 2.3 Eligible Wild River.

Forest Use and Occupation

Access (S)

		Cross Country Travel	Road and Trail Travel 1/
	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
	Motorized, <50" wide	No	Yes
	Motorized, >50" wide	No	Yes
	OROMTRD 2/	N/A	2/
	Winter Nonmotorized	Yes	Yes
	Snowmachine	No	Yes

1/ Individual roads and trails are designated open or closed in the annual Forest Plan Travel Maps.

2/ OROMTRD = Open road and open motorized trail route density does not apply to this prescription area.

2.9.2 SOUTH FORK ELIGIBLE RECREATION RIVER

Description

This prescription applies to the portion of the South Fork of the Snake River that has been determined to be an eligible recreation river, consisting of the water surface, islands, sand bars, riparian vegetation, and adjacent uplands.

The rest of the description is the same as the scenic portion of the river (2.9.1).

Goal

Goals are the same as the scenic portion except:

Maintain the river's recreation values, from Palisades Dam to Conant Valley Powerline

Standards and Guidelines

Same as 2.9.1 S. Fork Eligible Scenic River

3.1.1 (a) NONMOTORIZED

Description

This management prescription identifies areas where semi-primitive nonmotorized recreation use, like hiking and horse-back riding, will occur during the summer months. The experience is similar to a primitive experience, but does allow some motorized use, like chainsaws for summer trail maintenance, snowmachines during the winter, and helicopters. Groomed snowmachine trails are not allowed

These areas are accessible by trails or cross-country; you find no usable roads. All-terrain vehicles and motorcycles cannot use the area. Encounters with other people diminish as you move away from nearby roads and trailheads. Generally, you experience a backcountry setting with a high likelihood of solitude. However, you may occasionally meet large groups.

You may find oversnow vehicles; helicopter use; stock tanks; or fences. Otherwise, the forest generally presents a natural appearance. A variety of forest successional stages may be present, ranging from areas with recent wildfires to old growth habitat. Firewood is available for camping, but is not generally available for home use. Outfitter and guiding activity may be present. Domestic livestock grazing may be present in some areas, and you may see range improvements such as fencing and stock tanks. *A variety of nonforested rangeland successional stages may be present.*

Goal

Maintain or enhance semi-primitive nonmotorized dispersed recreation opportunities.

Objectives

- 1 Prescribed natural fire and management ignited fire will be managed to maintain fire's ecological role and to enhance habitat.
2. Allow insects and disease to play their natural role in ecological succession, compatible with other resource objectives.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes

Fire/Fuels

The emphasis will be on prescribed natural fire whenever conditions permit. (G)

Employ Minimum Impact Suppression Tactics (MIST) to the maximum extent possible.(G)

Physical Elements

Soil & Water

Watershed restoration will be done primarily where deteriorated soil or hydrologic conditions are caused by humans or their influences create a serious threat or loss of resource values. (G)

Promote natural healing where a definite hazard to life or property or important environmental qualities outside and within this prescription area are not imminent; or where natural vegetation would return in a reasonable time. (G)

Use indigenous or appropriate naturalized species to reestablish vegetation where there is no reasonable expectation of natural healing. (G)

Permit emergency burned area rehabilitation only if necessary to prevent an unnatural loss of semi-primitive nonmotorized resources or to protect life, property, and other resource values outside the area. (S)

Minerals/Geology

Same as 1.2 Wilderness Study Area.

Forest Use and Occupation

Access (S)

		Cross Country Travel	Road and Trail Travel 1/
	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
	Motorized, <50" wide	No	No 2/
	Motorized, >50" wide	No	No 2/
	OROMTRD 3/	N/A	0.0 ml/sq.mi. 3/
	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

1/ Individual roads and trails are designated open or closed in the annual Forest Plan Travel Maps.

2/ Motorized use is not allowed, except that motorized equipment is allowed for trail construction/maintenance. Motorized transport of Forest Service employees is not allowed except on contracts where motorized maintenance equipment is being used.

3/ OROMTRD = Open road and open motorized trail route density: includes all open roads and open motorized trails. (See Roads in Glossary for more information)

Roads

Existing system or nonsystem roads will be closed as soon as practicable. (S)

No new road construction. (S)

Recreation

Dispersed - Minimal recreation facilities may be provided (such as hitch rack, rudimentary toilets, etc) not to exceed Development Level I (see Glossary). Generally, recreation facilities are not encouraged (G)

High impact campsites should be restored to meet Frissell Condition Class 3 (see Glossary). (G)

Trails - Trails and bridges are constructed/maintained to a level to accommodate heavy foot and horse traffic, where allowed. (G)

- Motorized/mechanized trail maintenance and construction equipment may be used. (G)

ROS - Primitive to semi-primitive nonmotorized. (G)

VQO - Retention to partial retention. (G)

Production of Natural Resources

Timber

These areas are removed from the suitable timber base. They are not part of the ASQ.(S)

No timber harvesting, except for 'minor' forest products such as camp firewood, posts and poles for fencing on Forest only, administrative use, etc. Harvesting does not trigger the need for reforestation. Chainsaws are allowed. (S)

Range

Livestock Grazing - Range developments (water tanks, fences, etc.) that do not detract from the overall objectives of the area are acceptable. (S)

Manage allotments at FRES levels A, B, C, or D. (G)

3.1.2 NONMOTORIZED

Description

This management prescription identifies areas where semi-primitive nonmotorized recreation use, like hiking and horseback riding, will occur during the summer months. The experience is similar to a primitive experience, but does allow some motorized use, like chainsaws for summer trail maintenance, snowmachines during the winter, and helicopters. Groomed snowmachine trails are not allowed

These areas are accessible by trails or cross-country; you find no usable roads. All-terrain vehicles and motorcycles cannot use the area. Encounters with other people diminish as you move away from nearby roads and trailheads. Generally, you experience a backcountry setting with a high likelihood of solitude. However, you may meet large groups occasionally.

You may find oversnow vehicles, helicopter use, stock tanks, and fences. Otherwise, the forest presents a natural appearance. A variety of forest successional stages may be present, ranging from areas with recent wildfires to old growth habitat. Firewood is available for camping, but is not available generally for home use. Outfitter and guiding activity may be present. Domestic sheep grazing is greatly reduced or absent to provide better management in grizzly bear management. Cattle grazing may be present in some areas, and you may see range improvements such as fencing and stock tanks. A variety of nonforested rangeland successional stages may be present

Goal

Maintain or enhance semi-primitive nonmotorized dispersed recreation opportunities.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes

Fire/Fuels

Wildfire will be managed using the appropriate suppression response. The emphasis will be on prescribed natural fire whenever conditions permit. (S)

Employ Minimum Impact Suppression Tactics (MIST) to the maximum extent possible. (S)

Use management-ignited fire to maintain fire's ecological role and to enhance habitat. (G)

Insects & Disease

Allow insects and disease to play their natural role in ecological succession, compatible with other resource objectives. (G)

Physical Elements

Soil & Water

Watershed restoration will be done primarily where deteriorated soil or hydrologic conditions are caused by humans or their influences create a serious threat or loss of resource values. (G)

Promote natural healing where a definite hazard to life or property or important environmental qualities outside this prescription area are not imminent, or where natural vegetation would return in a reasonable time (G)

Use indigenous or appropriate naturalized species to reestablish vegetation where there is no reasonable expectation of natural healing. (S)

Permit emergency burned area rehabilitation only if necessary to prevent an unnatural loss of semi-primitive nonmotorized resources or to protect life, property, and other resource values outside and within the area. (G)

Minerals/Geology

Same as 1.2 Wilderness Study Area.

Air Quality

Protect air quality in conformance with Class II standards specified in Forestwide standards and guidelines. (S)

Forest Use and Occupation

Access (S)

		Cross Country Travel	Road and Trail Travel 1/
	Pedestrian Horse/Pack Stock Mtn Bike/Mechanized	Yes Yes Yes	Yes Yes Yes
	Motorized, <50" wide Motorized, >50" wide TMARD 3/ OROMTRD 3/	No No N/A N/A	No 2/ No 2/ 0.0 mi/sq mi 0.0 mi/sq mi.
	Winter Nonmotorized Snowmachine	Yes Yes 4/	Yes Yes
<p>1/ Individual roads and trails are designated open or closed in the annual Forest Plan Travel Maps.</p> <p>2/ Motorized use is not allowed, except that motorized equipment is allowed for trail construction/maintenance. Motorized transport of Forest Service employees is not allowed except on contracts where motorized maintenance equipment is being used.</p> <p>3/ TMARD = Total motorized access route density. includes all open and restricted roads and motorized trails. (See Roads in Glossary for more information)</p> <p>OROMTRD = Open road and open motorized trail route density' includes all open roads and open motorized trails (See Roads in Glossary for more information)</p> <p>4/ Cross-country snowmachine use is only allowed from Dec. 15 to April 1.</p>			

Roads

Existing system or nonsystem roads will be closed as soon as practicable. (S)

No new road construction. (S)

Recreation

Dispersed - Minimal recreation facilities may be provided (such as hitch rack, rudimentary toilets, etc.) not to exceed Development Level I. Generally, recreation facilities are not encouraged. (G)

- High impact campsites should be restored to meet Frissell Condition Class 3 (G)

Trails - Trails and bridges are constructed/maintained to a level to accommodate heavy foot and horse traffic, where allowed. (S)

- Motorized/mechanized trail maintenance and construction equipment may be used (G)

ROS - Primitive to semi-primitive nonmotorized. (S)

VQO - Preservation to partial retention. (G)

Production of Natural Resources

Timber

These areas are removed from the suitable timber base. They are not part of the ASQ (S)

No timber harvesting, except for 'minor' forest products such as camp firewood, posts and poles for fencing on Forest only, administrative use, etc. Harvesting does not trigger the need for reforestation. Chainsaws are allowed. (S)

Range

Domestic sheep grazing will be phased out over time on an opportunity basis due to conflicts with grizzly bear. An opportunity is defined as a suitable or favorable time to abolish or close an allotment because of nonuse violations, term permit waivers where the permit is waived back to the government, resource protection, or permit actions resulting in cancellation of the permit. If opportunities do not arise, then efforts will be made to relocate or accommodate sheep to other areas. (G)

Cattle grazing is allowed. (S)

Allotment Management Plans will specify measures to meet agency grizzly goals and objectives. (S)

Permittee's full cooperation in meeting grizzly bear management goals and objectives for Situation 2 grizzly bear habitat will be a condition of the permit. In addition, the following will be required: (S)

a Temporary cessation or modification of permitted livestock grazing activities may occur to resolve grizzly bear conflicts with humans or livestock

b Livestock carcasses will be disposed of or rendered unattractive to bear within 24 hours after they are discovered. Disposal may include removing the carcass from the area, burying it at least 2 feet underground, burning, using an acceptable chemical repellent, or other methods approved by the District Ranger. Disposal shall be in accordance with other governing agencies (such as the Wyoming Department of Fish and Game) in order to determine cause of death for reimbursement purposes.

c. Human food, refuse, and prepared livestock/pet foods associated with the livestock operation will be made unavailable to grizzlies through proper storage, handling, and disposal. Proper storage includes a) inside a bear-proof container, b) suspended horizontally between adjacent posts or trees, c) stored in a hard-sided vehicle or trailer, or d) other methods approved by the District Ranger. The exception is when the food is being eaten or prepared for eating, or when food and similar organic matter is being transported.

d. High quality food production areas for grizzlies (i.e. wet alpine and subalpine meadows, stream bottoms, aspen groves, and other riparian areas) will receive special grazing direction such as light, once-over grazing, special utilization standards, or complete closure. These sites and their corresponding direction will be identified in the Annual Plan of Use.

e. Livestock depredation believed to be associated with bears will be reported within 24 hours after they are discovered to the District Ranger and the proper State agencies.

f. Any observation of grizzly bear or grizzly bear sign will be reported to the District Ranger as soon as practical

g. Any action taken by the permittee or their agents which violates the Endangered Species Act will be grounds for cancellation of their grazing permit

Range developments (water tanks, fences, etc) that do not detract from the overall objectives of the area are acceptable. (S)

3.2 (a,b,c,d,f,g) SEMI-PRIMITIVE MOTORIZED

Description

This management prescription identifies areas with a semi-primitive backcountry recreation experience, associated with some motorized vehicle use. These areas are accessible by roads, trails or cross-country. Motorized vehicle use is allowed, except on steep slopes or unstable soils. Roads and trails are designed and maintained to allow easy passage. You will find occasional to frequent encounters with trail users. You may meet large groups occasionally.

Generally, the forest presents a natural appearance. A variety of forest successional stages may be present, ranging from areas with recent wildfires to late successional habitat. Firewood is available for camping and home use. Outfitter and guiding activity may be present. Domestic livestock grazing may be present in some areas, and you may see range improvements such as fencing and stock tanks. A variety of nonforested rangeland successional stages may be present.

Goal

Maintain or enhance semi-primitive motorized dispersed recreation opportunities.

Objective

Prescribed natural fire and management-ignited fire will be managed to maintain fire's ecological role and to enhance habitat.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes

Insects and Disease

Allow insects and disease to play their natural role in ecological succession.

Fire/Fuels

The emphasis will be on prescribed natural fire whenever conditions permit. (G)

Employ Minimum Impact Suppression Tactics (MIST) to the maximum extent possible (G)

Biological Element

Wildlife

Maintain snags at 60 percent of biological potential for woodpeckers. (G)

Forest Use and Occupation

Access (S)

3.2 (a)

Access standards for 3.2 (a)-(d) and (f) and (g) are shown in two charts based on differences in motorized cross country travel, season of use and size of areas where road and trail density does not apply.

		Cross Country Travel	Road and Trail Travel 1/
	Pedestrian Horse/Pack Stock Mtn Bike/Mechanized	Yes Yes Yes	Yes Yes Yes
	Motorized, <50" wide Motorized, >50" wide OROMTRD	Yes 2/ Yes 2/ N/A	Yes Yes <= 1.0 m/sq.mi. 3/
	Winter Nonmotorized Snowmachine	Yes Yes	Yes Yes

1/ Individual roads and trails are designated open or closed in the annual Forest Plan Travel Maps.

2/ Motorized use is allowed (except on slopes > 40%, on unstable soils, or during the period from September 1 to December 30).

3/ OROMTRD = Open road and open motorized trail route density: includes all open roads and open motorized trails. (See Roads in Glossary for more information) In the Spring Mtn. Canyon area (Lemhi Mtns., Dubois R D.) OROMTRD is <= 1.3 miles/square mile

3.2 (b)

The same as 3.2 (a) (see Table above) except cross-country motorized use is allowed, (except on slopes > 40%, on unstable soils, or during the period from Oct. 1 to Dec. 30).

3.2 (f)

The same as 3.2 (a) (see Table above) except in 3.2 (f) prescription areas ≤ 2 5 square mile in size, OROMTRD does not apply, and there are no seasonal restrictions on cross-country motorized use.

3.2 (g)

		Cross Country Travel	Road and Trail Travel 1/
	Pedestrian Horse/Pack Stock Mtn Bike/Mechanized	Yes Yes Yes	Yes Yes Yes
	Motorized, <50" wide Motorized, >50" wide OROMTRD 2/	No No N/A	Yes Yes <= 1.0 mi/sq.mi. 2/
	Winter Nonmotorized Snowmachine	Yes Yes 3/	Yes Yes

1/ Individual roads and trails are designated open or closed in the annual Forest Plan Travel Maps.

2/ OROMTRD = Open road and open motorized trail route density: includes all open roads and open motorized trails (See Roads in Glossary for more information) In 3.2 (g) prescription areas which are narrow linear road corridors (i.e. Pass Creek and Eightmile Creek, Irving Creek, East Dry Creek, and Keg Springs), OROMTRD does not apply.

3/ In grizzly bear BMU's, cross-country snowmachine use is only allowed from Dec. 15 to April 1.

3.2 (c)

The same as 3.2 (g), except in 3.2 (c) prescription areas ≤ 1.0 mi/sq.mi. in size, OROMTRD does not apply.

3.2 (d)

The same as 3.2 (g) except in 3.2 (d) prescription areas ≤ 3.5 mi./sq.mi. in size, OROMTRD does not apply.

Game Retrieval

Same as 2.7 a, b Elk and Deer Winter Range except in Henry's Lake BMU - Subunits 1 and 2

Roads

Generally, no new road construction. (G)

Recreation

Dispersed - Dispersed recreation facilities may be provided to reduce adverse resource impacts at heavily used sites (G).

- Development level shall not exceed Level 2 (see Glossary) (S)

- High impact campsites should be restored to meet Frissell Condition Class 3 (see Glossary). (G)

Trails - Trails and bridges are constructed/maintained to a level to accommodate heavy foot, horse, and motorized vehicle traffic, where allowed. (G)

ROS - Semi-primitive motorized and roaded natural. (G)

VQO - Retention to partial retention. (G)

Production of Natural Resources

Timber

These areas are removed from the suitable timber base They are not part of the ASQ (S)

Timber management is allowed for such products as camp firewood, home use firewood, posts and poles for fencing on Forest, Christmas trees, wildlife habitat, administrative use , etc Harvesting generally does not trigger the need for reforestation (G)

Commercial post and pole sales are allowed provided no new temporary or system road construction occurs (G)

Range

Range developments (water tanks, fences, etc.) that do not detract from the overall objectives of the area are acceptable. (G)

Manage allotments at FRES levels A, B, C, or D. (G)

4.1 DEVELOPED RECREATION SITES

Description

This prescription applies to existing campgrounds, picnic areas, boating sites/ramps, and other facilities such as trailheads, snow parks, scenic and wildlife viewing areas, fishing access points, and inventoried National Forest Recreation sites selected for potential development located throughout the Targhee National Forest Development ranges from native material roads and campsites, with nonflush toilets, to a high degree of site modification with comfort and convenience facilities including paved roads, water systems, mobility impaired access, flush toilets and boat launches. See recreation facility Development Levels 1-5 in the Glossary.

Overall, you find many signs of people. You see little or no evidence of resource development except for recreation. Picnic tables, roads, buildings, and camping spots are obvious. You often hear sounds of vehicles and other human activity. Signs advise that off-highway vehicle use is not allowed except to enter and depart the site on roads

You can gather down firewood for camping, but you cannot gather it for home use. Access to fishing may be rather easy if the facility is near a stream or river, but the fishing may be less satisfactory than in more remote areas

You generally will not find livestock within campgrounds, but they may be visible nearby. Signs and sounds of logging may also be apparent from time to time.

Wildlife, in the form of chipmunks, squirrels, birds, and occasional big game may be seen.

Generally you will find a variety of vegetation conditions from sagebrush to forested land within these areas. The forest cover will vary from mature trees to young seedling and sapling trees. The forest will generally be in a healthy, vigorous condition to provide for safety and provide for a friendly, relaxed outdoor experience. The area around the campground will generally exhibit a variety of visual conditions, depending on past insect, disease, and fire activity and management's response to those disturbances.

Goals

1. Provide for a variety of concentrated public recreation uses in a roaded-natural setting based on the character of the areas and visitors' needs.
2. Protect and enhance a natural appearing environment within and adjacent to the existing sites to the extent possible while maintaining the existing array of developed recreation sites.

Objectives

1. Natural fuels will be reduced or otherwise treated so the potential fireline intensities will not exceed 100 BTU per second per foot on 90% of the days during the regular fire season (Burning Index \leq 40)
2. Promote "Watchable Wildlife" when compatible with developed recreation use.
3. Provide an appropriate mix of reservation and nonreservation sites in campgrounds.
4. Provide short trails to facilities and opportunities for interpretation.
5. Manage aspen for its value in providing seasonal color.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes

Fire/Fuels

All wildfires that threaten these areas will be aggressively suppressed. (S)

Prescribed fire generally will not apply here. It may be used, however, to obtain natural regeneration in preference to soil-disturbing techniques. (G)

Insects and Disease

Control insects and disease consistent with recreational objectives. (S)

Physical Elements

Soil and Water

Where standards are not being met, actively rehabilitate these areas. Use rehabilitation techniques that do not detract from the recreation opportunity. (S)

Avoid new construction on unstable or highly erosive soil. (G)

On new developments provide adequate vegetation filters to maintain and/or enhance riparian-dependent resources. (G)

Lands

Corridor rights-of-way should avoid campgrounds and other facilities. (G)

Minerals/Geology

Same as 1.2 Wilderness Study Area.

Biological Elements

Wildlife

Animal Damage Control - Animal damage control generally will not be done in campgrounds and other developed sites because of potential conflicts with recreation users and their pets, except for control of problem bears, beavers, porcupines, etc. (G)

Forest Use and Occupation

Access (S)

		Cross Country Travel	Road and Trail Travel 1/
	Pedestrian	Yes	Yes
	Horse/Pack Stock	No	Yes
	Mtn Bike/Mechanized	No	Yes
	Motorized, <50" wide	No	Yes 2/
	Motorized, >50" wide	No	Yes 2/
	OROMTRD 3/	N/A	N/A
	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

1/ Individual roads and trails are designated open or closed in the annual Forest Plan Travel Maps.

2/ Motorized use is allowed only on existing roads and is limited to entering, leaving, and visiting other sites within the facility.

3/ OROMTRD = Open road and open motorized trail route density: includes all open roads and open motorized trails (See Roads in Glossary for more information)

Recreation

Developed - Campgrounds and picnic areas that have a seasonal use level of 40 percent or higher should be managed at the Standard Service Level (see Glossary). (G)

- Campgrounds and picnic areas that have a season-long use level of 20 to 40 percent should be managed at less than the Standard Service Level. (G)

- Those with less than 20 percent average season-long use may require closure of sites first and then, if needed, closure of the entire facility. (G)

- Campground use will be limited to no more than two vehicles per family unit, unless posted as a multi-family unit. (S)

Development Level Guideline. Developed sites should be built, improved, and maintained in accordance with the established Recreation Opportunity Spectrum (ROS) classification for the Management Prescription Area and the development standards as follows: (G)

<u>ROS Class</u>	<u>Recreation Development Level</u>
Primitive	None
Semi-primitive Nonmotorized	Not to exceed 1
Semi-primitive Motorized	Not to exceed 2
Roaded Natural	Not to exceed 3
Urban	Not to exceed 4

ROS - Semi-primitive motorized to urban. (G)

VQO - Manage for a full range from retention to modification. Facilities are often evident but harmonize and blend with the natural setting. (G)

Production of Natural Resources

Timber

Developed recreation sites are removed from the suitable timber base. No ASQ is provided from these lands. (S)

Range

Exclude grazing of recreational stock and livestock in developed recreation sites during the managed recreation use season. (S)

Grazing at trailheads may be allowed when developments or recreation use is not adversely affected. (G)

4.2 SPECIAL USE PERMIT RECREATION SITES

Description

This prescription applies to ski areas, resorts, summer home sites and organization camps (e.g., Boy and Girl Scouts of America) that are allowed under a special use permit

The emphasis is on providing privately operated types of recreation on National Forest land for large concentrated groups of people. Overall, you find many signs of people. You see little or no evidence of resource development except for recreation. Cabins and buildings used by permittees are visible but blend into the surroundings. Roads are generally gravelled, but may be paved in higher use areas. OHV use is limited to entry and departure routes and for administrative purposes. In some areas you may see extensive development associated with ski areas or resorts—for example, buildings, ski lifts, maintenance equipment, etc. Many pedestrians and cars may be seen in these areas.

You generally will not find livestock within these areas, but they may be visible nearby. Signs and sounds of logging may also be apparent from time to time.

Wildlife, in the form of chipmunks, squirrels, birds, and occasional big game may be seen. Generally you will find a variety of vegetation conditions from sagebrush to forested land within these areas. The forest cover will vary from mature trees to young seedling and sapling trees. The forest will generally be in a healthy, vigorous condition to provide for safety and provide for a friendly, relaxed outdoor experience. The area around the special use facility will generally exhibit a variety of visual conditions, depending on past insect, disease, and fire activity and management's response to those disturbances.

Goals

1. Provide for privately operated recreation use.
2. Protect and enhance a natural appearing environment to the extent possible while providing for private and group recreation opportunities.
3. Strive to incorporate opportunities for watchable wildlife.

Objectives

1. Natural fuels will be reduced or otherwise treated so the potential fireline intensities will not exceed 100 BTU per second per foot on 90 percent of the days during the regular fire season (Burning Index ≤ 40). (S)
2. Implement the Big Springs Summer Home Agreement.
3. Implement decision of June 14, 1949 for Lot 2 Block G in the Buffalo Summer Home Area.

Require existing cabin to be removed from National Forest System lands by May 2, 1997, as specified in existing permit. No set-back lot will be provided and Lot 2 Block G will not be considered for exchange in the Buffalo Summer Home Area. (S)
4. Additional objectives for recreation residences

New recreation residence tracts (summer homes) will not be established. No new residences will be permitted on vacant lots that are no longer leased unless necessary to replace lots damaged by landslides at the Hoffman site or to implement the Big Springs court order. (S)
5. Provide short trails providing access to facilities and opportunities for interpretation.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes

Fire/Fuels

All wildfires that threaten these areas will be aggressively suppressed. (S)

Prescribed fire generally will not apply here. It may be used, however, to achieve resource objectives. (G)

Insects and Disease

Control insects and disease consistent with visual objectives. (S)

Physical Elements

Soil and Water

Use rehabilitation techniques that do not detract from the recreation opportunity (G)

Avoid new construction on unstable or highly erosive soils (G)

On new developments provide adequate vegetation filters to maintain and/or enhance riparian-dependent resources. (G)

Lands

Corridor rights-of-way will avoid summer homes and group facilities. (G)

Minerals/Geology

Locatable - Locatable mineral entry is allowable, but will be mitigated to the greatest extent possible to protect the recreation experience. (G)

Mineral Material - No entry for mineral materials. (S)

Biological Elements

Wildlife

Projects that allow selected wildlife species to be more visible to recreation users may be allowed when compatible with special use permit recreation sites. (G)

Animal Damage Control - Animal damage control generally will not be done on these sites because of potential conflicts with recreation users and their pets. (G)

Plants

Projects or events that focus on the identification and/or uses of plants are allowed where compatible with special use permits and the activities do not degrade the vegetation at the facility.

Forest Use and Occupation

Access (S)

		Cross Country Travel	Road and Trail Travel 1/
	Pedestrian	Yes	Yes
	Horse/Pack Stock	No 2/	Yes
	Mtn Bike/Mechanized	No	Yes
	Motorized, <50" wide	No	Yes 3/
	Motorized, >50" wide	No	Yes 3/
	OROMTRD 4/	N/A	not applicable
	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes 5/	Yes 5/

1/ Individual roads and trails are designated open or closed in the annual Forest Plan Travel Maps.

2/ Horse/pack stock is not allowed cross-country, except as noted in the special use permit

3/ Motorized use is allowed only on existing roads and is limited to entering, leaving, and visiting other sites within the facility, except as guided by the special use permit.

4/ OROMTRD = Open road and open motorized trail route density: includes all open roads and open motorized trails. (See Roads in Glossary for more information)

5/ Except within designated downhill ski area boundaries.

Recreation

Developed - Natural vegetation should be favored around facilities. However, mowing natural vegetation around facilities may be allowed. (G)

Trails - Trails may be allowed for the convenience of people using these sites (G)

ROS - Roaded natural to urban. (G)

VQO - Manage for a full range from partial retention to maximum modification. Facilities are often evident, but harmonize and blend with the natural setting. (G)

Production of Natural Resources

Timber

Developed recreation sites are removed from the suitable timber base. No ASQ is provided from these lands (S)

All vegetation treatment options are available, but only as required to meet specific recreation objectives (G)

Stipulate removal of unsafe and/or dead trees in the special use permit. Native species may be planted to provide cover when naturally-occurring vegetation is inadequate (G)

Range

Unless grazing activities are needed to meet recreation objectives, or unless authorized by special use or grazing permit, grazing of recreation stock and other livestock will not be allowed in special use recreation sites. (G)

Grazing activities may be allowed in and around facilities designed for livestock use. (G)

4.3 DISPERSED CAMPING MANAGEMENT

Description

The purpose of this prescription is to maintain a quality dispersed recreation experience for the public and still protect other resource values that occur in the same area. This prescription applies to highly attractive and desirable, heavy, summer use areas such as around lakes or reservoirs, along roads and streams; or at trailheads where there are multiple campsites accessed by conventional wheeled vehicles (> 50" wide) or boat. Included would be heavy use areas where dispersed camping occurs in potential conflict with other resources or where site damage is occurring or likely to occur

While dispersed recreation is the main theme, protecting the resource values of the area is also critical. Therefore this prescription is intended to create a balance between the users and the resource they came to enjoy. This prescription is intended to be applied in those areas where special concerns or consideration must be given to dispersed recreation use in order to maintain the recreation opportunities.

This prescription includes areas not considered developed, but which are used by the public on a recurring basis. They include sites where developed status does not fit, but use by the public is more than occasional use during the recreation use period. These sites may have some limited developed facilities which may include one or two, but not the majority of the following: fire-rings, tables, toilet facilities, signs, and/or water. These sites are not fee areas and have very limited capital investment (<\$50M).

Management emphasis is directed at managing dispersed or undeveloped type camping opportunities, such that other resources are not unacceptably affected. Minor development is allowed to protect the site or prevent resource damage, but development should not put sites into a developed site management emphasis. Restrictions may be placed on camping locations to allow used areas to recover or to protect natural resources

Goals

1. Provide facilities to a level only to meet resource protection needs.
2. Provide a balance between recreation use and other resource needs so that those resources which provide attractions to the area are protected to a point they continue to be important recreational attractions.
3. Maintain or improve the quality of the dispersed camping sites that now exist in the area

Objective

Avoid allowing heavy build-up of fuels in these areas to reduce risk of accidental fire ignition.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes

Fire and Fuels

Avoid application of chemical retardant, foam, or additives in these areas. Exceptions may be warranted in situations where over-riding safety situations exist, or following a review and recommendation by a resource advisor, when an escape would cause more long-term damage (G)

Use minimum impact suppression methods. (G)

Physical Elements

Minerals/Geology

Adequate reclamation plans and bonds are required in mining plans of operation. These bonds include costs of removing facilities, equipment, and materials; recontouring disturbed areas to near pre-mining topography; isolating and neutralizing or removing toxic or potentially toxic materials; salvaging and replacing topsoil; and preparing seedbeds and revegetating to meet Management Prescription Goals. (G)

Avoid locating permanent structures or facilities within these lands. Limit road construction to the minimum necessary for the approved activity. (G)

Avoid locating waste dumps, leaching pads, and other facilities within these lands or within the viewshed where other alternatives are available. If no other alternative exists, ensure that visual mitigation such as screening are in place to prevent degradation of visual quality on these lands. (G)

For leasable minerals, avoid surface occupancy for exploration and development activities where leases do not already exist. (G)

Mineral material extraction should be discouraged (subject to valid permitted rights, or permitted plans of operation as allowed by Law). (G)

Forest Use and Occupation

Access (S)

		Cross Country Travel	Road and Trail Travel 1/
	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
	Motorized, <50" wide	No 2/	Yes
	Motorized, >50" wide	No 2/	Yes
	OROMTRD 3/	N/A	N/A
	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

1/ Individual roads and trails are designated open or closed in the annual Forest Plan Travel Maps.

2/ Cross-country travel is allowed only to access the campsite unless the surrounding prescription area is open for cross-country travel, or as described in the Management Plan for this prescription area.

3/ OROMTRD = Open road and open motorized trail route density: includes all open roads and open motorized trails (See Roads in Glossary for more information)

Roads and Trails

No new roads, trails, or landings will be constructed within these lands until appropriate standards for construction, maintenance, and operations are in place. (G)

Improve, seasonally close, close and relocate and stabilize, or obliterate roads and trails (or sections of them) that have been identified as posing a high risk of causing unnaturally high levels of sediment input into fish spawning areas. Action to be taken will be determined based upon travel management needs, terrain, the need for the road or trail, and resource priorities (G)

Roads and trails that have been identified as inhibiting riparian, wetland or aquatic ecosystem processes and/or functions (e.g., plant community development, sediment transport, and stream channel development) will be improved, relocated, or obliterated. The decision to improve, relocate, or obliterate will be based on the potential environmental impact, the ecological condition of the riparian, wetland and aquatic resources affected, and the need for the road or trail. (G)

Culverts and stream crossings found to pose a risk to riparian, wetland or aquatic conditions will be improved to accommodate at least a 50-year flood, including associated bedload and debris. (G)

New stream crossings will be constructed and maintained to prevent diversion of streamflow out of the channel and down the road in case of failure(s). In locations found to have high potential for failure, the roadway will be hardened to further lessen the chance of roadway failure or severe erosion should the crossing over-top. (G)

Constructed temporary stream crossings, such as log and culvert installations, may be allowed. Temporary crossings will be constructed and used in such a way as to minimize sediment input and to provide for fish passage. They will be maintained during use and removed and rehabilitated as soon as they are no longer needed. (G)

Construct, reconstruct, and maintain all road crossings of streams which currently or historically bear fish to provide for fish passage. Exceptions are allowed where it is necessary to restrict fish movements in order to protect native or desirable nonnative fish populations. (G)

During construction and maintenance activities, sidecast loose material away from these lands or transport it to a suitable disposal site if on-site disposal is not practical (G)

Recreation and Outfitter/Guide

When dispersed recreation is found to result in soil displacement in excess of 15 percent of an activity area (e.g., aquatic influence zone, riparian areas, dispersed campsites, etc), or alteration of natural stream channel morphology, address impacts through education, use limits, more intensive maintenance, facility modification, and/or closures. (G)

Recreational grazing must meet Range Standards for utilization of riparian vegetation. (S)

Permitted stock holding, watering, and handling facilities within riparian vegetation (does not include the entire aquatic influence zone) are only allowed if appropriate and mitigation measures are implemented to reduce negative impacts. (S)

Road surfacing or hardening should be encouraged in areas of high use and evident resource damage. Both parking location and access roads should be considered. (G)

Fire circles created by the public, should not exceed one per site. Where more than one circle is inventoried, action should be taken to reduce the number to one. Action could include education, signing, facility installation closure order, surfacing, etc. Restrictions to require use of fire pans or contained fires may be necessary and should be considered in the area management plan. (G)

Boat launching along streams, river sections, lakes or reservoirs should be restricted to developed sites or if no sites exist, consideration should be made to develop a facility to meet the public needs. (G)

For all groups in excess of 20 persons, the site should have toilet facilities. Where facilities do not exist, portable toilet units should be provided by groups of 20 or more persons. (G)

When portable toilet units are used, they shall be placed away from water and must be packed out when use has ended. (S)

Solid waste disposal will be accomplished using the Pack In-Pack Out program. (G)

ROS - Primitive to urban. (G)

VQO - Retention to modification. (G)

Production of Natural Resources

Timber

These lands are not included in the suitable timber base. They are not part of the ASQ. (S)

Where needed to attain Management Prescription Goals, design silvicultural prescriptions and allow prescribed burning and stocking control, as well as the re-establishment and culturing of stands to attain desired vegetation characteristics (G)

Range

Incorporate into AMP's, objectives for attainment of site-specific DFC's for riparian or wetland plant community seral stage development and stream channel condition. (G)

Proposed livestock watering facilities, corrals, and holding pastures within these lands are allowed only if appropriate, and mitigation measures are implemented to reduce negative impacts (S)

Existing livestock watering facilities, corrals, and holding pastures within these areas are allowed at permit issuance only if mitigation measures are implemented to reduce negative impacts. (G)

Salting sites should be placed 1/4 mile from dispersed sites. (G)

5.1 (b-c) TIMBER MANAGEMENT

The purpose of this prescription is to provide commodity resource development with moderate accommodation of other resources

Description

The emphasis is on scheduled wood-fiber production and use, on livestock production, and on other compatible commodity outputs, and consideration for long-term forest health.

Overall, you notice many signs of people. You see a fairly extensive roading system and timber harvest activity in some areas. The main road system is gravel-surfaced and well maintained, with gentle grades well suited for sedan travel. You may see timber harvest equipment at roadside and meet logging traffic along the roadway. You will see other people driving for pleasure or hauling out a load of firewood. Driving a sedan you can travel about two-thirds of the main road system. About one-third of the main road system is closed for wildlife security or roadway protection.

You notice frequent low-standard branch roads with native and gravel surfaces. Most of these low-standard roads are closed annually or seasonally to vehicle access. Some branch roads remain open for public access, for commodity production and for Forest Service administration.

The forest is a mosaic of different sizes, ages and heights. Older, taller trees tend to dominate the landscape, but openings with smaller trees are obvious. Recently cut areas show tree stumps, slash and disturbed soil. Recently cut areas have a partial canopy of older trees. Older clearcut areas have seedlings, saplings, poles, and older trees up to 35 feet tall and have a less disturbed appearing forest floor. Dead trees from the mountain pine beetle infestation are seen in older stands and scattered throughout the rest of the forest

Firewood is available, by permit, from dead trees, designated aspen areas, and from slash and logs decked for that purpose.

If you watch wildlife, you will see a variety of species, particularly those which prefer young stages of forest succession to those which prefer late stages of forest succession. Elk and deer numbers have generally increased somewhat in recent years. However, in areas of active timber harvest activity, some elk and other big-game species may have been displaced to areas with greater security. Because of the setting, outfitted hunting may not be as common as it is in less-developed areas.

During the summer and fall you encounter cattle or sheep and notice signs of intensive management practices, such as burning, spraying, seeding, fences, cattleguards, water developments and gates. You see some cattle within streamside riparian areas and on nearby slopes. Away from the streams, you see scattered groups of livestock. You may find traffic delays when livestock is being moved.

You find such nonmotorized activities as hiking, biking and horse-back riding along roads closed to vehicle traffic. Some roads and areas are available for snowmobile, motorcycle, and 4-wheel-drive vehicle use.

Goal

These would be managed to promote the production of commodity and noncommodity resources.

Objectives

1. Establish fire protection objectives for the area and desired fuel conditions.
2. Fire management strategies emphasize preservation and protection of timber and range values scheduled for current use.
3. Effectively control the insects and disease and sustain forest growth.
4. Provide a wide array of dispersed recreation opportunities.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes

Fire/Fuels

Wildfires will normally be suppressed using control strategies during the fire season. Pre- and post-fire season strategies may include containment, confinement, or control. (G)

Prescribed fire may be used to reduce fuel loading; obtain natural regeneration; improve livestock forage conditions, for wildlife habitat improvement, and for other purposes that meet the needs of this prescription. (G)

Insects and Disease

Practices to prevent or control insects and disease through direct control or silvicultural practices may be considered. (G)

Biological Elements

Wildlife

Maintain snag habitat at > 40 percent of the biological potential for woodpeckers (G)

Forest Use and Occupation

Access (S)

The only difference in access standards between 5.1 (b) and (c) is open road and open motorized trail route density.

5.1 (b)

		Cross Country Travel	Road and Trail Travel 1/
	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
	Motorized, <50" wide	No	Yes
	Motorized, >50" wide	No	Yes
	OROMTRD 2/	N/A	<= 3.0 mi /sq.mi.
	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

1/ Individual roads and trails are designated open or closed in the annual Forest Plan Travel Maps.

2/ OROMTRD = Open road and open motorized trail route density. includes all open roads and open motorized trails. (See Roads in Glossary for more information)

5.1 (c) same as 5.1 (b) above except OROMTRD is <= 1.5 miles/square mile.

Game Retrieval

Same as 2.7 a, b Elk and Deer Winter Range.

Recreation

Trails - Motorized trails should be developed using primarily local roads and trails not being actively used for commodity recovery. (G)

ROS - Recreation is managed to provide a combination of semi-primitive nonmotorized to roaded natural opportunities. (G)

VQO - The VQO is generally Partial Retention to Modification. In visually sensitive foreground areas, the VQO is Retention. (G)

Production of Natural Resources

Timber

Lands are included in the suitable timber base They contribute toward the ASQ. (S)

Regeneration systems should rely on natural regeneration to the greatest extent possible. (G)

Reforested sites may be protected from rodent and livestock damage to encourage the greatest possible survival and growth over time, consistent with other resource needs. (G)

Harvest and treatment residues should be made available for firewood and other products in a manner compatible with site preparation, productivity, and restocking requirements. Designated aspen areas should be made available for firewood. (G)

Range

Livestock grazing may be allowed on transitory forage produced following timber harvest where and when that use will not conflict with regeneration efforts or other concerns. (G)

**5.1.3 (a-b) TIMBER MANAGEMENT
(NO CLEARCUTTING, URBAN INTERFACE FUELS MANAGEMENT)**

The purpose of this prescription is to provide timber management with no clearcutting, and to provide fuels management within and adjacent to urban areas of the Forest.

Description

The emphasis is on scheduled wood-fiber production and use, on fuels management within and adjacent to urban areas of the Forest, on livestock production, and on other compatible commodity outputs, with consideration for long-term forest health.

Overall, one would notice the same conditions as in Management Prescription 5 1 (b) and (c)

Goal

Manage vegetation and fuels to minimize fire risk for urban facilities within the interface.

Standards and Guidelines

Forestwide standards and guidelines apply. The same standards and guidelines apply as 5 1 except

Forest Use and Occupation

Access(S)

5.1.3 (a) is the same as 5.1 (b) except cross country motorized access for vehicles < 50" is permitted and prescription areas < 2.5 square miles in size, OROMTRD does not apply..

5.1.3 (b) is the same as 5.1 (b) except prescription areas < 2.5 square miles in size, OROMTRD does not apply.

Game Retrieval

Same as 2 7 a,b Elk and Deer Winter Range

Production of Natural Resources

Timber

No clearcutting allowed

5.1.4 (a-c) TIMBER MANAGEMENT (BIG GAME SECURITY EMPHASIS)

The purpose of this prescription is to provide commodity resource development with special emphasis on big game security.

Description

The emphasis is on scheduled wood-fiber production and use, big game security, other compatible commodity outputs, and consideration for long-term forest health. It combines the forested security block emphasis of 5.4 with cross-country motorized use allowed in 5.1, but restricts that motorized use during the big game hunts.

This management prescription emphasizes management actions and resource conditions which provide increased security for big game species, and hunting opportunities with limited access. Habitats are managed for multiple land use benefits, but these are managed over time and space to provide security and cover for hunted big game species.

Spring, summer, and fall forage is abundant and well distributed throughout the area. Hiding and thermal cover is abundant and in large patches to provide security for big game throughout the spring, summer, and fall seasons. Big game movements and migrations are facilitated due to well distributed forage and cover.

Timber management emphasizes providing a variety of forested successional stages, with large blocks of forested vegetation providing hiding cover. Security areas are provided adjacent to areas where timber harvesting is occurring.

Motorized access is managed to provide big game security. You notice frequent low-standard branch roads with native and gravel surfaces. Most of these low-standard roads are closed annually or seasonally to vehicle access. Some branch roads remain open for public access, for commodity production and for Forest Service administration.

Hiking off-road conditions, forest stand conditions, ability to view wildlife, presence of cattle and sheep, and nonmotorized activities are the same as 5.1.

Goal

Protect the long-term productivity of the land and meet areawide standards that protect resource values such as fisheries, water quality, wildlife habitat (including big game security areas) and visual quality.

Objective

Manage for big game security in > 250 acre forested blocks.

Standards and Guidelines

Forestwide standards and guidelines apply. The same standards and guidelines apply as 5.1 except:

FOREST USE AND OCCUPATION

Access (S)

5.1 4 (a)

		Cross Country Travel	Road and Trail Travel 1/
	Pedestrian Horse/Pack Stock Mtn Bike/Mechanized	Yes Yes Yes	Yes Yes Yes
	Motorized, <50" wide Motorized, >50" wide OROMTRD 3/	Yes 2/ No N/A	Yes Yes <= 1.5 mi/sq mi. prior to and after the fall big game hunt
	OROMTRD 3/	N/A	<= 1.0 mi/sq.mi. during the fall big game hunt. 3/
	Winter Nonmotorized Snowmachine	Yes Yes	Yes Yes

1/ Individual roads and trails are designated open or closed in the annual Forest Plan Travel Maps

2/ Open to travel from June 15 to just prior to the Idaho and Wyoming big game hunt.

3/ OROMTRD = Open road and open motorized trail route density* includes all open roads and open motorized trails. (See Roads in Glossary for more information)

5.1.4 (b) is the same as 5 1.4 (a) above except no cross country motorized travel by vehicles <50" wide and OROMTRD is < 1.5 without seasonal road restrictions.

5.1.4 (c) is the same as 5 1 4 (a) except cross country snowmachine use is only allowed from Jan. 1 to April 30

Game Retrieval

Same as 2 7 a, b Elk and Deer Winter Range, except not allowed in 5 1.4 (c).

Production of Natural Resources

Timber

For the forested component within the prescription area, no more than 20 percent of the acres will be in a created opening at any point in time (a created opening is defined as: a) clearcuts (nonstocked and seedling stages); b) seed cuts of a shelterwood (nonstocked and seedling stages); or c) group selection (nonstocked and seedling stages). (S)

Naturally occurring forested blocks less than 250 acres in size, may have 20 acre harvest units, with no more than 20% of the block in the created opening category at one time. (G)

For scheduling harvest activities, adjacent big game security areas will be provided. Security should provide the following conditions:

1. Security areas will be > 250 acres in size, or depending on the size of the timber sale area boundary, as large as necessary to meet big game security needs (G)
2. Within the security area, OROMTRD must be ≤ the density established for this management prescription.
3. No timber harvesting activity or similar type of disturbance activity can occur within the security area during the time it is designated as a security area.

5.2.1 VISUAL QUALITY IMPROVEMENT

Description

This prescription emphasizes improving or maintaining visual opportunities for visitors along major travel corridors through heavily timbered areas, while allowing livestock production, timber harvest, and other compatible commodity outputs. The purpose of this prescription is to maintain or create openings in timber stands to provide scenic vistas.

Overall you may notice signs of people camping by the roadside or as part of a commercial timber harvest.

As you drive, you see occasional timber harvest activity in some areas. The main road system is paved or gravel-surfaced and well maintained, with gentle grades suited for sedan travel. Clearcuts and harvest areas have been designed and located to provide vistas of the surrounding area.

There will be occasional places to pull off the road and have a picnic, read an interpretative sign or photograph a pleasing landscape.

The road side area is dominated by a mix of older stands of trees, young stands, and created openings to provide scenic vistas. A few areas show tree stumps, hand-piled slash, and disturbed soil. Occasionally, older cut areas show tree seedlings, saplings and poles up to 35 feet tall and have a less-disturbed appearing forest floor. Scattered dead trees are seen throughout the forest, but generally it appears healthy and vigorous.

If you watch for wildlife, you may occasionally see an elk, deer or moose in a natural opening or alongside the road, but generally these are hidden from view by the trees. During the summer and fall, you may encounter cattle or sheep grazing in openings. Signs of intensive management practices, such as burning, spraying, seeding, fences, water developments and gates are normally visually compatible.

Nonmotorized activities, such as hiking, biking or horse-back riding may originate from trail or road points along the main road. Some roads and nearby areas are available for year-around snowmobile, motorcycle, and 4 wheel-drive vehicle use.

Goals

1. Manage these major travel corridors to improve or maintain their visual quality.
2. Manage these lands in an environmentally sensitive manner to promote the production of commodity and noncommodity resources at varying levels through a variety of silvicultural prescriptions.

Objectives

1. Establish fire protection objectives for the area and desired fuel conditions
2. Fire management strategies emphasize preservation and protection of timber and range values scheduled for current use.
3. Effectively control the insects and disease and sustain forest growth.
- 4 Provide a wide array of dispersed recreation facilities.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes

Fire/Fuels

Wildfires will normally be suppressed using control strategies during the fire season. Pre- and post-fire season strategies may include containment, confinement, or control. (G)

Prescribed fire may be used to reduce fuel loading; obtain natural regeneration, improve livestock forage conditions; for wildlife habitat improvement; and for other purposes that meet the needs of this prescription. (G)

Insects and Disease

Practices to prevent or control insects and disease through direct control or silvicultural practices may be considered. (G)

Biological Elements

Wildlife

Maintain snag habitat at > 40 percent of the biological potential for woodpeckers (G)

Forest Use and Occupation

Access (S)

		Cross Country Travel	Road and Trail Travel 1/
	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
	Motorized, <50" wide	Yes	Yes
	Motorized, >50" wide	Yes	Yes
	OROMTRD 2/	N/A	N/A
	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes
<p>1/ Individual roads and trails are designated open or closed in the annual Forest Plan Travel Maps.</p> <p>2/ OROMTRD = Open road and open motorized trail route density: includes all open roads and open motorized trails. (See Roads in Glossary for more information)</p>			

Game Retrieval

Same as 2.7 a,b Elk and Deer Winter Range.

Roads

Management of the area does not require an extensive road system, and will consist of short spurs from the main travel routes (G)

Recreation

Trails - Motorized trails should be developed using primarily local roads and trails not being actively used for commodity recovery. (G)

ROS - Recreation is managed to provide a combination of semi-primitive nonmotorized to roaded natural opportunities. (G)

VQO - The Visual Quality Objective (VQO) is Retention to Maximum Modification. (G)

Production of Natural Resources

Timber

Lands are included in the suitable timber base. They contribute toward the ASQ. (S)

Any silvicultural system may be used, depending on the visual quality that is being emphasized. (G)

Regeneration systems should rely on natural regeneration to the greatest extent possible. (G)

Reforested sites may be protected from rodent and livestock damage to encourage the greatest possible growth over time, consistent with other resource needs. (G)

Maximum created opening size could be 40 acres, but will generally be 1 to 5 acres in size to create scenic vistas. (G)

Harvest and treatment residues should be made available for firewood and other products in a manner compatible with the visual quality objective. Designated aspen areas should be made available for firewood to ensure the color provided by these stands is maintained over time (G)

Range

Livestock grazing may be allowed on transitory forage produced following timber harvest where and when that use will not conflict with regeneration efforts or other concerns. (G)

5.2.2 VISUAL QUALITY MAINTENANCE

Description

This prescription emphasizes maintaining the existing visual quality within major travel corridors with high quality natural vistas, while allowing livestock production, limited timber harvest, and other compatible commodity outputs.

Overall you may notice signs of people camping by the roadside. Signs of commercial timber harvesting will generally not be evident.

The roadside area is dominated by a wide variety of vegetation and landscape forms (e.g. mountain peaks, valleys, meadows, streams, etc.) that are easily observed from natural vistas and openings along the road. Occasionally, older cut areas show tree seedlings, saplings and poles up to 35 feet tall and have a less-disturbed appearing forest floor. Scattered dead trees are seen throughout the forest, but generally it appears healthy and vigorous.

Other signs of activity are the same as 5.2.1.

Goal

Manage these travel corridors to protect their visual quality.

Objectives

1. Silvicultural practices are designed to emphasize or maintain visual quality of the area.
2. Lands are included in the suitable timber base. They contribute toward the ASQ (S)
3. Regeneration systems should rely on natural regeneration to the greatest extent possible. (G)
4. Reforested sites may be protected from rodent and livestock damage to encourage the greatest possible survival and growth over time, consistent with other resource needs. (G)
5. Maximum created opening size shall generally be less than 5 acres (G)
6. Harvest and treatment residues should be made available for firewood and other products in a manner compatible with the visual quality objective. Designated aspen areas should be made available for firewood to ensure the color provided by these stands is maintained over time. (G)

Standards and Guidelines

Forestwide standards and guidelines apply. The Standards and Guidelines are the same as 5.2 1 except:

Biological Elements

Wildlife

No assigned snag habitat biological potential for woodpeckers.

Forest Use and Occupation

Access (S)

The access Standard is the same as 5.2.1 except cross country motorized travel is allowed for all vehicles unless visual features are degraded by disturbances to vegetation or soils, and summer cross country motorized travel is prohibited where this prescription is used in the Centennial Subsection.

Game Retrieval

Same as 2 7 a, b Elk and Deer Winter Range

Recreation

VQO - The Visual Quality Objective (VQO) is Retention to Partial Retention. (G)

5.3.5 GRIZZLY BEAR HABITAT (NIC FOR ASQ, NO CROSS-COUNTRY, PHASE OUT SHEEP)

Description

This management prescription emphasizes a high degree of security and resource conditions which contribute toward the conservation and recovery of the grizzly bear, and benefits to other wildlife. Habitats will be managed to meet the goals of grizzly bear recovery. Other uses may be allowed when compatible with these goals.

Grizzly habitat maintenance and improvement, and grizzly-human conflict minimization will receive the highest management priority. Management decisions will favor the needs of the grizzly bear when grizzly habitat and other land use values compete. Land uses which can affect grizzlies and/or their habitat will be made compatible with grizzly needs or such uses will be disallowed or eliminated. Grizzly-human conflicts will be resolved in favor of grizzlies unless the bear involved is determined to be a nuisance bear. (IGBC, 1986)

The abundance and distribution of natural food sources (such as huckleberry habitats, whitebark pine, etc.) are maintained or improved by natural events such as fire and insect disturbances, or by designed vegetation management activities. A variety of forested successional stages are present, and are the result of natural disturbances such as fire and insects or by designed vegetation management activities. Habitat conditions which contribute to the movement of bears to adjacent bear management units are maintained. Human activities are managed or restricted so that human conflicts with grizzlies are unlikely; this includes restricting human activities and generally reduced public access.

Objectives

1. Develop a fire management plan (coordinated with adjacent wilderness fire plans) within 1 year of ROD.

2. Any nonfederal lands within this area will be a high priority for acquisition
3. Maintain grizzly bear security through a low density of open, motorized roads and trails.
4. Manage recreation to minimize grizzly conflicts with humans.
5. Domestic sheep grazing will be phased out over time, on a opportunity basis.
6. Vegetation manipulation will be designed to maintain or improve grizzly habitat
7. Effects analysis will be analyzed at multiple scales. Analysis areas will follow ecological boundaries, watersheds, and topographic breaks. Cumulative effects will be analyzed on no less than a BMU subunit scale.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

The Interagency Grizzly Bear Guidelines for Management Situation 1 Habitat apply to this management prescription.

Ecological Processes

Fire/Fuels

Prescribed fire is allowed to maintain or improve grizzly habitat. (G)

Insects & Disease

Insects and diseases are allowed to play their natural role in ecosystem development, unless this conflicts with the maintenance of grizzly bear habitat. (G)

Physical Elements

Lands

Lands activities which adversely affect grizzly bear populations or their habitat will not be allowed (S)

Heritage Resource

No new interpretation/enhancement of cultural sites. (S)

Biological Elements

Wildlife

Maintain snag habitat at > 60 percent of the biological potential for woodpeckers. (G)

Analysis areas for EA purposes will be at least 7,000 acres in size. (G)

Number, Size and Location - Timber sales, prescribed burns, road reclaiming, tree thinning, and trail construction must be concentrated in activity areas on an annual basis between April 1 and September 15. Each activity area shall not exceed 7,000 acres in size. (S).

Not more than 3 activity areas may exist within each bear management unit in any given year. (S)

Activity areas should generally follow ecological boundaries, watersheds and topographic breaks. Activity areas should be distributed such that no less than 7,000 acres exists between them. (G)

Inventory, monitoring, and short duration activities (generally 10 days or less) such as trail maintenance, spraying weeds, range maintenance activities, should be concentrated in time and space. Activities should be concentrated in one consecutive 30-day period each year, between April 1 and September 15 (G)

Management activities may take place during winter (December 15 to April 1) and shall be addressed on a case-by-case basis. The primary concern during the winter will be the changes the activity may have on habitat quality and quantity. (G)

Administrative Responsibilities - Emergency cessation or modification of activities will occur when those activities are in conflict with grizzly bear management objectives. Scheduled activities will not occur during the season of bear use in areas where foraging opportunities are limited in their availability, in area, or time. (S)

Forest Use and Occupation

Access (S)

		Cross Country Travel	Road and Trail Travel 1/
	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
	Motorized, <50" wide	No	Yes
	Motorized, >50" wide	No	Yes
	TMARD 2/	N/A	<= 0.8 mi/sq.mi.
	OROMTRD 2/	N/A	<= 0.6 mi/sq.mi.
	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes 3/	Yes

1/ Individual roads and trails are designated open or closed in the annual Forest Plan Travel Maps.

2/ TMARD = Total motorized access route density: includes all open and restricted roads and motorized trails. (See Roads in Glossary for more information)

OROMTRD = Open road and open motorized trail route density. includes all open roads and open motorized trails. (See Roads in Glossary for more information)

3/ Cross-country snowmachine use is only allowed from Dec 15 to April 1.

Roads

New or relocated roads will meet the following guidelines' (G)

1. Avoid high quality (such as whitebark pine habitat) grizzly bear habitat.
2. Minimize sight lines on temporary roads and skid trails.

3 Revegetate temporary roads following use

4. Minimum required construction standards will be followed.

Motorized administrative use on restricted roads and restricted motorized trails by personnel of resource management agencies is acceptable at low intensity levels as defined in existing cumulative effects analysis models. This includes contractors and permittees in addition to agency employees. (See Roads and Trails in the Glossary for definitions) (S)

Recreation

Special Uses - Special Use Activities which adversely affect grizzly bear populations or their habitat will not be permitted. (S)

Trails - New or relocated trails will meet the following

1. Avoid high quality grizzly bear habitat (G)

2. Locate so as to minimize the risk of human/bear interactions (for example, do not place trails along roaring streams where bears cannot hear humans approaching). (G)

ROS - Primitive to semi-primitive motorized. (G)

VQO - Retention to partial retention. (G)

Production of Natural Resources

Timber

These lands are included in the suitable timber base. They contribute toward the ASQ, but are a NIC. (S)

There will be no vegetation manipulation in riparian areas in the spring or in whitebark pine areas in the fall (except in years of poor cone crops). (G)

Scarification is limited to ≤ 15 percent of an area where soil disturbance impedes the re-establishment of grizzly bear foods (for example: where berry producing shrubs are present such as blue huckleberry, mtn. ash, chokecherry, buffaloberry, grouse whortleberry, etc.; where wet site species are present such as horsetail, cow parsnip, camas, wet-site carex spp, etc.) (S)

Scarification of *Carex geyeri* and *Carex rossii* is allowed at levels above 15 percent since these species readily re-establish following scarification. (G)

Cover - Maintain > 70 percent of the forested acres in each analysis area in vegetation that provides security cover for the grizzly bear. Where security cover is below 70 percent, no treatments are allowed which would further reduce the number of acres meeting security cover. (S)

Security cover is defined as forested acres (all tree species) which have not been managed or burned in the last 20 years, and managed or burned forested areas within the last 20 years which meet the following criteria (G)

Overstory Basal Area of trees 5.0"+	Understory Trees/ac. 0-4 9" and 7'+	Acreage Multiplier
130+ sq. ft. per acre	250+	1.0 (Good)
80-129 sq. ft. per acre	150-249	0.7 (Medium)
30-79 sq. ft. per acre	50-149	0.4 (Poor)

The overstory and understory categories for security cover are to be considered separately. A stand having either 130 sq. ft. of basal area per acre or 250 understory trees per acre over 7 ft. tall would meet the requirements for full security cover. Both live and dead tree basal areas are used for overstory calculations. (S)

Maintain > 20 percent thermal cover in each analysis area. Where thermal cover is below 20 percent, no treatments are allowed which would further reduce the number of acres meeting thermal cover criteria. Thermal cover is defined as forest stands with >80 sq. ft. of basal area per acre (live and dead trees), >45 percent canopy closure, and >40 ft tall trees. (S)

Maximum distance to security cover will be 300 feet, which translates to a maximum created opening width of 600 feet. (S)

Created openings will be located at least 1500 feet from open roads. A clearcut and seedtree cut result in created openings. Final removal of a shelterwood or an overstory removal result in a created opening if the stand is less than 7 feet tall or less than stocking standards. (S)

No new created openings are allowed adjacent to existing openings (including meadows and created openings). Maintenance of natural openings is allowed. (S)

Leave strips between openings will be the larger of 600 feet or 3 times the sight distance (the distance needed to hide 90% of a grizzly bear). (S)

Dead & Down Component - If available, leave at least 2 pieces per acre over 12 inches in diameter. Woody material should be in various stages of decay if possible. If a treatment area is below Forestwide standards, use the treatment to increase down woody material to recommended amounts. (G)

Security Areas - Maintain a minimum 7,000 acre security area adjacent to each timber sale area. (S)

Security areas must provide the following conditions: (S)

1. Within the security area, TMARD (8 mi/sq.mile) and OROMTRD (.6 mi/sq mile) must be < the density established for this management prescription.
2. Within the security area, security cover must be greater than or equal to the amount established for this management prescription.
3. No timber harvesting activity or similar type of disturbance activity can occur within the security area during the time it is designated as a security area.

Range

Opportunities to resolve domestic sheep and grizzly bear conflicts over time are defined as a suitable or favorable time to abolish or close an allotment because of nonuse violations, term permit waivers where the permit is waived back to the government, resource protection, or permit actions resulting in cancellation of the permit. If opportunities do not arise, then efforts will be made to relocate or accommodate sheep to other areas. (G)

Cattle grazing is allowed. Allotment Management Plans will specify measures to meet agency grizzly goals and objectives. (S)

Permittee's full compliance in meeting grizzly bear management goals and objectives for grizzly bear habitat will be a condition of the permit. In addition, the following will be required: (S)

1. Temporary cessation or modification of permitted livestock grazing activities will occur to resolve grizzly bear conflicts with humans or livestock.
2. Livestock carcasses will be disposed of or rendered unattractive to bear within 24 hours after they are discovered. Disposal may include removing the carcass from the area, burying it at least 2 feet underground, burning, using an acceptable chemical repellent, or other methods approved by the District Ranger. Disposal shall be in accordance with other governing agencies (e.g., the Wyoming Department of Fish and Game) in order to determine cause of death for reimbursement purposes.
3. Human food, refuse, and prepared livestock/pet foods associated with the livestock operation will be made unavailable to grizzlies through proper storage, handling, and disposal. Proper storage includes a) inside a bear-proof container, b) suspended horizontally from adjacent posts or trees, c) stored in a hard-sided vehicle or trailer, or d) other methods approved by the District Ranger. The exception is when the food is being eaten or prepared for eating, or when food and similar organic matter is being transported. Unburned human foods, garbage or other refuse will be carried off the Forest as often as practical.
4. High quality food production areas for grizzlies (i.e. wet alpine and subalpine meadows, stream bottoms, aspen groves, and other riparian areas) will receive special grazing direction such as light, once-over grazing, special utilization standards, or complete closure. These sites and their corresponding direction will be identified in the Annual Operating Plan.
5. Livestock depredation believed to be associated with bears will be reported within 24 hours after they are discovered to the District Ranger and the proper State agencies.
6. Any observation of grizzly bear or grizzly bear sign will be reported to the District Ranger as soon as practical.
7. Any action taken by the permittee or their agents which violates the Endangered Species Act will be grounds for cancellation of their grazing permit.

5.4 (a,b,c) ELK AND DEER SUMMER RANGE

Description

This management prescription emphasizes management actions and resource conditions which provide increased security for big game species, and hunting opportunities with limited access. Habitats are managed for multiple land use benefits, but these uses are managed over time and space to provide security and cover for hunted big game species.

Spring, summer, and fall forage is abundant and well distributed throughout the area. Hiding and thermal cover is abundant and in large patches to provide security for big game throughout the spring, summer, and fall seasons. Big game movements and migrations are facilitated due to well distributed forage and cover.

Timber management emphasizes providing a variety of forested age classes, with large blocks of forested vegetation providing hiding cover. Security areas are provided adjacent to areas where timber harvesting is occurring.

Motorized access is managed to provide security for big game. Motorized summer use will occur only on designated routes.

Livestock grazing exists in some areas; forage utilization, water developments, grazing systems, and other livestock management actions are managed to be compatible with big game habitat needs.

Dispersed recreation, mining activity, and other multiple uses are managed in time and space to help provide security habitat for big game animals.

Goal

Provide big game security areas while allowing for other resource activities.

Objective

Utilize silvicultural techniques which prevent or lessen insect and disease epidemics to maintain cover values for elk.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes

Fire/Fuels

Use prescribed fire to improve forage production, assist in forest regeneration and enhance ecological conditions. (G)

Biological Elements

Wildlife

Maintain snag habitat at > 60 percent of the biological potential for woodpeckers. (G)

Forest Use and Occupation

Access (S)

5 4 (a)

		Cross Country Travel	Road and Trail Travel 1/
	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	No	Yes
	Motorized, <50" wide	No	Yes
	Motorized, >50" wide	No	Yes
	OROMTRD 2/	N/A	<= 0.5 m/sq.mi.
	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes 3/	Yes

1/ Individual roads and trails are designated open or closed in the annual Forest Plan Travel Maps.

2/ OROMTRD = Open road and open motorized trail route density; includes all open roads and open motorized trails. (See Roads in Glossary for more information)

In 5.4 (a) prescription areas <= 5 0 sq mi. in size, OROMTRD does not apply.

3/ Cross-country snowmachine use is only allowed from Dec 1 to April 30.

5 4 (b) The same as (a) above, except No Motorized trail and road travel is allowed, the OROMTRD is 0.0 miles/square mile, and snowmachine use is not allowed.

5 4 (c) The same as (a) above, except Mountain Bike/Mechanized is allowed for cross country travel and the OROMTRD is < 1.25 miles/square mile.

Game Retrieval

Same as 2 7 a, b Elk and Deer Winter Range except. not allowed in 5.4b.

Recreation

ROS - Primitive to urban. (G)

VQO - Retention to partial retention. (G)

Production of Natural Resources

Timber

These lands are part of the suitable timber base. They contribute toward the ASQ. (S)

Manage for big game security in forested blocks > 250 acres (a forested block is defined as adjacent stands of saplings, pole, mature and old growth trees). (S)

For the forested component within the prescription area, no more than 20 percent of the acres will be in a created opening at any point in time (a created opening is defined as a) clearcuts (nonstocked and seedling stages); b) seed cuts of a shelterwood (nonstocked and seedling stages); or c) group selection (nonstocked and seedling stages). (S)

Naturally occurring forested blocks less than 250 acres in size, may have 20 acre harvest units, with no more than 20% of the block in the created opening category at one time (G)

For scheduling harvest activities, adjacent big game security areas will be provided. Security areas must provide the following conditions: (S)

1. Security areas will be > 250 acres in size, or as large as the timber sale area boundary, whichever is greater.
2. Within the security area, OROMTRD must be \leq the density established for this management prescription.
3. No timber harvesting activity or similar type of disturbance activity can occur within the security area during the time it is designated as a security area.

Range

Allotments are managed at FRES levels A , B, C or D. (G)

6.1 (b) RANGE MANAGEMENT

Description

The purpose of this management prescription is to achieve and maintain healthy nonforested rangelands for livestock forage production and good watershed condition.

Forage is provided on a sustained-yield basis that protects rangeland values, including domestic livestock grazing and wildlife habitat. Cattle, sheep, horses, and perhaps other domestic livestock can often be seen. Important seasonal ranges for big game animals exist in many of these areas. Not all areas are grazed by domestic livestock, some areas may be reserved for wildlife and watershed restoration work. Range improvements, such as fencing, corrals, and water developments, are present. Roads, trails, and stock driveways exist, as needed, to provide access for livestock management. Vegetation manipulation (with the use of fire, mechanical means, or herbicides) may occur to achieve or maintain healthy rangeland conditions. A variety of rangeland vegetation successional stages can be observed. Herders, range riders, camps, and transport vehicles may be seen at various times and places. Dispersed recreation activity generally occurs throughout these areas.

Goal

Provide forage on a sustained-yield basis that protects rangeland values, including domestic livestock grazing, and wildlife habitat.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed as follows.

Ecological Processes

Fire/Fuels

Prescribed fire is allowed to achieve desired forage or ecological condition (G)

Forest Use and Occupation

Access (S)

6.1 (b)

		Cross Country Travel	Road and Trail Travel 1/
	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
	Motorized, <50" wide	No	Yes
	Motorized, >50" wide	No	Yes
	OROMTRD 2/	N/A	<= 2 mi/sq.mi. 2/
	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

1/ Individual roads and trails are designated open or closed in the annual Forest Plan Travel Maps.

2/ OROMTRD = Open road and open motorized trail route density: includes all open roads and open motorized trails. (See Roads in Glossary for more information)

In 6.1 (b) prescription areas <= 40 sq. mi in size, OROMTRD does not apply.

Game Retrieval

Same as 2.7 a,b Elk and Deer Winter Range.

Outfitter/Guide

Outfitter/Guide stock are allowed; AUM's are specified in outfitter/guide permits and RPD's. (G)

Recreation

Dispersed - Limited recreation facilities, which are not detrimental to intensive range management, and other resources may be provided in this prescription. (G)

Opportunities may exist for some interpretative signs for public education. (G)

ROS - Semi-primitive nonmotorized to roaded natural. (G)

VQO - Retention to modification. (G)

Production of Natural Resources

Timber

These areas are removed from the suitable timber base. They are not part of the ASQ. (S)

Timber may be harvested to improve wildlife habitat and to provide miscellaneous products (such as posts & poles, firewood, etc.) as long as the harvest does not trigger the need for reforestation. (G)

Range

Allotments are managed at FRES levels A, B, C & D. (G)

7.1 (b) INTERMINGLED PUBLIC/PRIVATE LANDS

The purpose of this prescription is to provide fuels management within and adjacent to urban areas of the Forest. Timber management will only be done with selective or patch cut harvest methods, and will not contribute toward the ASQ.

Description

The emphasis is on fuels management within and adjacent to urban areas of the Forest, nonscheduled wood-fiber production and use, livestock production, and on other compatible commodity outputs, consistent with adequate protection of all resource values and consideration for long-term forest health and biodiversity.

Overall, you notice many signs of people. You see a fairly extensive roading system and timber harvest activity in some areas. The main road system is gravel-surfaced and well maintained, with gentle grades suited for sedan travel. You may see timber harvest equipment at roadside and meet logging traffic along the roadway. You will see other people driving for pleasure or hauling out a load of firewood. Driving a sedan you can travel about two-thirds of the main road system. About one-third of the main road system is closed for wildlife security or roadway protection.

You notice some low-standard branch roads with native and gravel surfaces. Most of these low-standard roads are closed annually or seasonally to vehicle access. About two-thirds of the closed roads are blocked seasonally by gates, and about one-third are blocked year-round by semi-permanent barricades and gates. Some branch roads remain open for public access, for commodity production and for Forest Service administration.

The forest is a mosaic of different sizes, ages and heights. Older, taller trees tend to dominate the landscape, but small, patch openings with smaller trees are obvious. Recently cut areas have a partial canopy of older trees and no new clearcuts have been made since implementation of the Revision. Older clearcut areas have seedlings, saplings, poles, and older trees up to 35 feet tall and have a less disturbed appearing forest floor. Dead trees from the mountain pine beetle infestation are seen in older stands and scattered throughout the rest of the forest.

Firewood is available, by permit, from dead trees, designated aspen areas, slash and logs decked for that purpose.

If you watch wildlife, you will see an increase in the early seral species like the snowshoe hare, mountain bluebird, and ruffed grouse with a corresponding reduction in such mature-growth-dependent species as the martin, red-breasted nuthatch, and goshawk. Elk and deer numbers have generally increased somewhat in recent years. However, due to human activity, increased hunting pressure, and reduced wildlife security some elk and other big-game have been displaced to areas with greater security. Over time, big-game seasons may have been shortened or restricted. Because of the setting, outfitted hunting may not be as common as it is in less-developed areas.

During the summer and fall you encounter cattle or sheep and notice signs of intensive management practices, such as burning, spraying, seeding, fences, cattleguards, water developments and gates. You see some cattle within streamside riparian areas and on nearby slopes. Away from the streams, you see scattered groups of livestock. You may find traffic delays when livestock is being moved.

You find such nonmotorized activities as hiking, biking and horse-back riding along roads closed to vehicle traffic. Some roads and areas are available for snowmobile, motorcycle, and 4-wheel-drive vehicle use.

Goals

1. Manage vegetation and fuels to minimize fire risk for urban facilities within the interface.
2. Manage these lands in an environmentally sensitive manner to promote the production of commodity and noncommodity resources.

Standards and Guides and Objectives

Same as 5.1.3 (and 5.1) except.

1. OROMTRD does not apply to prescription areas less than or equal to 1.0 square miles. (S)
2. No Game Retrieval Access is Allowed. (S)
3. No ASQ. (S)
4. VQO's of Maximum Modification are allowed. (G)

8.1 CONCENTRATED DEVELOPMENT AREAS

Description

This prescription applies to all existing concentrated developments including active mines, borrow pits, gravel pits, electronic sites, utility corridors, and administrative sites (including guard stations and rental cabins). Concentrated development is normally small, but may be extensive on occasion. A wide variety of vegetation and landtypes may be present. This category is often surrounded by other management areas.

These are generally highly developed areas with much evidence of people, structures, roads, and often disturbed ground. High noise levels sometimes emanate from these sites due to the use of heavy equipment or blasting at various times. Other sites are collections of buildings and storage structures from which the administration of the National Forest is carried out. Some closed gates and restrictions on travel may be present in order to protect equipment and developments.

Goal

Allow concentrated development in small areas for mineral development and infrastructure needs.

Objectives

- 1. Restrict development of concentrated development sites to the smallest area possible.
- 2. Develop new communication sites when existing site capacity has been reached, or when new technologies require new locations, or to meet public needs when alternative sites on other lands are not suitable or available
- 3. Obtain materials from commercial sources or borrow sites identified in the Forest "Compendium".

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes

Fire/Fuels

All wildfire will be aggressively suppressed. (S)

Insects & Disease

Attempt to control epidemics at small outbreak sizes. Salvage of dead and dying trees of commercial value is possible. (G)

Forest Use and Occupation

Access (S)

		Cross Country Travel	Road and Trail Travel 1/
	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
	Motorized, <50" wide	No 2/	Yes
	Motorized, >50" wide	No 2/	Yes
	OROMTRD 3/	N/A	N/A
	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

1/ Individual roads and trails are designated open or closed in the annual Forest Plan Travel Maps.

2/ Motorized use is not allowed, except as authorized in a site specific analysis.

3/ OROMTRD = Open road and open motorized trail route density: includes all open roads and open motorized trails. (See Roads in Glossary for more information)

Recreation

Dispersed - Do not encourage use of areas in proximity to these sites. (G)

Trails - Protect existing trails and wherever possible avoid development of trails in or near concentrated development sites. Where feasible move existing trails away from these areas. (G)

ROS - Semiprimitive nonmotorized to urban. (G)

VQO - The Visual Quality Objective (VQO) is generally Partial Retention to Maximum Modification (G)

Production of Natural Resources

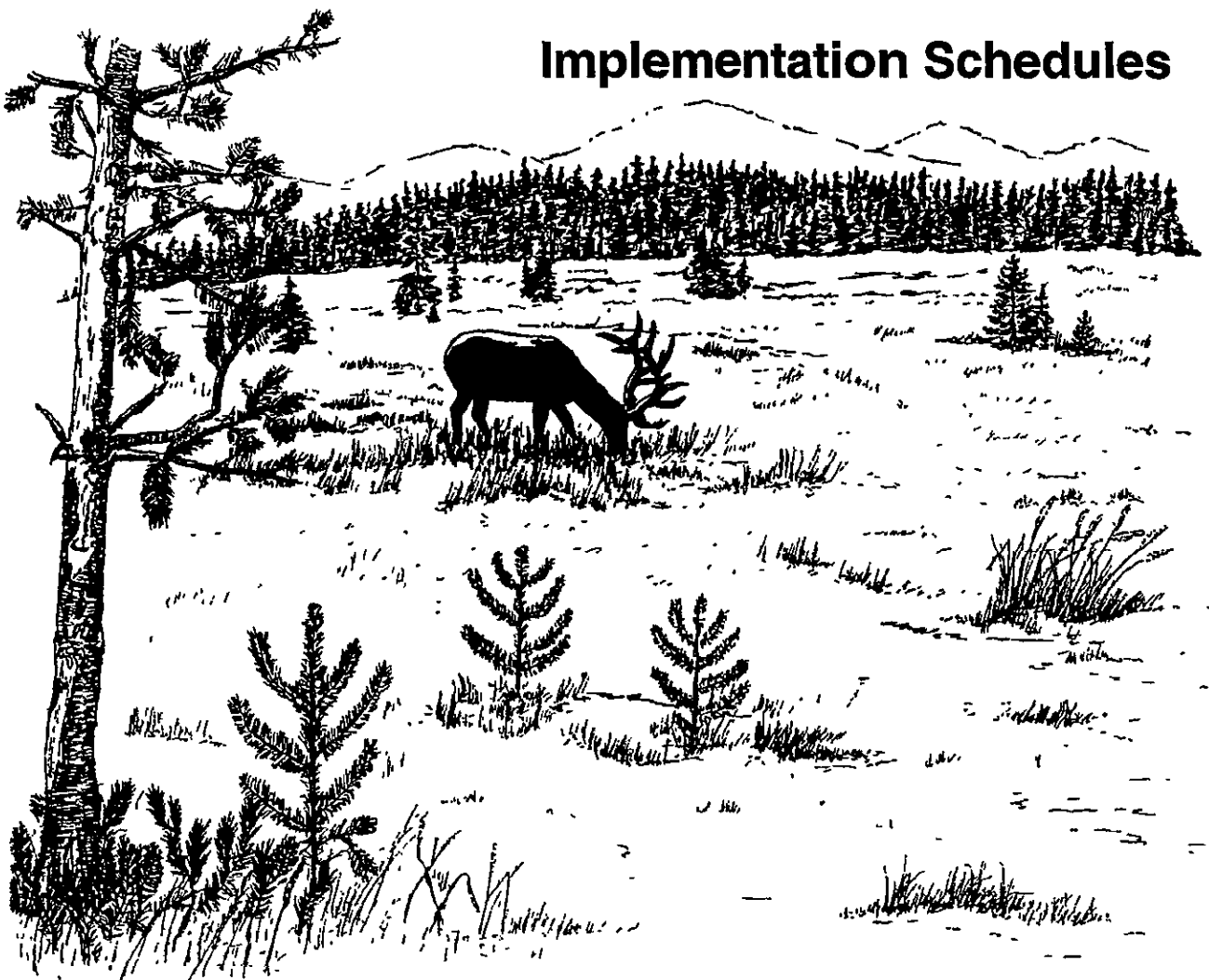
Timber

These lands are removed from the suitable timber base. They do not contribute to the ASQ. (S)

Chapter

IV

Implementation Schedules



CHAPTER IV IMPLEMENTATION SCHEDULES

Implementation of the Revision occurs through identification, selection, scheduling and execution of management practices to meet management direction in the Revision. A list of activities that the Forest has decided to complete in the future that tie to decisions is provided below. This list is not inclusive of all the activities and projects the Forest will undertake in the coming decade, but rather those activities that will aid in implementation.

These listing will routinely change as projects get completed or are removed from the lists for other reasons, and new projects take their place. Projects will be implemented in response to public demand, planned outputs of goods and services in this Revision and the annual budgeting process and resource concern priorities.

Categories are listed by issue group, as identified in the DEIS

ECOLOGICAL PROCESSES

Objective

By 2007, establish the range of natural variability of vegetation conditions by subsection for the Forest.

BIOLOGICAL ELEMENTS

AQUATIC AND RIPARIAN RESOURCES, AND WATERSHEDS

Objectives

1 By 2017, watershed improvement needs backlog would be completed in the Lemhi/Medicine Lodge, Big Holes/Palisades, Caribou Subsections. Watershed improvement needs identified in the Teton Basin Study would be verified. Watershed improvement needs inventories would be completed on the Centennials, Madison Plateau, and Teton Subsections.

2. By 1998, all streams supporting native cutthroat trout would be inventoried, classified, and delineated. Restoration activities would be planned and scheduled for stream reaches found to be in unsatisfactory condition.

2.8.3 AQUATIC INFLUENCE ZONE

Objectives

1. Within three years of the Record of Decision, all existing roads, trails, culverts, fords and stream crossings within these lands will be inventoried and evaluated as to whether they meet management prescription goals. Those that do not meet management prescription goals will be scheduled for restoration.

2. Establish the range of variability for aquatic influence zone characteristics.

WILDLIFE

Objective - Snag/Cavity Nesting Habitat - Determine the biological potential for cavity nesting habitat on a watershed basis to enable management of some areas at higher levels of biological potential and some at lower levels of biological potential and meet the overall management prescription objectives.

Road Density - Implement the road density standards in the bear management units within 3 years of the signing of the ROD in coordination with USFWS and State Wildlife agencies. Complete the balance of the road density standards in the remainder of the decade.

Common Loon Habitat - Evaluate the potential to provide and maintain suitable breeding habitat for common loons at these sites: Indian Lake, Thompson Hole, Bergman Reservoir, Junco lake, Fish Lake, Loon Lake, Moose Lake, Unnamed Pond (Sec. 9, T47N, R118W).

Develop common loon management plans for the above sites if the evaluation indicates there is potential to provide and maintain suitable breeding habitat.

Spotted Bat and Western Big-eared Bat Habitat - Develop management plans for any caves, mine shafts, and other suitable habitats where these bat species are found to be present

2.3.5 GRIZZLY BEAR HABITAT

Objective - Fire/Fuels - Develop a fire management plan (coordinate with any adjacent wilderness fire plans) within 1 year of ROD.

NONFORESTED VEGETATION

Objectives

1. By 2007, improve the ecological status of 1,200 acres of riparian habitat presently reported as early seral stage to mid-/ late-seral stage.
2. By 2007, improve 26,400 acres of uplands (nonriparian and nontimber plant communities) currently reported as unsatisfactory ecological condition to satisfactory condition.
3. By 2007, grazing systems will be implemented on all grazing allotments to meet Range Goals I and II.
4. Within five years after the signing of the Record of Decision establish stream bank stability (trampling disturbance) standards correlated to stubble height at the hydric greenline.

FOREST USE AND OCCUPATION RECREATION

Objective - Dispersed - By 2007, stabilize soil, water, and vegetation conditions to maintain the desirable recreation setting on approximately 100 of the 300 identified dispersed recreation sites in greatest need of restoration. These sites would have limited developed facilities.

Trails - Complete a review of 5-10% of the system trails each year to determine rehabilitation needs.

Wild, Scenic and Recreation Rivers - By 2002, the 249 miles of inventoried eligible streams will have suitability studies completed. Priority would be on the South Fork of the Snake River Basin, approximately one-third of the streams would be done at a time.

8.1.6 DESIGNATED WILDERNESS - OPPORTUNITY CLASS I

Objective

Cooperate with the State Game and Fish Departments to prepare a Wilderness fishery management plan by the year 1999.

Forest Plan Revision - Capital Improvements Projects (CIP) List By Approximate Year of Construction			
Year	Project	Locations	Cost
1996	SST's -- 4 doubles	Stoddard, Upper Coffee, Big Elk, Teton Canyon Campground Rehabilitation and new group site	\$129M
1996	Buttermilk/Calamity		\$252M
1997	Water Systems	Warm River, Big Elk, Cave Falls, (Mike Harris and Steel Creek if \$ will stretch)	\$159M
1998	Reunion Flat rehabilitation		\$193M
1998	Blowout CG rehab/const (8-10 new units)		\$216M
1999	Trail Facilities (GWT, mtce - some new construction of TH's)		\$219M
1999	Buffalo CG rehabilitation		\$275M
2000	Cottonwood Boat Ramp (some new construction)		\$168M
2000	Charcoal Kilns (protective covers)		\$132M
2001	Water systems	Stoddard, Big Elk	\$244M
2001	Warm River CG Rehab, and SST		\$202M
2002	Big Falls Inn		
2002	Upper Coffee Pot rehabilitation		
2003	Water systems	Mike Harris, Box Canyon, Steel Creek, Alpine Alpine, Mike Harris	\$200M
2003	SST's		\$200M
2004	McCrea rehabilitation		
2004	Riverside rehabilitation/ramp		
2005	Big Elk rehabilitation		
2005	Palisades TH/bridge (some new construction)		
2006	Howard Springs picnic rehabilitation		
2006	Wilderness TH's (some new construction)		
2007	Lower Mesa parking, etc.		
2007	Webber Creek relocation		
<p>AS POSSIBLE - projects of construction/reconstruction <\$100M will be funded out of Forest Budget as funding is available. Projects to be selected by Forest Recreation Committee and Rangers from a priority list established by the committee. ANNUALLY - 4-6 miles of trail construction/reconstruction to be submitted \$60M</p>			
CG = Campground, SST = Sweet Smelling Toilet, TH = Trail Head			

JEDEDIAH SMITH WILDERNESS
Wilderness Implementation Schedule
October 1, 1997 - September 30, 2001

FY98 Schedule of Activities			
Activity	Due Date Priority	Responsibility	Cost Expanded Budget Line Item
Ecosystem Management			
Maintain signs at trailheads that address various users of the Wilderness	9/98 2	Recreation	\$ 500 NFWM
Coordinate management of wilderness with both districts	9/98 1	Recreation	
Coordinate recreation and wildlife planning	9/98 1	Recreation Wildlife	
Develop Watershed Improvement Needs Inventory	9/98 1	Resources	\$ 3,500 NFSO/SI
Develop Air Quality Monitoring Plan	12/98	Resources	\$ 2,500 NFSO
Develop Baseline Water Quality Monitoring Plan	9/98	Resources	\$ 2,000 NFSO
Continue plant surveys for noxious, t, e, and s species	9/97	Resources	\$ 3,000 NFWM
Recreation			
Continue monitoring based on Forest Plan	9/98 1	Recreation	\$ 2,000 NFWM
Update baseline data with Grand Targhee Ski Resort coordination	9/98 1	Recreation	\$10,000 NFWM
Continue evaluation and inventory of intruding manmade features	9/98 2	Recreation	\$ 3,000 NFWM
Education			
Develop education plan for local schools	9/98 1	Recreation	\$ 2,000 NFWM
Develop ethics orientation plan for permittees	9/98 1	Recreation	\$ 2,000 NFWM
Develop ethics orientation plan for internal employees	9/98 1	Recreation	\$ 2,000 NFWM
Develop education plan for organizational camps	9/98 1	Recreation	\$ 2,000 NFWM
Provide information on wilderness ethics to frontliners for public	5/98 1	Recreation	\$ 500 NFWM
Continue contact with users of mountain bikes, motor bikes, game carts	5/98 1	Recreation	
Lands			
Continue boundary survey	9/98 1	Lands	\$30,000 NFLA
Sign portions of boundary requiring identification	9/98 1	Recreation	\$ 2,000 NFWM

FY98 Schedule of Activities			
Activity	Due Date Priority	Responsibility	Cost Expanded Budget Line Item
Law Enforcement			
Revise winter law enforcement plan to protect wilderness boudary	9/98 1	Law Enforcement	\$70,000 NFWM
Revise MOU with NPS for winter law enforcement	9/98	Law Enforcement	
Wildlife/Fisheries			
Develop MOU for fish stocking with F&G	9/98 1	Wildlife	
Develop Wilderness Fish Management Plan with F&G	9/98	Wildlife	
Develop monitoring plan with F&G for bighorn sheep	9/98	Wildlife	\$ 3,000 NFWL

FY99 Schedule of Activities			
Activity	Due Date Priority	Responsibility	Cost Expanded Budget Line Item
Ecosystem Management			
Coordinate management of wilderness with both districts	9/99 1	Recreation	
Coordinate recreation and wildlife planning	9/99 1	Recreation Wildlife	
Watershed Improvement Projects from WINI	9/99 1	Resources	\$ 6,000 NFSO/SI
Air Quality Monitoring Scheme Developed	12/99	Resources	\$ 3,500 NFSO
Continue Baseline Water Quality Monitoring	9/99	Resources	\$ 3,500 NFSO
Continue plant surveys for noxious, t, e, and s species	9/99	Resources	\$ 3,000 NFWM
Recreation			
Continue monitoring based on Forest Plan	9/99 1	Recreation	\$ 3,000 NFWM
Update baseline data with Grand Targhee Ski Resort coordination	9/99 1	Recreation	\$10,000 NFWM
Continue evaluation and inventory of intruding manmade features	9/99 2	Recreation	\$ 3,000 NFWM
Education			
Continue education plan for local schools	9/99 1	Recreation	\$ 2,000 NFWM
Continue ethics orientation plan for permittees	9/99 1	Recreation	\$ 2,000 NFWM
Continue ethics orientation plan for internal employees	9/99 1	Recreation	\$ 2,000 NFWM
Continue education plan for organizational camps	9/99 1	Recreation	\$ 2,000 NFWM
Provide information on wilderness ethics to frontliners for public	5/99 1	Recreation	\$ 500 NFWM
Lands			
Continue boundary survey	9/99 1	Lands	\$30,000 NFLA
Sign portions of boundary requiring identification	9/99 1	Recreation	\$ 2,000 NFWM

FY99 Schedule of Activities			
Activity	Due Date Priority	Responsibility	Cost Expanded Budget Line Item
Law Enforcement			
Update winter law enforcement plan to protect wilderness boudary	9/99 1	Law Enforcement	\$50,000 NFWM
Revise MOU with NPS for winter law enforcement	9/99	Law Enforcement	
Wildlife/Fisheries			
Continue MOU for fish stocking with F&G	9/99 1	Wildlife	\$ 3,000 NFWL
Continue Wilderness Fish Management Plan with F&G	9/99	Wildlife	\$ 3,000 NFWL
Continue monitoring plan with F&G for bighorn sheep	9/99	Wildlife	\$ 3,000 NFWL

FY00 Schedule of Activities			
Activity	Due Date Priority	Responsibility	Cost Expanded Budget Line Item
Ecosystem Management			
Coordinate management of wilderness with both districts	9/00 1	Recreation	
Coordinate recreation and wildlife planning	9/00 1	Recreation Wildlife	
Watershed Improvement Projects from WINI	9/00 1	Resources	\$ 6,000 NFSO/SI
Air Quality Monitoring Scheme Developed	12/00	Resources	\$ 3,500 NFSO
Continue Baseline Water Quality Monitoring	9/00	Resources	\$ 3,500 NFSO
Continue plant surveys for noxious, t, e, and s species	9/00	Resources	\$ 3,000 NFWM
Recreation			
Continue monitoring based on Forest Plan	9/00 1	Recreation	\$ 3,000 NFWM
Update baseline data with Grand Targhee Ski Resort coordination	9/00 1	Recreation	\$10,000 NFWM
Continue evaluation and inventory of intruding manmade features	9/00 2	Recreation	\$ 3,000 NFWM
Education			
Continue education plan for local schools	9/00 1	Recreation	\$ 2,000 NFWM
Continue ethics orientation plan for permittees	9/00 1	Recreation	\$ 2,000 NFWM
Continue ethics orientation plan for internal employees	9/00 1	Recreation	\$ 2,000 NFWM
Continue education plan for organizational camps	9/00 1	Recreation	\$ 2,000 NFWM
Provide information on wilderness ethics to frontliners for public	5/00 1	Recreation	\$ 500 NFWM
Lands			
Continue boundary survey	9/00 1	Lands	\$30,000 NFLA
Sign portions of boundary requiring identification	9/00 1	Recreation	\$ 2,000 NFWM

FY00 Schedule of Activities			
Activity	Due Date Priority	Responsibility	Cost Expanded Budget Line Item
Law Enforcement			
Update winter law enforcement plan to protect wilderness boundary	9/00 1	Law Enforcement	\$50,000 NFWM
Revise MOU with NPS for winter law enforcement	9/00	Law Enforcement	
Wildlife/Fisheries			
Continue MOU for fish stocking with F&G	9/00 1	Wildlife	\$ 3,000 NFWL
Continue Wilderness Fish Management Plan with F&G	9/00	Wildlife	\$ 3,000 NFWL
Continue monitoring plan with F&G for bighorn sheep	9/00	Wildlife	\$ 3,000 NFWL

FY01 Schedule of Activities			
Activity	Due Date Priority	Responsibility	Cost Expanded Budget Line Item
Ecosystem Management			
Coordinate management of wilderness with both districts	9/01 1	Recreation	
Coordinate recreation and wildlife planning	9/01 1	Recreation Wildlife	
Watershed Improvement Projects from WINI	9/01 1	Resources	\$ 6,000 NFSO/SI
Air Quality Monitoring Scheme Developed	12/01	Resources	\$ 3,500 NFSO
Continue Baseline Water Quality Monitoring	9/01	Resources	\$ 3,500 NFSO
Continue plant surveys for noxious, t, e, and s species	9/01	Resources	\$ 3,000 NFWM
Recreation			
Continue monitoring based on Forest Plan	9/01 1	Recreation	\$ 3,000 NFWM
Update baseline data with Grand Targhee Ski Resort coordination	9/01 1	Recreation	\$10,000 NFWM
Continue evaluation and inventory of intruding manmade features	9/01 2	Recreation	\$ 3,000 NFWM
Education			
Continue education plan for local schools	9/01 1	Recreation	\$ 2,000 NFWM
Continue ethics orientation plan for permittees	9/01 1	Recreation	\$ 2,000 NFWM
Continue ethics orientation plan for internal employees	9/01 1	Recreation	\$ 2,000 NFWM
Continue education plan for organizational camps	9/01 1	Recreation	\$ 2,000 NFWM
Provide information on wilderness ethics to frontliners for public	5/01 1	Recreation	\$ 500 NFWM
Lands			
Continue boundary survey	9/01 1	Lands	\$30,000 NFLA
Sign portions of boundary requiring identification	9/01 1	Recreation	\$ 2,000 NFWM

FY01 Schedule of Activities			
Activity	Due Date Priority	Responsibility	Cost Expanded Budget Line Item
Law Enforcement			
Update winter law enforcement plan to protect wilderness boundary	9/01 1	Law Enforcement	\$50,000 NFWM
Revise MOU with NPS for winter law enforcement	9/01	Law Enforcement	
Wildlife/Fisheries			
Continue MOU for fish stocking with F&G	9/01 1	Wildlife	\$ 3,000 NFWL
Continue Wilderness Fish Management Plan with F&G	9/01	Wildlife	\$ 3,000 NFWL
Continue monitoring plan with F&G for bighorn sheep	9/01	Wildlife	\$ 3,000 NFWL

WINEGAR HOLE WILDERNESS
Wilderness Implementation Schedule
October 1, 1997 - September 30, 2001

FY97 Schedule of Activities			
Activity	Due Date Priority	Responsibility	Cost Expanded Budget Line Item
Recreation			
Hunter Contacts	11/97 1	Recreation Wildlife	\$ 750 NFWM/NFTE
Maintain Fish Lake Trailhead	9/97 1	Recreation	\$ 200 NFRM
Trails maintained	8/97 2	Recreation NPS	
Complete campsite/trail condition inventory	9/97 2	Recreation	\$ 500 NFWM
Wildlife			
*Herpetofauna Survey	7/97 1	Wildlife	\$ 225 NFEM
Waterfowl Survey	6/97 1	Wildlife	\$ 375 NFEM
	8/97 1		\$ 375 NFEM
*Raptor Survey	7/97 1	Wildlife	\$ 2,250 NFEM
*Cavity Nester Survey	7/97	Wildlife	\$ 375 NFEM
Monitor need for bear proof storage facilities	9/97 1	Wildlife	\$ 500 NFEM
*Furbearer Winter Tracking	4/97 2	Wildlife	\$ 1,200 NFWL
*Watershed/Fisheries Survey	9/97 2	Wildlife	\$ 400 NFIF
* Dependant on funding			

FY98 Schedule of Activities			
Activity	Due Date Priority	Responsibility	Cost Expanded Budget Line Item
Recreation			
Hunter Contacts	11/98 1	Recreation Wildlife	\$ 750 NFWM/NFTE
Maintain Fish Lake Trailhead	9/98 1	Recreation	\$ 210 NFRM
Trails maintained	8/98 2	Recreation NPS	
Lands			
Landline needs identified	8/98 3	Recreation	\$ 1,000 NFLA
Wildlife			
*Herpetofauna Survey	7/98 1	Wildlife	\$ 240 NFEM
Waterfowl Survey	6/98 1	Wildlife	\$ 400 NFEM
	8/98 1		\$ 400 NFEM
*Raptor Survey	7/98 1	Wildlife	\$ 2,363 NFEM
*Cavity Nester Survey	7/98	Wildlife	\$ 400 NFEM
*Furbearer Winter Tracking	4/98 2	Wildlife	\$ 1,260 NFWL
*Watershed/Fisheries Survey	9/98 2	Wildlife	\$ 400 NFIF
Water/Soil/Air			
Watershed Improvement Needs Inventory	9/98 1	Resources	\$ 3,500 NFSSO/SI
Develop Air Quality Monitoring Plan	12/98	Resources	\$ 2,500 NFSSO
Baseline Water Quality Monitoring Plan Developed	9/98	Resources	\$ 2,000 NFSSO

FY99 Schedule of Activities			
Activity	Due Date Priority	Responsibility	Cost Expanded Budget Line Item
Recreation			
Hunter Contacts	11/99 1	Recreation Wildlife	\$ 830 NFWM/NFTE
Maintain Fish Lake Trailhead	9/99 1	Recreation	\$ 220 NFRM
Trails maintained	8/99 2	Recreation NPS	
Wildlife			
*Herpetofauna Survey	7/99 1	Wildlife	\$ 252 NFEM
Waterfowl Survey	6/99 1	Wildlife	\$ 420 NFEM
	8/99 1		\$ 420 NFEM
*Raptor Survey	7/99 1	Wildlife	\$ 2,481 NFEM
*Cavity Nester Survey	7/99	Wildlife	\$ 420 NFEM
Monitor need for bear proof storage facilities	9/99 1	Wildlife	\$ 551 NFEM
*Furbearer Winter Tracking	4/99 2	Wildlife	\$ 1,323 NFWL
*Watershed/Fisheries Survey	9/99 2	Wildlife	\$ 450 NFIF
Water/Soil/Air			
Air Quality Monitoring Scheme Development	9/99 1	Resources	\$ 3,500 NFSO/SI
Baseline Water Quality Monitoring	9/99 1	Resources	\$ 2,500 NFSO
Watershed Improvement Projects from WINI	9/99 1	Resources	\$ 5,000 NFSI

FY00 Schedule of Activities			
Activity	Due Date Priority	Responsibility	Cost Expanded Budget Line Item
Recreation			
Hunter Contacts	11/00 1	Recreation Wildlife	\$ 872 NFWM/NFTE
Maintain Fish Lake Trailhead	9/00 1	Recreation	\$ 231 NFRM
Trails maintained	8/00 2	Recreation NPS	
Lands			
Boundary Marking	9/00 2	Recreation	\$ 3,500 NFLA
Wildlife			
*Herpetofauna Survey	7/00 1	Wildlife	\$ 265 NFEM
Waterfowl Survey	6/00 1	Wildlife	\$ 441 NFEM
	8/00 1		\$ 441 NFEM
*Raptor Survey	7/00 1	Wildlife	\$ 2,605 NFEM
*Cavity Nester Survey	7/00	Wildlife	\$ 441 NFEM
*Furbearer Winter Tracking	4/00 2	Wildlife	\$ 1,389 NFWL
*Watershed/Fisheries Survey	9/00 2	Wildlife	\$ 480 NFIF
Water/Soil/Air			
Air Quality Monitoring	9/00 1	Resources	\$ 3,500 NFSO
Water Quality Monitoring	9/00 1	Resources	\$ 2,500 NFSO
Watershed Improvement Projects from WINI	9/00 1	Resources	\$ 5,000 NFSI

FY01 Schedule of Activities			
Activity	Due Date Priority	Responsibility	Cost Expanded Budget Line Item
Recreation			
Hunter Contacts	11/01 1	Recreation Wildlife	\$ 915 NFWM/NFTE
Maintain Fish Lake Trailhead	9/01 1	Recreation	\$ 243 NFRM
Trails maintained	8/01 2	Recreation NPS	
Wildlife			
*Herpetofauna Survey	7/01 1	Wildlife	\$ 278 NFTM
Waterfowl Survey	6/01 1	Wildlife	\$ 461 NFTM
	8/01 1		\$ 461 NFTM
*Raptor Survey	7/01 1	Wildlife	\$ 2,735 NFTM
*Cavity Nester Survey	7/01	Wildlife	\$ 461 NFTM
Monitor need for bear proof storage facilities	9/01 1	Wildlife	\$ 609 NFTM
*Furbearer Winter Tracking	4/01 2	Wildlife	\$ 2,067 NFWL
*Watershed/Fisheries Survey	9/01 2	Wildlife	\$ 500 NFIF
Water/Soil/Air			
Air Quality Monitoring	9/01 1	Resources	\$ 3,500 NFSO
Water Quality Monitoring	9/01 1	Resources	\$ 2,500 NFSO
Watershed Improvement Projects from WINI	9/01 1	Resources	\$ 5,000 NFSI

FOREST TIMBER SCHEDULE

The following tables display the timber sale program by watershed over the first ten years of this Revision. Volumes are in MBF. Miles of road construction is based on an estimate of 0.23 miles per MMBF. Miles of road reconstruction is based on an estimate of 0.15 miles per MMBF.

Watershed 002 Indian Creek						District: Palisades (D-4)					
No Sales Scheduled											

Watershed 003 Elk Creek						District: Palisades (D-4)					
	Estimated Harvest		Allowable Logging Method			Allowable Silv. System				Est Miles of Road	
Sale Name	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const.	Recon.
Small Sales	324	100	Y	Y	Y	Y	Y	Y	Y	0.07	0.05
TOTAL	324	100								0.07	0.05

Watershed 004 Palisades Creek						District: Palisades (D-4)					
No Sales Scheduled											

Watershed 005 Rainey Creek						District: Palisades (D-4)					
No Sales Scheduled											

Watershed 006 Pine Creek						District: Palisades (D-4)					
No Sales Scheduled											

Watershed 007/33 Heise/Kelly Canyon						District: Palisades (D-4)					
No Sales Scheduled											

Watershed 008 Henry's Fork Headwaters						District: Island Park (D-2)					
No Sales Scheduled											

Watershed 009A Island Park - Centennials						District: Island Park (D-2)					
	Estimated Harvest		Allowable Logging Method			Allowable Silv. System				Est Miles of Road	
Sale Name	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const.	Recon.
Small Sales	2,782	860	Y	Y	Y	Y	Y	Y	Y	0.64	0.42
TOTAL	2,782	860								0.64	0.42

Watershed 009B Island Park - Bishop Mountain						District: Island Park (D-2)					
Sale Name	Estimated Harvest		Allowable Logging Method			Allowable Silv. System				Est. Miles of Road	
	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const.	Recon.
Small Sales	6,730	2,080	Y	Y	Y	Y	Y	Y	Y	1.55	1.01
TOTAL	6,730	2,080								1.55	1.01

Watershed 010 Buffalo River						District: Island Park (D-2)					
No Sales Scheduled											

Watershed 011 Middle Henry's Fork						District: Island Park (D-2) & Ashton (D-3)					
No Sales Scheduled											

Watershed 012 Warm River						District: Ashton (D-3)					
No Sales Scheduled											

Watershed 013 Robinson Creek						District: Ashton (D-3)					
No Sales Scheduled											

Watershed 014 Big Bend Ridge						District: Ashton (D-3)					
Sale Name	Estimated Harvest		Allowable Logging Method			Allowable Silv. System				Est. Miles of Road	
	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const.	Recon.
Small Sales	5,500	1,700	Y	Y	Y	Y	Y	Y	Y	1.27	0.83
TOTAL	5,500	1,700								1.27	0.83

Watershed 015 Conant Creek						District: Ashton (D-3)					
No Sales Scheduled											

Watershed 016 Falls River						District: Ashton (D-3)					
Sale Name	Estimated Harvest		Allowable Logging Method			Allowable Silv. System				Est. Miles of Road	
	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const.	Recon.
Small Sales	2,912	900	Y	Y	Y	Y	Y	Y	Y	0.67	0.44
TOTAL	2,912	900								0.67	0.44

Watershed 017 Trail Creek	District: Teton Basin (D-5)
No Sales Scheduled	

Watershed 018 Darby Creek	District: Teton Basin (D-5)
No Sales Scheduled	

Watershed 019 Teton Creek						District: Teton Basin (D-5)					
	Estimated Harvest		Allowable Logging Method			Allowable Silv. System				Est. Miles of Road	
Sale Name	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const.	Recon.
Small Sales	162	50	Y	Y	Y	Y	Y	Y	Y	0.04	0.02
TOTAL	162	50								0.04	0.02

Watershed 020 Leigh Creek						District: Teton Basin (D-5)					
	Estimated Harvest		Allowable Logging Method			Allowable Silv. System				Est. Miles of Road	
Sale Name	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const.	Recon.
Small Sales	97	30	Y	Y	Y	Y	Y	Y	Y	0.02	0.01
TOTAL	97	30								0.02	0.01

Watershed 021 Badger Creek	District: Teton Basin (D-5)
No Sales Scheduled	

Watershed 022 Mahogany Creek						District: Teton Basin (D-5)					
	Estimated Harvest		Allowable Logging Method			Allowable Silv. System				Est. Miles of Road	
Sale Name	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const.	Recon.
Small Sales	324	100	Y	Y	Y	Y	Y	Y	Y	0.07	0.05
TOTAL	324	100								0.07	0.05

Watershed 023/024 Canyon & Moody Creek						District: Palisades (D-4) & Teton Basin (D-5)					
	Estimated Harvest		Allowable Logging Method			Allowable Silv. System				Est. Miles of Road	
Sale Name	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const.	Recon.
Small Sales											
D-4	194	60	Y	Y	Y	Y	Y	Y	Y	0.045	0.03
D-5	194	60	Y	Y	Y	Y	Y	Y	Y	0.045	0.03
TOTAL	388	120								0.090	0.06

Watershed 025 Camas Creek						District: Dubois (D-1) & Island Park (D-2)					
	Estimated Harvest		Allowable Logging Method			Allowable Silv. System				Est. Miles of Road	
Sale Name	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const.	Recon.
Small Sales											
D-1	4,465	1,380	Y	Y	Y	Y	Y	Y	Y	1.03	0.67
D-2	226	70	Y	Y	Y	Y	Y	Y	Y	0.05	0.03
TOTAL	4,691	1,450								1.08	0.70

Watershed 026A Beaver Creek						District: Dubois (D-1)					
	Estimated Harvest		Allowable Logging Method			Allowable Silv. System				Est. Miles of Road	
Sale Name	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const.	Recon.
Small Sales	10,580	3,270	Y	Y	Y	Y	Y	Y	Y	2.43	1.59
TOTAL	10,580	3,270								2.43	1.59

Watershed 026B Beaver Creek						District: Dubois (D-1)					
No Sales Scheduled											

Watershed 027/028 Medicine Lodge/Indian Creek						District: Dubois (D-1)					
No Sales Scheduled											

Watershed 029 Warms Springs						District: Dubois (D-1)					
No Sales Scheduled											

Watershed 030A Upper Birch Creek (West) District: Dubois (D-1)
No Sales Scheduled

Watershed 030B Upper Birch Creek (East) District: Dubois (D-1)
No Sales Scheduled

Watershed 031A Lower Birch Creek (West) District: Dubois (D-1)
No Sales Scheduled

Watershed 031B Lower Birch Creek (East) District: Dubois (D-1)
No Sales Scheduled

Watershed 034 Snow Creek District: Ashton (D-3)
No Sales Scheduled

Watershed 035 Burns-Pat Creek District: Palisades (D-4)											
	Estimated Harvest		Allowable Logging Method			Allowable Silv. System				Est. Miles of Road	
Sale Name	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const.	Recon.
Small Sales	485	150	Y	Y	Y	Y	Y	Y	Y	0.11	0.07
TOTAL	485	150								0.11	0.07

Watershed 036 McCoy-Jensen Creeks District: Palisades (D-4)											
	Estimated Harvest		Allowable Logging Method			Allowable Silv. System				Est. Miles of Road	
Sale Name	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const.	Recon.
Small Sales	485	150	Y	Y	Y	Y	Y	Y	Y	0.11	0.07
TOTAL	485	150								0.11	0.07

Watershed 037 Elk-Bear Creeks District: Palisades (D-4)
No Sales Scheduled

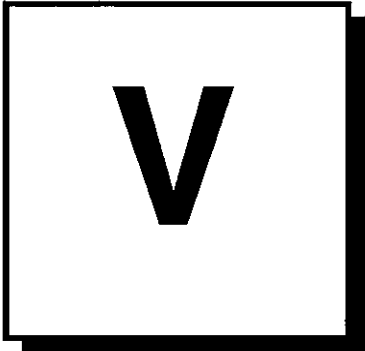
Watershed 038 Fall Creek						District: Palisades (D-4)					
Sale Name	Estimated Harvest		Allowable Logging Method			Allowable Silv. System				Est. Miles of Road	
	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const.	Recon.
Small Sales	874	270	Y	Y	Y	Y	Y	Y	Y	0.20	0.13
TOTAL	874	270								0.20	0.13

Watershed 039 Pritchard Creek						District: Palisades (D-4)					
No Sales Scheduled											

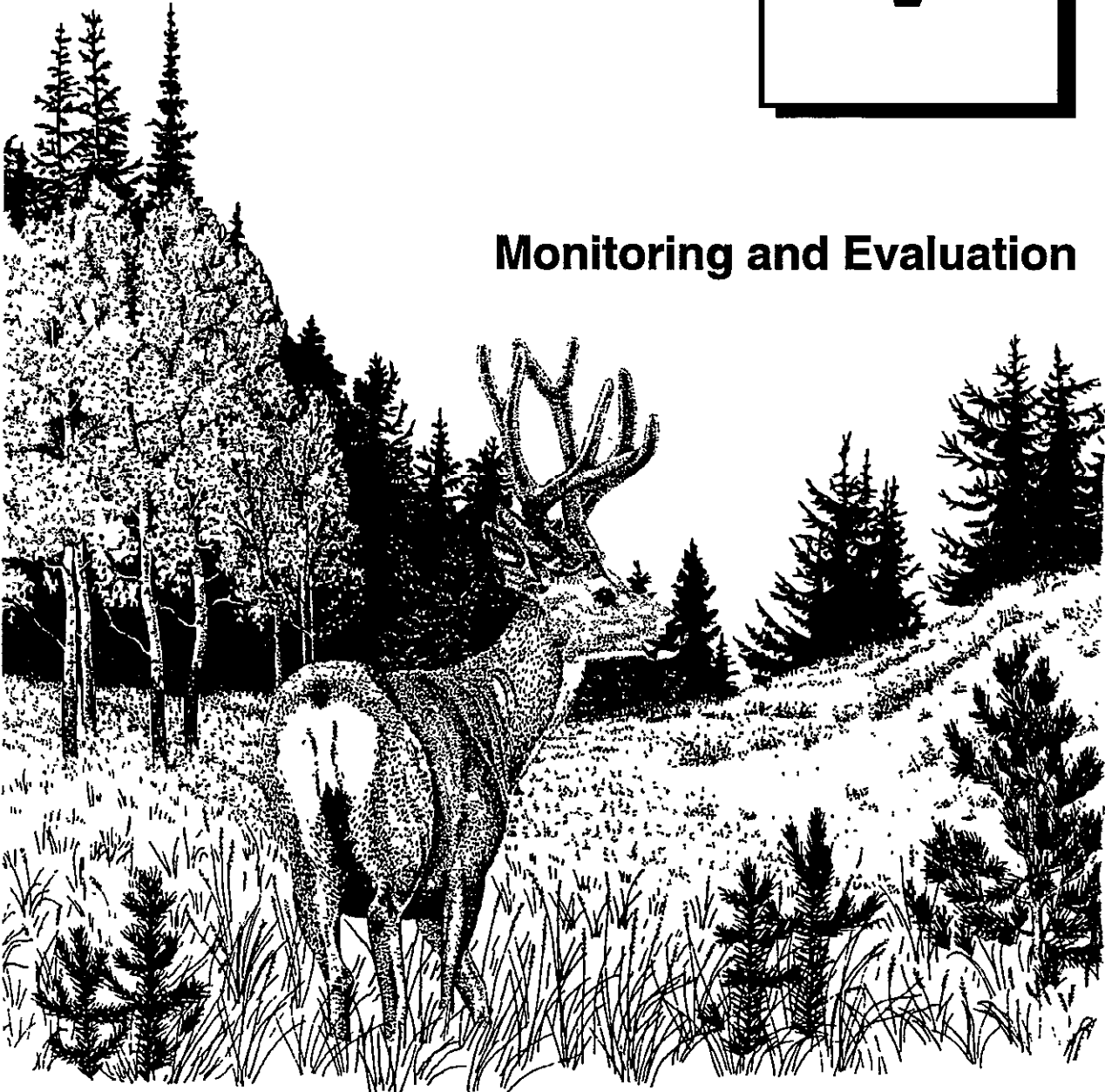
Watershed 040 Brockman Creek						District: Palisades (D-4)					
Sale Name	Estimated Harvest		Allowable Logging Method			Allowable Silv. System				Est. Miles of Road	
	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const.	Recon.
Small Sales	647	200	Y	Y	Y	Y	Y	Y	Y	0.15	0.10
TOTAL	647	200								0.15	0.10

Forest Total	36,981	11,430								8.50	5.55
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Chapter



Monitoring and Evaluation



CHAPTER V

MONITORING AND EVALUATION

INTRODUCTION

In the preceding chapters of the Revision, the Forest Service has identified general management direction in terms of goals and objectives, and committed itself to carry out that direction. Monitoring and evaluation provides an opportunity for the agency to demonstrate how it is complying with the standards and guidelines, and whether or not the standards and guidelines are performing in the predicted manner. In essence, it answers the question, "Are we doing what we said we would do?", and "Are our assumptions that we based decisions and allocations on correct?"

A monitoring and evaluation plan is required by Forest Service planning regulations, which stipulate a report will be issued at the mid-point of the planning cycle. The Forest plans to issue a monitoring report annually, to better demonstrate progress toward meeting goals and objectives, and to identify as early as possible any needed changes to the Revision.

RELATIONSHIP TO OTHER MONITORING ACTIVITIES

This plan shows how the Forest will monitor compliance with, and performance of, standards and guidelines and assumptions in the Revision. The monitoring activities listed in this plan are only a part of a larger range of monitoring activities which take place on the Forest.

Often additional specific monitoring requirements are determined in planning and analysis which support specific projects (known as the NEPA process). Though these monitoring activities are conducted independently of Revision monitoring, there will often be an overlap between the two in that project monitoring can give some indication of how Revision standards and guidelines are working, or accomplishment of Revision goals and objectives. Monitoring of randomly-selected projects for compliance with Revision standards and guides is also conducted.

The Forest conducts some monitoring which is required by law or regulation and which may not necessarily demonstrate how the Revision is working. An example of this type of monitoring is regeneration surveys which are done in timber harvest units. Additionally, some contract administration provides information on how Revision goals and objectives are being met, and provides information on compliance with standards and guides.

The research branch of the Forest Service conducts a wide range of trials and experiments to determine the causes of resource problems, or to improve resource management. The results of these scientifically-rigorous experiments are documented in research technical reports and serve to validate current goals, objectives, standards and guidelines, or to recommend changes to them. This type of monitoring is crucial to the adaptive management approach the Forest has taken.

Collectively, all of the above-mentioned efforts, and other day-to-day work not discussed here, comprises a large body of monitoring work of which Revision monitoring is an important part. While not all of the items monitored by these other efforts are expressly listed in the Revision Monitoring Plan, there is often much overlap between them and they are closely related.

TYPES OF MONITORING

Three levels of feedback can be had regarding performance of the Revision. A type of monitoring is associated with each level. The three types of monitoring are implementation, effectiveness and validation.

Implementation monitoring answers the question, "Are projects and activities being implemented in compliance with the standards and guidelines?" Implementation monitoring forms the basis for the other types of monitoring, since those cannot be conducted unless projects and activities comply with Revision standards and guidelines. Thus this may be the most important of the three types, and needs to be conducted most often.

Effectiveness monitoring answers the question, "Is implementation of the standards and guidelines giving us the results we expected?" Effectiveness monitoring often means quantitatively assessing the effects of management actions. Since this may require quite a bit of data, effectiveness monitoring is generally conducted on a limited basis dealing with sensitive areas and activities that pose higher risks of adverse effects on Forest resources, or address items of high public interest. Once the question of whether effects are as expected is answered, then implementation monitoring is sufficient.

Validation monitoring answers the questions, "Are these results what we really want? Are there better ways to meet the Revision goals and objectives?" Validation monitoring is usually conducted when there is reason to question basic assumptions or coefficients, such as when these are not reasonably supported by existing research. Monitoring focuses on items of strong public interest, agency concern, diversity of opinion, or those that have the potential to be unduly lax or restrictive. This type of monitoring may require a partnership with the Research branch and long-term investigations. Once an item is validated, as with effectiveness monitoring, then implementation monitoring is sufficient.

WHAT ITEMS WILL BE MONITORED?

To maximize the efficiency of the overall monitoring effort, the Forest has focused on certain critical items, identified partners, and will measure as many items as possible with the least number of indicators. The items selected for Revision monitoring met these important criteria, among others.

- * critical planning assumptions;
- * activities with the greatest risk to resources;
- * most potentially constraining on outputs.

The items are listed in brief in the accompanying Monitoring Item Summary, and in greater detail in the individual Monitoring Item Descriptions on the following pages.

MONITORING AND THE BUDGET

The monitoring program outlined here is the optimal level, assuming the Revision is fully-funded. It is unlikely that annual budgets will fully fund the monitoring effort shown here. Priorities for the annual monitoring effort will be based on annual budgets and program direction, and on the priority of the item, in descending order, from Forest Priority Group 1 to Forest Priority Group 3.

The cost of annually monitoring the items in Priority Groups 1, 2 and 3 is as follows:

<u>Priority Group</u>	<u>Cost for Entire Group</u>
1 (5 items):	between \$ 14,270 and \$ 17,770;
2 (9 items):	between \$131,650 and \$141,650;
3 (13 items):	between \$114,850 and \$129,350;
Total Program Cost (27 items):	between \$260,770 and \$288,770.

MONITORING ITEM SUMMARY

Monitoring Item	Forest Priority Group	Page
PHYSICAL ELEMENTS		
Air Quality		
Long-term visual in Class I, II	3	V-5
Soils		
Hydrologic Disturbance in Watersheds	1	V-6
Woody Residue Needs (Soil/Wildlife)	1	V-6
Detrimental Soil Disturbance	2	V-8
Fine Organic Matter Retention	3	V-8
BIOLOGICAL ELEMENTS		
Aquatic/Riparian		
Improvement of WQL Streams	2	V-9
Application of BMP's	3	V-10
Wildlife		
Goshawk Habitat Standards	1	V-11
Grizzly Bear Habitat Improvement	1	V-12
Biological Diversity Study	3	V-13
Standing Dead Tree Habitat	3	V-14
FOREST USE AND OCCUPATION		
Forest Users		
User Satisfaction	2	V-16
Recreation		
Seasonal Trail Use Impacts to Soil + Veg	2	V-17
Recreation/Wildlife Conflicts	2	V-17
Dispersed Campsite Soil Displacement	3	V-18
Jedediah Smith Wilderness LAC	3	V-19
Roads and Trail Access		
Authorized Use/Game Retrieval Use Level	2	V-23
Road Closure Effectiveness	2	V-23
Achievement of Road Density Standards	2	V-25
PRODUCTION OF NATURAL RESOURCES		
Range		
Riparian Plant Use/Trampling	2	V-26
Riparian Forage Utilization	2	V-26
Upland Forage Utilization	3	V-27
AMP Planning/Admin Site Use	3	V-28
Upland Forage Utilization	3	V-29
Sage/Grassland Canopy Coverage	3	V-29
Timber		
Changes to Land Suitability	1	V-30
Maximum Created Opening Size	3	V-30
Security Cover Retention	3	V-31
Large Forested Block Retention	3	V-32

HOW WILL THE MONITORING INFORMATION BE USED?

The results of annual monitoring activities **will** be evaluated to either verify that the current actions and standards are correct; or to determine the **need** to change actions and standards. This evaluation will be assembled into an annual report and **made** available to Forest stakeholders

Based on the information included in the **annual** reports the Forest will identify any changes needed to actions or standards. Depending on the **magnitude** of the change required the Forest may amend the Revision with either a minor (**nonsignificant**) amendment, or a major (**significant**) amendment. If the changes needed are of such a **large magnitude** that it is not feasible to amend the Plan, a Revision Revision may be called for.

The Monitoring Item Descriptions contain **certain** information categories about each item. These categories are briefly explained below.

Monitoring Item - What is the subject **of the** monitoring? This will often tie back to a particular Revision standard or guideline.

Type of monitoring - Implementation, **Effectiveness** or Validation. The item may feature more than one type of monitoring, such as **effectiveness** and validation.

Priority - The Forest assigned each **monitoring** item to one of three group priorities **first, second** or third.

Where Applies - This targets those **areas of** the Forest where the monitoring would occur.

Indicator - This is the parameter(s) that **will be** used to show compliance or change For example, trails meeting acceptable standards **could be** measured in miles; area meeting standards for down woody residue might be measured in **acres**.

Method - How will the monitoring **be done**? This could be line transects for vegetation condition monitoring; or user surveys for recreation use. If partnerships can be developed for doing the monitoring, that should be mentioned **here**.

Expected Precision and Reliability

- **Precision** - How accurately can we **measure** the true conditions?
- **Reliability** - How reproducible are the **monitoring** results on repeated measurements?

Tolerance, or Variability Indicating Action - At what point will further action or a change in management be required?

Frequency of Monitoring - How often **will** monitoring be conducted?

Lead Responsibility - Who on the Forest **will see** that this gets done?

Estimated Annual Cost - What will it **cost the** Forest to do the monitoring?

MONITORING AND EVALUATION STRATEGY
Monitoring Item Description

PHYSICAL

Air Quality

Monitoring Item - Impairment of long-term visual range in Class I and Class II wilderness airsheds.

Type of monitoring - Implementation monitoring. The standards have not been quantified so there is also a need to establish a baseline.

Priority - Forest Priority Group 3.

Where Applies - Monitoring should be conducted in designated wilderness on the Forest; and other nonwilderness areas upwind from and adjacent to Class I airsheds and Class II wilderness airsheds managed by other entities.

Indicator - Visibility in miles.

Method - The following methods will be used.

1. Mounted, timed-exposure camera(s) established at fixed photopoint(s). The exposures should be evaluated periodically by density-monitoring devices in addition to ocular means.
2. Aerosol particle evaluation, to supplement information gathered by photographic means on days not meeting visual standards. These devices gather and evaluate information at the site only, not at remote locations on the visual evaluation track, and can help determine the particulate components of air not meeting standards to help discover the cause.

There appears to be ample opportunity for partnerships in this effort. Other federal agencies such as EPA, the U. S. Fish and Wildlife Service, and the National Park Service are already engaged in efforts of this type. The adjacent national parks, especially Grand Teton National Park, have been conducting some of this type of monitoring for some time, most recently in conjunction with their own prescribed burning activities which have increased since the 1988 Yellowstone fires. Within the Forest Service, the Bridger-Teton National Forest has conducted air quality monitoring for years in connection with oil and gas development activities. The Rocky Mountain Regional Office and Rocky Mountain Research Station both have shown interest in, and have expertise in, air quality monitoring

Expected Precision and Reliability

- Precision — High.
- Reliability — High.

Tolerance, or Variability Indicating Action — Reference standards.

Frequency of Monitoring - This will depend on local activities. Initially the frequency should be higher, until a baseline is established, perhaps at intervals of two to three times a week. After ambient conditions are determined frequency could be relaxed and targeted toward times when conditions exceed naturally-occurring ambient conditions, or the Forest is planning and conducting activities which threaten to exceed standards.

Lead Responsibility - The Forest fire management shop should take the lead responsibility for this monitoring.

Estimated Annual Cost

- * Installation of camera: \$2,000 per unit, or \$200/year;
- * Annual operation and evaluation cost: \$1,500 per unit;
- * Installation of aerosol monitoring unit: \$5,000 per unit, or \$500/yr ;
- * Annual operation and evaluation cost: \$1,500 per unit.

TOTAL COST: \$3,700/year

There has been money allocated at the national level to conduct some of this type of monitoring.

Soils

Monitoring Item - Watersheds which are 30% or more hydrologically disturbed.

Type of monitoring - Implementation, Validation

Priority - Forest Priority Group 1.

Where Applies - Watersheds 10, 11 and 12 (currently at or above the 30% level), and watersheds 13 and 25 (which are approaching the 30% level).

Indicator - Bank instability (natural versus management-induced) along representative stream reaches within the above-mentioned watersheds

Method - Rosgen stream-typing and Intermountain Region streambank stability ratings.

Expected Precision and Reliability

- Precision - Moderate.
- Reliability - Moderate.

Tolerance, or Variability Indicating Action - Determine if bank instability is occurring within the watersheds currently exceeding the 30% guideline Determine the sufficiency of the 30% guideline.

Frequency of Monitoring - Annually, until the 30% figure is validated or changed by appropriate study.

Lead Responsibility - Integrated effort lead by watershed specialists and aquatic scientists.

Estimated Annual Cost - \$4,500.

Monitoring Item - Dead and Down material for meeting soil and wildlife requirements on Forest.

Type of monitoring - Effectiveness/Validation

Priority - Forest Priority Group 1.

Where Applies - Subsection, Watershed, Stand (~25 acres), Site

Indicator -

A. size class, length, composition class to meet standards

1. logs of ≥ 7 " diameter @ small end and $\geq 20'$ length
2. ≥ 7 logs/acre in each of decomp classes 1,2,3.

B. acre or # acres (patch) dependent upon analysis approach and area size, species or life form (e.g. cavity-nesters) of interest.

C distribution/condition/availability

- 1 stand
2. subwatershed or watershed
3. landscape (incl. species type and sere(s))
4. subsection

D. follow "Woody Residue Requirements" incorporated within the Revision Standards and Guidelines package for the Revision (Soils, Item II).

Method - sampling in project or analysis areas by subsection by watershed/subwatershed, by type, elevation, and soil productivity class (IRI inventory).

Also, follow procedures outlined within "Guidelines for Sampling Some Physical Conditions of Surface Soils", by Steve Howes, John Hazard, and J. Michael Geist, Pacific Northwest Region, July 1983 (R6-RWM-146-1983). Sampling would be on line transects.

Role of partners will depend on the availability of funds and relation of partner skills to task needs.

Expected Precision and Reliability

- Precision - variable by type but generally high
- Reliability - high

Tolerance, or Variability Indicating Action - Changes in management will be necessary as:

- A. baseline studies (inventory) refine dead/down needs in varied forest types for species needs;
- B. monitoring of projects and comparison of results among treated areas demonstrate that current guidelines are in need of change.

Measures and need for change in both (a) and (b) should be determined through evaluations of site, stand and landscape conditions coupled with baseline forestwide (systematic) species inventories and improved knowledge of regional life history characteristics and requirements for various species of wildlife that use dead and down logs.

Frequency of Monitoring - (Soils) Prior to and following project analyses for each subsection. Analyses and evaluations should include site, stand and landscape conditions. For soils, monitoring would be conducted annually, until an adequate determination can be made for ground-disturbing resource management practices.

Lead Responsibility - (Soils) Monitoring teams including soils, vegetation and wildlife/ecology specialists.

Estimated Annual Cost - Will vary by the number of projects anticipated and planned to affect the distribution and abundance of dead and down material. Per analysis and project costs will vary, but will likely range from \$2,000 to \$4,000, depending on size of analysis area and levels of previous and expected disturbance. Costs do not include baseline inventories nor NEPA preparation.

Monitoring Item - Compliance with draft policy of 15% detrimental soil disturbance in activity areas.

Type of monitoring - Implementation and Effectiveness.

Priority - Forest Priority Group 2

Where Applies - Forestwide (select representative sites where various land treatments have occurred).

Indicator - At least 85% of the total area within an activity area must have soil in satisfactory condition, or, no more than 15% of an activity area may have detrimentally-disturbed soil. Detrimentially-disturbed soil is soil that has been displaced, compacted, puddled, or severely burned.

Method - Follow procedures in "Guidelines for Sampling Some Physical Conditions of Surface Soils", by Steve Howes, John Hazard, and J. Michael Geist, Pacific Northwest Region, July 1983 (R6-RWM-146-1983). Sampling would be done on line transects.

Expected Precision and Reliability

- Precision - Moderately high.
- Reliability - Moderately high.

Tolerance, or Variability Indicating Action - For those resource practices consistently exceeding the 15% threshold, determine if techniques can be improved or another method found. Evaluate areas with greater than 15% soil disturbance for rehabilitation opportunities.

Frequency of Monitoring - Annually, until an adequate determination can be made for various resource practices that are ground-disturbing.

Lead Responsibility - Forest or District soil scientist.

Estimated Annual Cost - \$5,000

Monitoring Item - Compliance with standard for retaining 50% of the fine organic matter (duff layer) in activity areas.

Type of monitoring - Implementation and Effectiveness.

Priority - Forest Priority Group 3.

Where Applies - Forestwide (select representative sites, or habitat types, where various land treatments have occurred)

Indicator - At least 50% (evenly distributed) of the total area within an activity area must retain its fine organic matter (duff layer plus materials less than 3-inches in diameter) within forested ecosystems; provide for a minimum of 65 percent ground cover (plants, litter and rock - greater than 3/4 inch in diameter) on rangeland ecosystems; or, in both ecosystems, an equivalent percentage if the site cannot naturally attain the minimum percentages mentioned above.

Method - Follow procedures outlined within "Guidelines for Sampling Some Physical Conditions of Surface Soils" by Steve Howes, John Hazard, and J. Michael Geist, Pacific Northwest Region, July 1983, (R6-RWM-146-1983). Sampling would consist of line transects and 1/10th acre plots.

Expected Precision and Reliability

- Precision - Moderately high to high.
- Reliability - Moderately high to high.

Tolerance, or Variability Indicating Action - For those resource practices consistently exceeding the threshold, determine if techniques can be improved or another method found. Evaluate areas exceeding the standard for rehabilitation opportunities.

Frequency of Monitoring - Annually, until an adequate determination can be made for various ground-disturbing resource management practices.

Lead Responsibility - Forest or District soil scientist.

Estimated Annual Cost - \$1,000.

BIOLOGICAL ELEMENTS

Aquatic/Riparian

Monitoring Item - Verification of Water Quality Limited Streams. Specifically, is water quality in these streams improving to the point they can be delisted?

Type of monitoring - Validation monitoring

Priority - Forest Priority Group 2.

Where Applies - First on streams listed as Water Quality Limited, and then, if necessary, monitoring will be extended to their tributaries and watersheds.

Indicator - Depends on the reason for listing, e.g , on streams listed for nutrient concerns, nitrate + nitrite and orthophosphate are used as indicators. If monitoring of streams for the specific compound or component turns up concerns, monitoring would be extended to find the source of the concern.

Method - Approved protocols for the constituent of concern. Procedures include those used by the U.S. Geological Survey, or in publications such as "Monitoring Protocols to Evaluate Water Quality Effects of Grazing Management on Western Rangeland Streams" by Stephen Bauer and Timothy Burton, October 1993 (EPA 910/R-93-017).

Expected Precision and Reliability

- Precision - Depends on the parameter/constituent being measured (e.g , nutrients may be in mg/l, but sediment measurements vary widely)
- Reliability - If conditions remain constant, should be able to reproduce. Some constituents, though, vary with streamflow. There are some things that are difficult to reproduce when dealing with a fluid medium.

Tolerance, or Variability Indicating Action - When it can be reliably determined that water quality standards are being violated, or that the stream cannot be removed from the WQL list because of deteriorated conditions.

Frequency of Monitoring - Depends on the constituent being monitored. Generally, one can expect to have to visit sites several times during the summer

Lead Responsibility - Forest hydrologist.

Estimated Annual Cost - Assuming that we would be monitoring all WQL streams, estimated annual cost would be approximately \$15,000. This would include a full-time person to do the monitoring at the GS-5 level

**** Note:** an item not on the form is the consequence of not doing the monitoring. Although details are not anywhere near finalized, it has been suggested that for any stream that cannot be removed from the WQL list (i.e., for any stream that we cannot prove is meeting water quality goals), total maximum daily loads (TMDL's) of the constituent of concern would have to be established for the stream. This would be an enormous task, and, in fact, one that is widely thought to be impossible for the nonpoint pollutants that come from National Forest activities

Monitoring Item - Monitoring of application of Best Management Practices (BMP's) related to maintaining and improving water quality.

Type of monitoring - Implementation and Effectiveness.

Priority - Forest Priority Group 3.

Where Applies - Project areas where BMP's are applied (such as timber sale areas, new roads, etc.)

Indicator - Variable, depending upon the BMP which was applied.

Method - For implementation monitoring, reviews would be conducted of projects by teams including the project planner, administrator, and interested specialists. For effectiveness monitoring, water quality, soil characteristics (such as erosion), and fish habitat would be monitored for selected projects

Expected Precision and Reliability

- Precision - Variable, depending on the project and the impacts being measured.
- Reliability - Results should be reasonably reproducible, unless conditions change between monitoring times.

Tolerance, or Variability Indicating Action — If BMP's are not being applied in situations which call for their use, a review would be conducted to determine the reasons. If instream beneficial uses may be put at risk, or if unacceptable soil degradation is occurring, a review would be conducted to determine the reasons.

Frequency of Monitoring -

Implementation monitoring: Once after projects are finished.

Effectiveness monitoring: Variable. Water quality monitoring might be conducted several times per year. Monitoring for changes in soils, fish habitat or channel condition may be conducted once per year.

Lead Responsibility - Soil scientist, fisheries biologist, hydrologist.

Estimated Annual Cost - Average cost would be between \$2,000 and \$10,000 per year, depending on what's being monitored.

Wildlife

Monitoring Item - Forestwide habitat conditions for the northern goshawk.

Type of monitoring - Effectiveness/Validation

Priority - Forest Priority Group 1

Where Applies - Subsection, Watershed, Stand

Indicator - Numbers for the respective indicators can be found in the wildlife standards and guides for the revised Revision

- A. Number of nesting areas within a goshawk territory
- B. Respective size of the nesting area (30 acres), Post fledgling family area (PFA)(420 acres), and foraging area (5400 acres) that comprise a portion of a goshawk territory.
- C. Size class distribution
- D. Rotation age
- E. Maximum created opening size
- F. Snags and reserve trees
- G. Downed logs
- H. Management season
- I. Thinning
- J. Open road density

Factors to be considered include but not limited to:

- A. Forest inventories that reveal species occupancy of mature stands (or other) that may compete with goshawks for available habitat or nesting areas;
- B. Size of female home range and breeding area requirements with representative habitat characteristics for successful breeding and fledging of young;
- C. Existing landscape, stand, and site conditions and characteristics within analysis and treatment areas as determined by inventories prior to project implementation (biological potential of existing conditions prior to treatment or activity);

D. distribution and dispersion of appropriate size mature or late succession forest stands as related to stands of immature and nonstocked forest stands and nonforest areas at the following scales.

1. stand
2. subwatershed or watershed
3. landscape (incl. species type and sere(s)).

Method - systematic sampling, evaluation, and documentation of pre- and post-vegetation treatment conditions in project or analysis areas by landscape X watershed/subwatershed X forest type (cover and habitat type) X elevation X soil productivity class (IRI inventory). Role of partners will be systematic inventories of habitat conditions and species occurrences prior to and after vegetative treatments.

Expected Precision and Reliability

- Precision - variable by species and forest (condition, characteristics) type but generally high
- Reliability - high

Tolerance, or Variability Indicating Action - Changes in management will be necessary as

A. baseline studies (inventory) refine or replace available guidelines for managing northern goshawk habitat (forest structure/composition);

B. monitoring of projects and comparison of results among treated areas demonstrate that current guidelines are in need of change.

Measures and need for change in both (a) and (b) should be determined through evaluations of site, stand and landscape conditions coupled with baseline forestwide (systematic) species inventories, productivity, and improved knowledge of regional life history characteristics and requirements for northern goshawks

Frequency of Monitoring - Prior to and following project analyses for each subsection. Analyses and evaluations should include site, stand and landscape conditions.

Lead Responsibility - Wildlife/Ecology specialists

Estimated Annual Cost - Will vary by the number of projects anticipated and planned to affect the distribution and abundance of dead and down material. Per analysis and project costs will vary, but will likely range from \$1500 to \$3000 depending on size of analysis area, levels of previous disturbance, and expected disturbance. Costs do not include baseline inventories nor NEPA preparation

Monitoring Item - Improvement in the quality of grizzly bear habitat on the Forest, and the contribution of the Forest to total grizzly bear habitat quality in the Greater Yellowstone Area.

Type of monitoring - Implementation, Effectiveness

Priority - Forest Priority Group 1.

Where Applies - Applies to all prescription areas within designated Bear Management Units (BMU's) on the Forest.

Indicator - The primary indicators of trend in grizzly bear habitat are habitat effectiveness, habitat value; and bear displacement. These three are described in detail in the documentation for the grizzly bear cumulative effects model. (IGBC 1990)

In addition to the above, indicators will be used from the Interagency Grizzly Bear Committee Taskforce Report on Motorized Access Management. (IGBC 1994)

Method - Each management unit of the Greater Yellowstone Area, including the Targhee National Forest, will annually submit data on changes in road and trail access, and vegetation, to the USDA-Forest Service Intermountain Regional Office. That office will compile the data, develop a data set fixed in time, and issue this in electronic digital form (CD-ROM). This data will then be forwarded to individual management units for on-site use and runs.

On the Targhee National Forest, individual ranger districts will track changes in road and trail access and vegetation. These will be submitted to the Forest GIS shop for assembly into a Forest data package

Expected Precision and Reliability

- Precision - Very high.
- Reliability - Results will be reproducible with the same data set.

Tolerance, or Variability Indicating Action - Refer to the item on achievement of road density standards.

Frequency of Monitoring - Annually.

Lead Responsibility - Forest wildlife biologist.

Estimated Annual Cost - On each of the three ranger districts with grizzly bear habitat, one person (GS-9 wildlife biologist) will need two weeks to put together the input data required. On receipt of the CD-ROM data from the Regional Office, the Forest GIS shop will need one person (GS-7 tech) for one day to run the cumulative effects model on each of the seven subunits.

GS-9 biologist: 3 districts, two weeks each @ \$150/day	\$4,500
GS-7 GIS technician: 7 subunits, one day each @ \$110/day	\$ 770
TOTAL:	\$5,270

Monitoring Item - Biological Diversity

Type of monitoring - Implementation

Priority - Forest Priority Group 3.

Where Applies - Subsection, Landscape, Watershed, Subwatershed

Indicator -

- A. alpha diversity for species richness (within area of selection) diversity (rarity)
- B. beta diversity (area changes/differences among areas of selection)

C. Presence of and rate of increase by nonnative species.

Method - Standard measures for diversity of species according to and compared by ecological subsection, forest vegetation type characterizations/ classifications (e.g. occurrence and distribution of upland/ grass, coniferous, riparian), forest seres, disturbance regime, watershed type(s))

Measures for species richness and dominance are described by Magurran (1988) and Krebs (1989). Combinations of indicators, as suggested by Magurran, as being further explored for their utility on the Targhee Forest

Role of partners will be systematic inventories of habitat conditions and species occurrences prior to and after vegetative treatments.

Expected Precision and Reliability

- Precision - generally high
- Reliability - generally high if used and interpreted appropriately

Tolerance, or Variability Indicating Action - Changes in management will be necessary as

A. baseline studies (inventory) identify species changes resulting in a change in index values at representative scales of application.

B. research improves upon measures for understanding and managing for retaining biological diversity.

C. monitoring of projects and generation of comparative indices result in detectable species changes or trends as a result of natural or human-induced changes at landscape, watershed, or subwatershed level.

Measures and need for change in both (a) and (b) should be determined through evaluations of site, stand and landscape conditions coupled with baseline forestwide (systematic) species inventories and improved knowledge of regional life history characteristics and requirements for various species of wildlife that use a variety of patch or larger landforms.

Frequency of Monitoring - Variable. annually to every third year depending on the baseline inventory information, number, size, and distribution of projects, and unpredictable events such as fire.

Lead Responsibility - Ecologist or individual skilled in collecting information and applying techniques.

Estimated Annual Cost - \$15,000 per year. Costs do not include baseline inventories nor NEPA preparation.

Monitoring Item - Dead Standing (plus green trees for replacement) for meeting wildlife requirements on Forest.

Type of monitoring - Effectiveness/Validation

Priority - Forest Priority Group 3.

Where Applies - Subsection, Watershed, Stand (~25 acres), Site

Indicator -

- A. diameter size
- B. tree species
- C. tree height
- D. composition (dead tree hardness/class)
- E. dispersion of dead standing and replacement trees (distribution=)
- F. evenness and clumpiness of dead and green replacement trees)

Factors to be considered include but not limited to

- A. Forest inventories for species that use dead standing trees
- B. Number of species, species group or life form (e.g. cavity nesters, forest raptors, songbirds, furbearers) with potential to occur according to species distribution and available habitat characteristics (Note. Guidelines do not assume that requirements for one species meet the needs for another where overlap in size and placement characteristics exist.)
- C. Size of female home range and breeding area requirements with representative habitat characteristics for successful breeding and fledging of young according for species of interest or concern.
- D. Existing landscape, stand, and site conditions and characteristics within analysis and treatment areas as determined by inventories prior to project implementation.
- E. Distribution/condition/availability:
 - 1. stand
 - 2. subwatershed or watershed
 - 3. landscape (incl. species type and sere(s).
 - 4. subsection
- F. Distribution of natural opening sizes, shapes and structural characteristics of forest seres comparing natural disturbance types to human-induced.
- G. Occurrence and distribution of forest types and effective conditions at landscape, stand and site relative to potential for species occurrence, distribution and reproduction.

Method - systematic sampling in project or analysis areas by subsection by watershed/subwatershed, forest type, elevation, and soil productivity class (IRI inventory). Role of partners will be systematic inventories of habitat conditions and species occurrences prior to and after vegetative treatments.

Expected Precision and Reliability

- Precision - variable by species and forest (condition, characteristics) type but generally high
- Reliability - high

Tolerance, or Variability Indicating Action - Changes in management will be necessary as:

- A. baseline studies (inventory) refine or replace dead standing and green replacement trees in varied forest types and conditions for species needs;

B. monitoring of projects and comparison of results among treated areas demonstrate that current guidelines are in need of change.

Measures and need for change in both (a) and (b) should be determined through evaluations of site, stand and landscape conditions coupled with baseline forestwide (systematic) species inventories and improved knowledge of regional life history characteristics and requirements for various species of wildlife that use dead standing and green replacement trees.

Frequency of Monitoring - Prior to and following project analyses for each subsection. Analyses and evaluations should include site, stand and landscape conditions.

Lead Responsibility - Monitoring teams including soils, vegetation and wildlife/ecology specialists

Estimated Annual Cost - Will vary by the number of projects anticipated and planned to affect the distribution and abundance of dead and down material. Per analysis and project costs will vary, but will likely range from \$1500 to \$3000 depending on size of analysis area, levels of previous disturbance, and expected disturbance. Costs do not include baseline inventories nor NEPA preparation.

FOREST USE AND OCCUPATION

Forest Users

Monitoring Item - Forest customer satisfaction with the direction, progress, and administration, of the Revision.

Type of monitoring - Implementation, Effectiveness

Priority - Forest Priority Group 2

Where Applies - Forestwide.

Indicator - Comments, both written and oral, approving or disapproving of the direction of Forest management and the rate of progress in implementing it.

Method - Forest User mailing lists would be used to periodically build random samples. Individuals and groups on this list would then be sampled using methods such as phone surveys or mailings. These samples would be conducted by organizations or academic institutions with sampling expertise, under contract to the Forest. Informal, optional, person-to-person user surveys would be conducted of trail users, campers, and sport recreationists by field-going Forest personnel. Records and notes would be kept of public meetings held by the Forest. Forest employees would be encouraged to record and submit informal notes of opinions and suggestions of friends and family for consideration by the Forest.

Expected Precision and Reliability

- Precision - Samples designed with statistical principles could be quite accurate. Otherwise it would still provide a reasonable indication to managers
- Reliability - The results should be reasonably reproducible.

Tolerance, or Variability Indicating Action - This would have to be determined by Forest line officers based on the issue.

Frequency of Monitoring - Annually or as needed

Lead Responsibility - Forest Public Affairs Officer

Estimated Annual Cost - Working with a survey organization would require three weeks per year for the Public Affairs Officer. Helping to assess the surveys would require GS-9 employees. To conduct field surveys of recreationists would require two weeks for two GS-9 employees

GS12 PAO, three weeks @ \$1,000/wk	\$3,000
GS9 45 hours at \$18/hr.	\$ 810
<u>GS9 (field survey), 4 wks. @ \$18/hr</u>	<u>\$2,880</u>
TOTAL:	\$6,690

RECREATION

Monitoring Item - Impacts to on-trail and off-trail soils and vegetation from impacts from hiking, horse use and OHV use, for compliance with the 15% soil disturbance policy.

Type of monitoring - Implementation and Effectiveness.

Priority - Forest Priority Group 2.

Where Applies - System trail and off-trail areas.

Indicator - Soil displacement on the trail or within the adjacent meadow or basin area.

Method - Visual and photo documentation and trail condition surveys.

Expected Precision and Reliability

- Precision - 60-75%
- Reliability - 60-75%

Tolerance, or Variability Indicating Action - When condition surveys show that use is impacting the trail tread or adjacent soils and vegetation such that significant resource damage, health, and safety, or trail maintenance are at risk

Frequency of Monitoring - Annually on approximately 5-10% of the system trail areas (60-120 miles) and adjacent off-trail areas. (Priority areas initially are the Big Holes/Palisades,, Plateau, Caribou, and Medicine Lodge subsections.)

Lead Responsibility - Recreation and Engineering Staffs

Estimated Annual Cost - \$25,000-35,000.

Monitoring Item - Conflicts between all forms of recreation and wildlife.

Type of monitoring - Implementation and Effectiveness.

Priority - Forest Priority Group 2.

Where Applies - Forestwide.

Indicator - Number of violations of closure areas, observed wildlife disturbances; and diminishing wildlife populations or signs of stress.

Method - Field and aerial observations, photography. This item will depend partially on the results of monitoring of the effectiveness of road closures, which is another Priority Group 2 item

It is expected that partnerships can be developed with State game and fish agencies, State recreation agencies, and possibly recreation user groups to monitor this item.

Expected Precision and Reliability

- Precision - 50-75%
- Reliability - 50-75%

Tolerance, or Variability Indicating Action - When evaluation of wildlife populations indicates they are beginning to falter or seek out other areas for security and solitude, then an evaluation of recreation use levels will take place. Evaluation of other uses of the area may also be appropriate.

Frequency of Monitoring -

- Winter, in prescription areas emphasizing winter range values: weekly in 10% of winter range per year for 3-4 months,
- Summer, in prescription areas emphasizing big game security or summer range values: weekly for 3 to 4 months, especially in the early summer.

Lead Responsibility - District Rangers

Estimated Annual Cost - \$30,000.

Monitoring Item - Soil displacement in heavy-use dispersed campsites, for compliance with the 15% soil disturbance policy.

Type of monitoring - Implementation, Effectiveness.

Priority - Forest Priority Group 3.

Where Applies - 4.3 prescription areas.

Indicator - Displaced soil.

Method - Frissell Condition Class method.

Expected Precision and Reliability

- Precision - 75%+
- Reliability - Very Good, 75%+

Tolerance, or Variability Indicating Action - Significant or consistent violation of the 15% soil disturbance policy in 4.3 prescription areas will be cause to re-examine campsite use. This may also trigger validation monitoring of the propriety of applying the policy in these areas.

Frequency of Monitoring - Annually, within approximately 10% of the 100 4.3 prescription areas. (Medicine Lodge and Caribou subsections will receive top priority for this monitoring initially.)

Lead Responsibility - Forest Recreation Staff

Estimated Annual Cost - \$40,000

Monitoring Item - Impacts from wilderness use on wilderness quality (from the wilderness Limits of Acceptable Change plan for Jedediah Smith Wilderness).

Type of monitoring - Implementation and Effectiveness

Priority - Forest Priority Group 3.

Where Applies - Jedediah Smith Wilderness.

Indicator - see The Jedediah Smith monitoring plan which follows.

Method - see The Jedediah Smith plan which follows.

Expected Precision and Reliability

- Precision - 75%
- Reliability - 75%

Tolerance, or Variability Indicating Action - If it is determined that impacts from use of the Wilderness are exceeding those limits shown, then an evaluation will be made of the possible causes and potential remediations identified.

Frequency of Monitoring - Annually.

Lead Responsibility - Teton Basin Ranger District, and Forest Recreation Staff.

Estimated Annual Cost - \$15,000-20,000

Monitoring Item - Jedediah Smith Wilderness Monitoring Plan.

INDICATORS AND STANDARDS

Indicators and standards will be monitored yearly and may require adjustment if on site administration indicates resources or social conditions are deteriorating beyond an acceptable level. These measurements relate only within each specific zone of the Wilderness and not all of one type of zone lumped together. In other words, for Class 1, if the standard is exceeded in a particular Class 1 zone, then management action will be taken. Following each indicator is a list of management actions which could be used to bring the indicator back to the identified standard for its class. The order of the actions shown does not indicate priority.

Indicator #1	Standards			
	Class 1	Class 2	Class 3	Issues 1/
Number of occupied campsites users may see from their site	0	2	3	1, 2, 4

Possible Management Actions - If number of visible campsites is approaching or exceeds standards:

1. Remove campsite(s) and restore the area to as near natural condition as possible.
2. Relocate campsite(s) to more suitable location and restore to as near natural condition as possible.
3. Talk with users and suggest other camping possibilities.

Indicator #2	Standards			
	Class 1	Class 2	Class 3	Issues 1/
Condition of individual campsites	vegetation flattened, not permanently injured	vegetation worn away at center of activity	vegetation lost around center of activity	1, 2, 5

Possible Management Actions - If condition of campsite is approaching or exceeds standards:

1. Rehabilitate the site, sign it for restoration, and/or close it.
2. Talk with users about minimum impact camping techniques.
- 3 Relocate site to a more durable location and restore the vacated campsite to as near natural condition as possible.
4. Visit local schools, organizational groups to discuss wilderness ethics, regulations, minimum impact practices.

Indicator #3	Standards			
	Class 1	Class 2	Class 3	Issues 1/
Condition of user-created routes and trail segments	game trail	18" to 42" wide, brush, rock, litter present	42" wide, brushed out along edge	1, 2, 4

Possible Management Actions - If user-created route or trail is approaching or exceeds standard:

1. Talk with users about trail conditions and experiences.
2. Ensure trail crews and maintenance volunteers are aware of standards and do not exceed them.
3. Rehabilitate trail sections that exceed standards.
4. Relocate trail segments to more suitable locations.
5. Encourage use on other trails.
6. Limit number of users on trail.
7. Visit local schools, organizational groups to discuss wilderness ethics, regulations, minimum impact practices.

Indicator #4	Standards			
	Class 1	Class 2	Class 3	Issues 1/
Number of encounters per mile with other parties along a user created route or trail	0*	3*	5*	1, 2, 3, 4, 5
* Encounters may be higher within first mile of trail from trailhead.				

Possible Management Actions - If number of encounters is approaching or exceeds standards:

1. Encourage users to vary starting times.
2. Lower party size and stock limits.
3. Monitor user acceptance of trail use levels.
4. Encourage users to go to other places.

Indicator #5	Standards			
	Class 1	Class 2	Class 3	Issues 1/
Number of substantiated complaints about outfitters and grazing permittees from the public and other permittees	2	5	10	3, 5

Possible Management Actions - If the number of complaints concerning permittees is approaching or exceeds standards:

1. Increase permit administration on the ground.

2. Require wilderness ethics education as a condition of permit issuance.
3. Restrict the number of permits issued.
4. Bring parties together to discuss issue(s).

Indicator #6	Standards			
	Class 1	Class 2	Class 3	Issues 1/
Number of violations of regulations by type	5	10	15	1, 3, 5
1/ See process paper for Jedediah Smith Wilderness				

Possible Management Actions - If the number of violations is approaching or exceeding standards

1. Increase presence of uniformed Forest Service personnel
2. Visit local schools, organizational groups to discuss wilderness ethics, regulations, minimum impact camping techniques.
3. Review regulations for appropriateness.
4. Increase posting of regulations at trailheads.

MONITORING

Air Quality

1. Monitor acid deposition in Wilderness lakes. Specifically, Two Island Lake is extremely sensitive to acid deposition; and Middle Granite Lake is more typical of Wilderness lakes with some buffering capacity. Reference for more information the water quality survey conducted in 1992 by personnel from the Targhee and Bridger-Teton National Forests

2. Monitor visual air quality by means such as periodic photography. Consider establishing a monitoring station at the Grand Targhee ski area or other location which would permit observation of air quality in both the Wilderness and Grand Teton National Park.

Wildlife and Fish

1. Monitor human/grizzly interactions (confrontations and movements) to determine any change in the known range of the bear, and which management actions are needed if any.
2. Monitor grizzly bear activity and movement relevant to domestic sheep grazing to determine which management actions are needed if any.
3. Continue annual population censusing of bighorn sheep including lamb survival and ram harvest (Wyoming Game and Fish Department).

Cultural Resources

Monitor cultural resource sites in high public use areas annually to assess potential and actual effects. Formulate mitigations in conjunction with the Wyoming State Historic Preservation Officer when effects are adverse.

Roads and Trails Access

Monitoring Item - Amount of authorized motorized use including permitted game retrieval on closed roads and trails, to determine if a route or area is effectively open.

Type of monitoring - Implementation monitoring.

Priority - Forest Priority Group 2

Where Applies - This item is most important in prescriptions which feature the following.

- * elk and deer habitat values—5.1.4, 5.4, 2.7;
- * grizzly bear habitat values—5 3.5, 2.6.1, 2.6.2, 2.6.5;

Indicator - The number of motorized trips per week per route.

Method - The districts will keep a record of administrative motorized use allowed on each route by date. This record could be maintained by the district ranger, and could be supported by an entry of dates and trips made per road, returned gate permits, or other means. At reporting time this record would be totalled and an evaluation made whether or not the number of trips throughout the summer effectively opened the road. Those roads opened would be noted to the GIS shop.

Expected Precision and Reliability

- Precision - Precision could be high depending on the accuracy of the record keeping.
- Reliability - The results would be wholly dependent on the records kept.

Tolerance, or Variability Indicating Action - Reference prescription standards.

Frequency of Monitoring - Annually.

Lead Responsibility - The district ranger would keep records of allowed entries onto closed routes for administrative purposes, and evaluate the data. The Forest GIS shop would display any resultant roads which are effectively opened.

Estimated Annual Cost

- * Two days per district per GS-9 biologist: 5 (\$450)
- * Two days for one GS-5 GIS technician. \$240

TOTAL: \$2,500

Monitoring Item - Effectiveness of road and trail closures.

Type of monitoring - Effectiveness monitoring

Priority - Forest Priority Group 2

Where Applies - This item is most important in prescriptions which feature the following

- * elk and deer habitat values—5.1.4, 5.4, 2.7;

- * grizzly bear habitat values—5.3.5, 2.6.1, 2.6.2, 2.6.5;
- * any 1.series prescriptions where motorized route densities exceed the target;
- * those areas where roads and/or trails were closed to stop direct resource damage.

Indicator - The units of measure to be used are:

- * direct encounter of a prohibited use in a restricted area;
- * evidence of prohibited use such as tire tracks

Method - Several methods would be used, in a rough stratified sampling approach. Visual checks of access points to closed road systems would be performed. Ocular check information from incidental employee observations would also be used. On the basis of evidence such as use encounters or tire tracks, roads would be placed into strata of confirmed-use, suspected-use and no-use. Each of these strata would then be sampled with mounted cameras activated by motion sensors. Although we might not be able to obtain a scientifically- valid number of samples due to cost, the data would help to refine our estimates of use and target areas of greatest concern.

There is an opportunity to develop partnerships with several entities, including State fish and game departments and the U. S. Fish and Wildlife Service. It is possible that user groups would be interested in assisting with this as well, though this would have to be done carefully because of possible information leakage.

Expected Precision and Reliability

- Precision - We can measure presence or absence of prohibited use with some accuracy. We will not be able to measure the number of offenses accurately.
- Reliability - Evidence of recent use at one point in time should be reliable. This data cannot be used reliably by itself to judge the frequency of prior use or predict future use since this will depend to some extent on the individual violators. The data could be entered into a predictive model if one is available and accepted.

Tolerance, or Variability Indicating Action - Reference the standards in the Roads section of the Forest-wide Standards and Guidelines (page 33). Briefly, the point at which some action would be required is when use exceeds 1-2 trips per week during the majority of the weeks during the spring/summer/fall period.

Frequency of Monitoring - The visual checks would be performed three times during the spring/summer/fall seasons, to incorporate at least one holiday weekend and the fall hunting season. Due to the limited number of cameras and personnel costs, we may wish to target only one or two districts per year, or only portions of certain districts. Complete Forest coverage would take several years.

Lead Responsibility - Forest law enforcement officer.

Estimated Annual Cost - Assume we will monitor one district per year. Assume one GS-5 tech can visually monitor ten roads per day, or thirty roads per sampling round of three days. Assume one GS-9 camera tech can install, monitor and remove six cameras (six roads) per one-week sampling round. Also assume we will purchase two camera units @ \$800 (the Forest wildlife shop already has 4-6 of these, but some need repairs). Then:

For visual checks:

- * One GS-5 tech twice per summer @ three days \$ 750;
- * Rental vehicle @ \$15/day \$ 90;

For camera confirmations:

* two new camera units amortized over ten years	\$ 160/year;
* install and read cameras-one week per sampling round three times per summer for one GS-9 @ \$700/week	\$2,100;
* materials/incidentals-mounting hardware, film, developing of film, incidental repairs	\$ 500;
Analysis/evaluation - one GS11 for one week	\$ 800.
TOTAL:	\$4,400/year.

Monitoring Item - Achievement of standards in prescription areas for Total Motorized Access Route Density (TMARD), and Open Road and Open Motorized Trail Route Density (OROMTRD).

Type of monitoring - Implementation monitoring.

Priority - Forest Priority Group 2.

Where Applies - This item is most important in prescriptions which feature the following:

- * elk and deer habitat values-5.1.4, 5 4, 2.7;
- * grizzly bear habitat values-5.3.5, 2.6.1, 2.6 2, 2.6.5;

Indicator - Miles per square mile of open roads and open motorized trails (for OROMTRD); and open and restricted roads and motorized trails (for TMARD).

Method - The method is explained in more detail in the Forestwide Standards and Guides, Roads section. The Forest Geographic Information System (GIS) and associated database will be used. Highlights of the method include:

- * annually update the transportation database with road and trail closures and other pertinent data;
- * GIS calculate the contiguous area of each prescription polygon;
- * calculate the miles of routes that are open and seasonally open, and total these;
- * moving-window technology will be used.

No partners in this effort were identified.

Expected Precision and Reliability

- Expected precision is high.
- Expected reliability is high.

Tolerance, or Variability Indicating Action - Progress in achieving the TMARD and OROMTRD standards should follow an established activity schedule. At the end of the specified time period the standards should be met. If the standards are not met by the end of the time period a management review should be conducted to determine the cause.

Frequency of Monitoring - Annually.

Lead Responsibility - The district ranger will annually forward accomplishments toward meeting standards, and other pertinent data, to the Forest engineer. The GIS shop will do the calculations and produce the report.

Estimated Annual Cost

* One GS-7 biologist for two days on each district - 2 (\$180) (5)

* One GS-5 GIS technician for one week per district - 5 (\$600)

TOTAL: \$4,800

PRODUCTION OF NATURAL RESOURCES

Range

Monitoring Item - Streambank trampling damage correlated to riparian stubble height standard. Range Objective IV.

Type of monitoring - Validation.

Priority - Forest Priority Group 2.

Where Applies - Grazing allotments (key areas) - same as monitoring item for riparian stubble height.

Indicator - Percent of streambank damage in key riparian areas.

Method - Targhee monitoring protocol (to be developed). Monitoring will be done concurrently with the monitoring of riparian forage utilization.

Expected Precision and Reliability

- Precision - High.
- Reliability - The measurements can be reproduced once the key area is established.

Tolerance, or Variability Indicating Action - To be determined

Frequency of Monitoring - To be done concurrently with riparian utilization monitoring.

Lead Responsibility - District Range Specialist.

Estimated Annual Cost If this item is done concurrently with the riparian utilization monitoring item, there will be no additional cost.

Monitoring Item - Riparian Forage Utilization, Range Item III. 2. a and b; and Administrative Site Monitoring Standard, Range Item IV. E.

Type of monitoring - Implementation

Priority - Forest Priority Group 2; High Range Priority #1.

Where Applies - Grazing Allotment (Key Areas)

Indicator - Percent Utilization of browse and stubble height of herbaceous riparian vegetation in Riparian Areas (hydric greenline) in key areas.

Method - Short term monitoring methods FSH 2209.21 Ch.42.0 or Targhee Monitoring Protocol (to be developed). Partners include Fish & Game and grazing permittee.

Expected Precision and Reliability

- Precision - Highly accurate.
- Reliability - The measurements can be repeated once the key area is identified.

Tolerance, or Variability Indicating Action - When the Standard/Guideline is more than 5% outside the range.

Frequency of Monitoring - Annually at least once a year on priority allotments and perhaps twice a year if there are wildlife concerns Each allotment requires 2-3 readings per unit Each allotment has 1-6 units.

Lead Responsibility - District Range Specialist.

Estimated Annual Cost - 33% of all allotments on each District will be monitored yearly: 1 GS-9 @ \$150.00/day. Average allotment requires 5 days (4 field days, 1 office) yearly. 33% of 154 allotments = 51 allotments:

$$\begin{array}{r}
 (\$150.00) (5) = 750 \\
 \quad \quad \quad \underline{51} \\
 \quad \quad \quad \$38,250 \text{ yearly}
 \end{array}$$

Monitoring Item - Upland Forage Utilization, Range Standard II; and Administrative Site Monitoring, Range Standard IV. E.

Type of monitoring - Implementation.

Priority - Forest Priority Group 3; High Range Priority #1.

Where Applies - Grazing Allotment (key areas).

Indicator - Percent utilization of forage species in key areas.

Method - Short-term monitoring methods described in Forest Service directives system at FSH 2209.21, Ch. 42.0; or Targhee Monitoring Protocol (to be developed). Partners include State game and fish agencies, and grazing permittee.

Expected Precision and Reliability

- Precision - Highly accurate.

•**Reliability** - The measurements can be repeated once the key area is identified.
Tolerance, or Variability Indicating Action - When the Standard/Guideline is more than 5% outside the range.

Frequency of Monitoring - Once a year on priority allotments and perhaps twice a year if there are wildlife concerns. Each allotment requires 2-3 readings per unit. Each allotment has 1-6 units.

Lead Responsibility - District Range Specialist.

Estimated Annual Cost - One-third of all allotments on each District will be monitored yearly. One GS-9 at \$150.00/day. Average allotment requires 3 days (2 days field, 1 day office) yearly. One-third of 154 allotments = 51.

$$\begin{array}{r} (\$150.00) (3) = 450.00 \\ 51 \\ \hline \$22,650.00 \text{ yearly Forestwide} \end{array}$$

Monitoring Item - Allotment Management Planning, Range Standard I.; and Administrative Site Monitoring, Range Standard IV. E.

Type of monitoring - Implementation

Priority - Forest Priority Group 3, High Range Priority #1.
Where Applies - Grazing Allotment (Bench Marks or key areas).

Indicator - Acres of Riparian or upland areas meeting DFC's or objectives identified in Allotment Management Plans (AMP's).

Method - Long-term trend determination FSH 2209.21 Ch.44 or Targhee Monitoring Protocol (to be developed).

Expected Precision and Reliability

- Precision - Highly accurate.
- Reliability - The measurements can be repeated.

Tolerance, or Variability Indicating Action - When the trend changes or objectives have not been met after 2 grazing rotations.

Frequency of Monitoring - Each study needs to be read every 5-7 years.

Lead Responsibility - Range Specialist

Estimated Annual Cost - Ten percent of all allotments will be monitored yearly, each allotment will have 2-5 studies. One GS-9 @ \$150.00/day, 3 days per study (2 field, 1 office day).

$$\begin{array}{r} 10\% \text{ of } 154 \text{ allots.} = 15 \\ (\$150.00) (3) = 450 \\ .15 \\ \hline \$6,750 \end{array}$$

Monitoring Item - Allotment Management Planning, Range Standard I.; and Administrative Site Monitoring, Range Standard IV. E.

Type of monitoring - Implementation

Priority - Forest Priority Group 3; Moderate Range Priority #2.

Where Applies - Ranger District or Forest total.

Indicator - Number of allotments with and without rotation grazing

Method - No field work required. Will use FSRAMIS Data Base. No partners

Expected Precision and Reliability

- Precision - Highly accurate.
- Reliability - The measurements can be repeated.

Tolerance, or Variability Indicating Action - Mid point of Decade 1.

Frequency of Monitoring - Annually at the end of the fiscal year.

Lead Responsibility - Forest Range Specialist.

Estimated Annual Cost - GS-12 @ \$225/day for 1 day. Total: \$225.00

Monitoring Item - Biodiversity Guideline I. for sagebrush/grassland habitats.

Type of monitoring - Implementation.

Priority - Forest Priority Group 3, Moderate Range Priority.

Where Applies - Watershed.

Indicator - Acres of big sagebrush (*Artemesi tridentata*) canopy cover classes expressed as a percent of the entire watershed.

Method - Line Intercept Method for Crown Canopy Cover, described in the Forest Service directives system at FSH 2209.21, Ch.44.51. Potential partners include State game and fish agencies, and grazing permittees.

Expected Precision and Reliability

- Precision - Highly accurate.
- Reliability - The measurements can be repeated.

Tolerance, or Variability Indicating Action - When the Standard/Guideline is more than 1% outside the range.

Frequency of Monitoring - Once every 5-7 years.

Lead Responsibility - District Range Specialist.

Estimated Annual Cost

One GS-9 @ \$150.00/day for 30 days (25 days field, 5 days office). \$4,500.00/District, assume each district is monitored twice during the ten-year plan period. Total cost \$4,500/year.

Timber

Monitoring Item - Reevaluation of land tentative suitability by the aggregation of information from individual project analyses.

Type of monitoring - Validation of tentative suitability calls made in the Revised Revision.

Priority - Forest Priority Group 1

Where Applies - Applies primarily to lands in 5.series prescriptions, but could involve the review of projects anywhere on the Forest.

Indicator - Change in total acreage in tentatively suited and unsuited lands using the criteria in the regulations and directives system.

Method - Review project-level NEPA analyses for site-level confirmations of LMP tentative suitability calls. Changes to initial calls on either suited or unsuited lands would be documented on a hardcopy map maintained in the planning shop. This map would aggregate changes from various documents. Changes to the Forest tentative suited land base could be entered into the Forest GIS.

Expected Precision and Reliability

- Precision - Site-specific analysis should give a precise description of true conditions.
- Reliability - Using given parameters such as slope percent and soil stability, results should be reliable and reproducible.

Tolerance, or Variability Indicating Action - A significant overall change in tentatively suitable acres could trigger a revision of the ASQ.

Frequency of Monitoring - Annually.

Lead Responsibility - The Forest planning shop would aggregate the findings. Project ID teams would do the individual analyses.

Estimated Annual Cost - \$1,000

Monitoring Item - Maximum created opening size.

Type of monitoring - Implementation monitoring

Priority - Forest Priority Group 3.

Where Applies - This item needs to be monitored in the following prescription areas:

- Rx 5.2.1 - generally 1 to 5 acres, but less than 40,
- Rx 5.2.2, 2.1.2 - less than 5 acres;
- Rx 5.3.5 - less than 6 5 acres;
- Rx 2.6.1 - less than 20 acres,

Indicator - Size of created openings, in acres.

Method - Compliance with the standard would be described in environmental documents.

Expected Precision and Reliability

- Precision - High.
- Reliability - High.

Tolerance, or Variability Indicating Action - Proposals to exceed the respective area standard would need to be sound and ecologically-based, and would require a Revision amendment. If a trend is seen in legitimate proposals to exceed the respective standards the standards would need to be reviewed.

Frequency of Monitoring - In each decision document, where vegetation management is selected.

Lead Responsibility - IDT leader and line officer.

Estimated Annual Cost - \$1000 per year, primarily in incidental GIS and other analysis costs to display compliance with the standard.

Monitoring Item - Providing security cover for grizzly bears in vegetation management projects.

Type of monitoring - Implementation and effectiveness.

Priority - Forest Priority Group 3.

Where Applies - This item must be monitored in the following prescription areas:

- 2.6.1 — 70%.

Indicator - Percent cover in area (see prescriptions for specifics).

Method - During environmental analysis of specific project proposals, work will be done to display compliance with the respective standards. See prescriptions.

Expected Precision and Reliability

- Precision - High.
- Reliability - High.

Tolerance, or Variability Indicating Action - Proposals to exceed the standard will require a Revision amendment. If a trend is seen toward exceeding the standard in soundly-based ecological management proposals the standard will need to be reviewed. This may involve re-opening of formal consultation.

Frequency of Monitoring - Every decision document selecting vegetation management in BMU's.

Lead Responsibility - IDT leaders, District Biologists, line officers.

Estimated Annual Cost - \$2000, primarily in incidental GIS and other analysis costs to display compliance with the standard. If the information required to demonstrate security cover is not found in the Forest data base, then field survey may be required

Monitoring Item - Manage for greater than 250-acre forested blocks.

Type of monitoring - Implementation

Priority - Forest Priority Group 3.

Where Applies - This applies to prescription areas 5.1.4 a-c and 5 4

Indicator - Size of forested blocks within project areas.

Method - Timber sale environmental documents will disclose compliance with this measure. Additionally, follow-up activity reviews should review effectiveness of treatments.

Expected Precision and Reliability

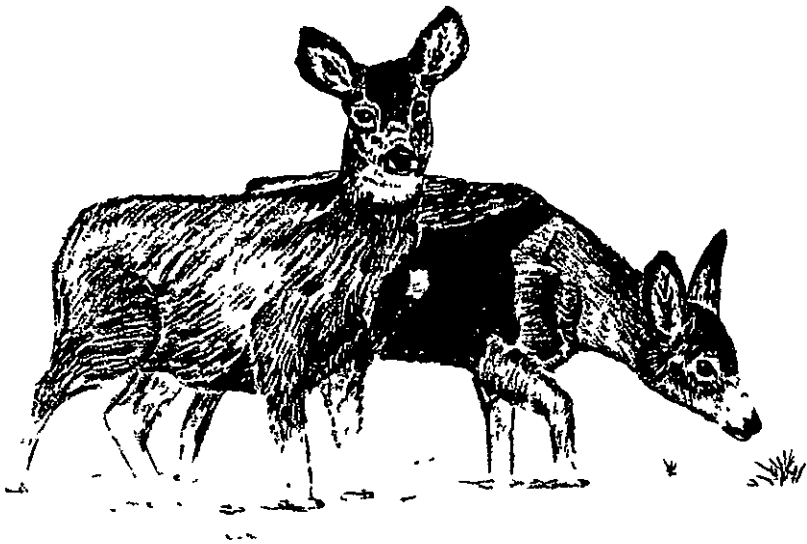
- Precision - High.
- Reliability - High

Tolerance, or Variability Indicating Action - Any proposal to violate the standard requires a Revision amendment. If a trend develops of proposals citing ecologically-sound reasons to amend the Plan or change the standard, the standard needs to be reviewed.

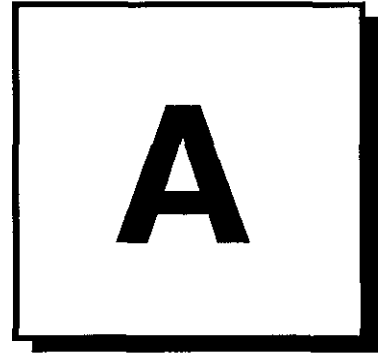
Frequency of Monitoring - With every decision document selecting a vegetation management alternative

Lead Responsibility - IDT leaders and line officers

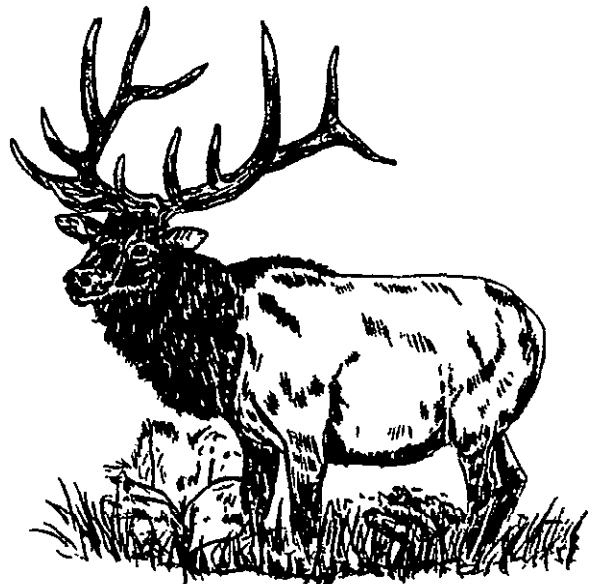
Estimated Annual Cost - \$1,000, primarily in incidental costs of GIS or other analysis to demonstrate compliance with the standard.



Appendix



National Goals Relevant to Land and Resource Management



APPENDIX A
NATIONAL GOALS RELEVANT TO LAND AND RESOURCE MANAGEMENT
(BASED ON FSM OBJECTIVE STATEMENTS)

American Indians * 1563

1. Maintain a governmental relationship with federally recognized tribal governments
2. Implement programs and activities honoring treaty rights and fulfill legally mandated trust responsibilities to the extent that they are determined applicable to National Forest System lands
3. Administer programs and activities to address and be sensitive to traditional native religious beliefs and practices
4. Provide research, transfer of technology and technical assistance to American Indian governments.

Solid Waste Management * 2130.2

1. Program objectives are to design, operate, and maintain all solid waste systems under Forest Service jurisdiction in such a manner so as to meet all federal, state, and local requirements, promote public health and safety, protect Forest resource and environmental qualities; and complement and support the total land-use management process.

Pesticide Management * 2150.2

1. To ensure the proper use of pesticides.

Energy Management * 2170.2

The objectives of energy management are to:

1. Conserve energy in the conduct of Forest Service programs and in the operation of Forest Service programs and in the operation of Forest Service facilities, and to improve efficiency in the production and use of wood products.
2. Minimize undesirable consequences associated with development of renewable and nonrenewable energy source extracted from Forest System lands.
3. Facilitate recovery of fuels from Forest System lands and implement programs to support production and use of alternative fuels
4. Provide leadership and support for environmentally acceptable and scientifically sound development, production, and use of all energy resources from lands.

Range Management * 2202.1

1. To manage range vegetation to protect basic soil and water resources, provide for ecological diversity, improve or maintain environmental quality, and meet public needs for interrelated resource uses.
2. To integrate management of range vegetation with other resource programs to achieve multiple-use objectives contained in Forest System land and resource management plans

3. To provide for livestock forage, wildlife food and habitat, outdoor recreation, and other resource values dependent on range vegetation.

4. To contribute to the economic and social well being of people by providing opportunities for economic diversity and by promoting stability for communities that depend on range resources for their livelihood

Grazing and livestock Use Permit System * 2230.2

1. To administer the grazing permit system consistent with range resource management objectives found in Forest land management plans, and to best serve the public's long-term economic and social needs

Range Improvements * 2240.2

1. Without impairing land productivity or water quality, implement and maintain range improvements to the extent benefits are commensurate with cost and demand for livestock forage.

2. Provide information and advice through the Range Technical Information System and the Vegetative Rehabilitation and Equipment Workshop to enhance restoration, improvement, and quality of ranges

Structural Range Improvement * 2242.02

1. Install structural range improvements to obtain proper livestock management and to meet objectives contained in Forest System land and resource management plans and allotment management plans

Maintenance of Improvement * 2244.02

1. To maintain in operable condition all range improvements on the National Forest System and other lands controlled by the Forest Service.

Range Improvement Investment * 2246.02

1. Invest in cost-effective range improvements to achieve objectives established in Forest System land and resource management plans and allotment management plans.

Recreation * 2302

1. To provide nonurbanized outdoor recreation opportunities in natural-appearing forest and rangeland settings.

2. To protect the long-term public interest by maintaining and enhancing open-space options, public accessibility, and cultural, visual, and natural resource values.

3. To promote public transportation and/or access to National Forest recreation opportunities.

4. To shift landownership patterns as necessary to place urbanized recreation setting into other ownerships to create more public open space and/or natural resource recreation values.

National Wilderness Preservation System * 2320.2

1. Maintain and perpetuate the enduring resource of Wilderness as one of the multiple uses of National Forest System land.

2 Maintain Wilderness in such a manner that ecosystems are unaffected by human manipulation and influences so that plants and animals develop and respond to natural forces.

3 Minimize the impact of those kinds of uses and activities generally prohibited by the Wilderness Act, but specifically exempted by the Act or subsequent legislation.

4 Protect and perpetuate Wilderness character and public values including, but not limited to, opportunities for scientific study, education, solitude, physical and mental challenges and stimulation, inspiration, and primitive recreation experiences.

Recreation in Wilderness * 2323.11

1. Provide consistent with management of the area as Wilderness, opportunities for public use, enjoyment, and understanding of the Wilderness, through experiences that depend on a Wilderness setting

2. Provide outstanding opportunities for solitude or primitive and unconfined type of recreation

Range in Wilderness * 2323.21

1. Manage Wilderness range in manner that utilizes the forage resource in accordance with established Wilderness objectives

Wildlife and Fish Management in Wilderness * 2323.31

1 Provide an environment where the forces of natural selection and survival rather than human actions determine which and what numbers of wildlife species will exist.

2 Consistent with objective #1, protect wildlife and fish indigenous to the area from human-caused conditions that could lead to federal listing as threatened or endangered.

3 Provide protection for known populations and aid recovery in areas of previous habitation, of federally listed threatened or endangered species and their habitats.

Stocking Methods *2323.34b

Stocking shall normally be done by primitive means, however, Regional Foresters may permit dropping of fish from aircraft for those waters where this practice was established before the area was designated a wilderness. Conduct aerial stocking pre- or post-visitor seasons. Landings are prohibited Specify mitigation for stocking methods in wilderness implementation schedules.

Stocking Policy *2323.34c

1. Do not stock exotic species of fish in wilderness. The order of preference for stocking fish species is:

- a Federally listed threatened or endangered, indigenous species.
- b. Indigenous species.
- c. Threatened or endangered native species if species is likely to survive and spawn successfully
- d. Native species if species is likely to survive and spawn successfully.

2. Stock barren waters only after determining that the scientific and research values of such barren waters will not be eliminated from a wilderness and documenting the desirability of such action in the forest plan.

3 Consider on a case-by-case basis presently unstocked waters that at one time supported an indigenous fish population and that could provide suitable habitat for an indigenous species with unusual wilderness appeal.

Soil and Water in Wilderness *2323.41

1. Maintain satisfactory natural watershed condition within Wilderness.

Forest Cover in Wilderness * 2323.51

1. Manage forest cover to retain the primeval character of the environment and to allow natural ecological processes to operate freely.

Air Resource in Wilderness * 2323.61

1. Protect air quality and related values, including visibility, on Wilderness land designated Class 1 by the Clean Air Act as amended in 1977.

2 Protect air quality in Wilderness areas not qualifying as Class 1 under the same objectives as those for other national Forest System lands.

Minerals in Wilderness * 2323.72

1. To preserve the Wilderness environment while activities for the purpose of gathering information about mineral resources

2. To ensure that mineral exploration and development operations conducted in accordance with valid existing rights for federally owned, locatable, and leasable minerals (FSM 2810 and FSM 2820) and for nonfederally owned minerals (FSM 2830) preserving the Wilderness resource to the extent possible.

3. To ensure the restoration of lands disturbed during exploration and development activities as nearly as practicable promptly upon abandonment of operations.

Insects and Disease in Wilderness * 2324.11

1. To allow indigenous insect and plant diseases to play, as nearly as possible, their natural ecological role within Wilderness.

2. To protect the scientific value of observing the effect of insects and diseases on ecosystems and identifying genetically resistant plant species.

3 To control insect and plant disease epidemics that threaten adjacent lands or resources.

Research in Wilderness * 2324.21

1. To provide appropriate opportunity for scientific studies that are dependent on a Wilderness environment.

Fire Management in Wilderness * 2324.21

1. Permit lightning-caused fires to play, as nearly as possible, their natural ecological role within Wilderness.

2 Reduce, to an acceptable level, the risks and consequences of wildfire within Wilderness or escaping from Wilderness

Structures and Improvements in Wilderness * 2324.31

1. To limit structures and improvements for administrative purposes or under special-use permit to those actually needed for management, protection, and use of the Wilderness for the purpose for which the Wilderness was established.

Motorized Equipment in Wilderness * 2326.02

1. To accomplish management activities with nonmotorized equipment and nonmechanical transport of supplies and personnel.

2. Exclude the sight, sound, and other tangible evidence of motorized equipment or mechanical transport within Wilderness except where they are needed and justified.

Public Managed Recreation Opportunities * 2330.2

1 To maximum opportunities for visitors to know and experience nature while engaging in outdoor recreation.

2. To develop and manage sites consistent with the available natural resources to provide a safe, healthful, aesthetic, nonurban atmosphere.

3. To provide a maximum contrast with urbanization at National Forest sites.

Privately Provided Recreation Opportunities * 2340.2

1 To provide, under special-use authorization, sufficient, suitable facilities and service that supplement or complement those provided by the private sector, state, and local government on private land and the Forest Service on National Forest System land to meet public needs, as determined through land and resource management planning.

2. To facilitate the use, enjoyment, understanding, and appreciation of the National Forest, natural resource, setting.

Concession Uses Involving Privately Developed Facilities * 2343.02

1 To provide a diversity of recreation activities that emphasize the Forest setting and rustic, natural-resource-based recreation opportunities

Group Use By Institutions or other Entities * 2345.02

1. To allow group recreation opportunities, facilities, and service at camps on National Forest System land when suitable private lands are not available.

Trail, River, and Similar Recreation Opportunities * 2350.2

1. Provide recreation opportunities for users of the general forest, water, and cave resources.

2. Provide opportunities for a variety of recreation pursuits with emphasis on activities that are in harmony with the natural environment and consistent with the recreation role of the National Forest.

3. Mitigate adverse impacts of users on the natural resources, cultural and historical resources, and on other users.

Forest Development Trails * 2353.02

1. Provide trail-related recreation opportunities that serve public needs and meet land management and recreation policy objectives
2. Provide trail recreation opportunities that emphasize the natural setting of the National Forest and are consistent with land capability
3. Provide trail access for National Forest management and protection.

Scenic and Historic Trails * 2353.41

- 1 To develop and administer National Scenic or National Historic Trails to ensure retention of the outdoor recreation experience for which the trail was established and continued production of maximum benefits from the land

National Wild and Scenic Rivers System * 2354.02

1. Provide river and similar water-recreation opportunities to meet the public needs in ways that are appropriated to the National Forest recreation role and are within the capabilities of the resource base. Protect the free-flowing conditions of designated Wild and Scenic Rivers and preserve and enhance the values for which they were established.

Off-Road Vehicle Management * 2355.02

1. Provide off-road vehicle recreation opportunities that are in concert with the environmental setting, minimize off-road vehicle effects on the land and resources, promote public safety, and control conflicts with other uses of National Forest System lands.

Cave Management * 2356.02

1. Provide cave-related recreational, cultural, educational, and scientific study opportunities that serve public need Balance surface resource management and cave use with the protection of cave values

Special Interest Areas * 2360.3

- 1 To protect and, where appropriate, foster public use and enjoyment of areas with scenic, historical, geological, botanical, zoological, paleontological, or other special characteristics. To classify areas that possess unusual recreation and scientific values so that these special values are available for public study, use, or enjoyment.

Cultural Resources * 2361.02

1. Complete an inventory of cultural resources on all National Forest System land by 1985 sufficient to provide a database for land management planning
2. Complete an inventory of all cultural resources on National Forest System land by 1990.
- 3 Until these inventories are complete, exercise caution to ensure cultural resources are not damaged, destroyed or transferred by meeting the coordination requirements outlined in FSM 2361.3
4. As part of the decision-making process, document inventory and evaluation procedures to ensure adequate participation by cultural resource professionals.

5 Perform inventories at appropriate levels prior to initiating project actions.

National Registry of National Landmarks * 2373.02

To cooperate with the U.S. Department of Interior National Park Service.

1. Encourage the preservation of sites illustrating the geological and ecological character of the United States.
2. Enhance the scientific and educational value of sites thus preserved.
3. Foster a greater concern in the conservation of the nation's natural heritage.

Visual Quality * 2380.2

1. To manage all National Forest System lands to attain the highest possible visual quality commensurate with other appropriated public uses, costs, and benefits.

Interpretive Services/Visitor Information * 2390.2

1. To assist those visitors in the National Forest, research projects, and state and private forestry locations in gaining a greater appreciation of the role of conservation in the development of the nation's heritage and culture.
2. To promote visitor understanding of the Forest Service, the National Forest System, forestry research, and state and private forestry programs.
3. To inform visitors of recreation opportunities and facilities on the National Forests.
4. To help visitors know and experience the natural environment.
5. To implement an interpretive program that helps solve management problems and aids in the development of public understanding of Forest Service management.
6. To expand the number of interpretive associations that contribute to public understanding of Forest Service practices, support interpretive services objectives, increase public awareness, and aid in management of National Forest resources.
7. To increase visitor understanding of natural and cultural history principals and their relation to land management techniques

Timber Management * 2402

1. Provide a continuous supply of National Forest timber for the use and necessities of the citizens on the United States.
2. To provide, as far as feasible, an even flow of National Forest timber in order to facilitate the stabilization of communities and opportunities for employment.
3. To cultivate and maintain tree stands in the manner that promotes and achieves a diverse pattern of vegetation that best meets the needs of people now and in the future.
 - a Manage and provide for regeneration of tree stands.

b. Maintain a diversity of forest vegetation types and resources consistent with the Forest Plan

Personal Use Firewood * 2409.18

1. To provide firewood and other wood for personal use in order to aid in the protection and silvicultural improvements of the National Forest.

Commercial Timber Sales * 2430.2

1. To provide an orderly program of timber sales from each National Forest in accordance with the Forest Plan or approved interim plans.

2. To offer for sale the ASQ and other sales specified in Forest Plans, subject to financing levels or other modification during their implementation.

3. To coordinate the timber sales program with planning, management, and use of other Forest resources

4 To provide a continuous flow of raw material to local forest industries

Salvage Sales * 2435.02

1. To manage the use of salvage sale fund to provide for the rapid optimum practical use of wood material damaged through natural event, such as insects, windstorms, wildfires, hurricanes, and tornadoes

Reforestation * 2470.02

1. To maintain all forest lands within the National Forest System in appropriate forest cover

2. Improve the quality and yield of new timber stands.

3. Achieve desired time and stocking level goals in a cost-efficient manner

Silvicultural Practices * 2470.2

1 To prescribe, implement, and monitor silvicultural practices that develop forest stand conditions, which meet land management objectives designated in Regional Guides and Forest Plans.

Harvest Cutting * 2471.02

1. To manage timber and other forest resources for protection, enhancement, and sustained yield of those resources through the sale or permitted use of forest products with the long-term intent to regenerate the stand.

Timber Stand Improvement * 2476.02

1. Maintain or increase the growth rate, health, species composition, and/or improve the quality of stands for timber or other resource uses according to direction in the Forest Plan.

Watershed Management * 2502

1. To protect and, where appropriate, enhance soil productivity, water quality and quantity, and timing of waterflows.

2. To maintain favorable conditions of streamflow and continuous production of resources from National Forest System watersheds.

Watershed Protection and Management * 2520.2

1 To protect National Forest watersheds by implementing practices designed to retain soil stability, improve or maintain site productivity, secure favorable conditions of water flow, and preserve or enhance aquatic values.

Watershed Improvement * 2522.02

1 Restore hydrologic balance of degraded watershed areas by stabilizing soil, controlling surface runoff and erosion, reducing flood potential, and improving long-term soil productivity.

2. Improve soil and water quality.

Burned Area Emergency Rehabilitation * 2523.02

1. To provide for immediate rehabilitation of watersheds following wildfire to help stabilize soil, control water, sediment, and debris movement

Riparian Areas * 2526.02

1. To protect, manage, and improve riparian areas while implementing land and resource management activities.

2. To manage riparian areas in the context of the environment in which they are located, recognizing their values.

Floodplain Management Wetland Protection * 2527.02

1. To reduce risk of flood loss

2 To minimize impacts of floods on human safety, health, and welfare

3. To minimize destruction, loss, and degradation of wetlands.

Water Quality Management * 2532.02

1. To protect and, when needed, improve the physical, chemical, biological, and aesthetic quality of the water resource consistent with the purposes of the National Forests and national water-quality goals.

2. To provide water of a quality suitable for the beneficial uses identified in the land and resource management planning process.

3 To ensure safe drinking water subject to public use on National Forests, whether the source is a natural or developed water supply. (When state standards do not exist, observe EPA water-quality criteria.)

Municipal Supply Watersheds * 2542.02

1 To manage National Forest System lands for multiple-use by balancing present and future resource use with domestic water-supply needs.

Soil Resource Improvement * 2553.02

1. To improve soil quality to selected levels for specific purposes by mechanical treatment, chemical, or other soil additives, irrigation, or vegetative manipulation
- 2 To rehabilitate soils that are in unsatisfactory condition

Air Quality * 2580.2

1. Protect air-quality-related values within Class 1 areas, as described in 42 U.S.C.7475 (d)(2)(b) and (c) and section 2580.5.
2. Control and minimize air-pollutant impact from land management activities.
3. Cooperate with air regulatory authorities to prevent significant adverse effects of air pollutants and atmospheric deposition on forest and rangeland resources.

Fish and Wildlife * 2602

1. Maintain ecosystem diversity and productivity by:
 - a Recovering threatened or endangered species.
 - b. Maintaining at least viable populations of all native and desired nonnative wildlife, fish, and plants in habitats distributed throughout their geographic range on National Forest System lands.
 - c. Producing habitat capability levels to meet sustained yield objectives relative to demand for featured management indicator species identified in RPA and Forest Plans.
2. Provide diverse opportunities for aesthetic, consumption, and scientific uses of wildlife, fish, and sensitive plant resources in accordance with national, regional, state and local demands.

Animal Damage Management * 2650.2

1. To protect resources and permitted livestock from animal damage on National Forest System lands and to protect human health and safety

Threatened and Endangered Species * 2670.21

1. Manage National Forest System habitats and activities for threatened and endangered species to achieve recovery objectives so that special protection measures provided under the Endangered Species Act are no longer necessary.

Sensitive Species * 2670.22

1. Develop and implement management practices to ensure that species do not become threatened or endangered because of Forest Service actions.
2. Maintain viable populations of all native and desired nonnative wildlife, fish, and plant species in habitats distributed throughout their geographic range on National Forest System lands.
3. Develop and implement management objectives for populations and/or habitat of sensitive species.

Special Uses * 2702

1. To authorize the use of National Forest System lands by federal, state, and local agencies, as well as private industry and individuals, in accordance with governing laws and regulations to best serve the interest of the public and the United States.

Special Use Authorization * 2710.2

1. To issue appropriate special-use authorizations according to the law, regulations, and policy for occupancy and use of land in a manner consistent with the purpose of the National Forest System and Forest Plans.

Special Use Administration * 2721.02

1. To issue and to administer special-use permits for recreation uses that serve the public, promote public health and safety, and protect the environment.

Special Uses Management * 2730.2

1 Provide rights-of-way for the public road system, including the federal-aid system, when such roads cross National Forest System lands or interest in lands.

2 Accommodate the access needs for the protection, development, and utilization of lands and resources owned by private interests or administered by public agencies when the planned Forest Development Road System and public road system do not meet those needs adequately

3. Protect and enhance the quality of air, water, soil, and natural beauty of Forest Service administered lands in the granting of any right-of-way.

4. Cooperate with intermingled and adjacent landowners in developing roads that serve the needs of both parties through the exchange of rights-of-way.

5. Provide access across National Forest System land to private land that is adequate to secure the owners thereof reasonable use and enjoyment of their land without unnecessarily reducing the management options of the Forest Service or damaging National Forest lands or resources.

Withdrawals * 2761.02

1. Protect the United States' improvements and other unique values that are subject to disposition or destruction under the public land laws.

2. Provide a consistent and efficient withdrawal program that meets land and resource management objectives.

3. Ensure cooperation and coordination with the Secretary of the Interior and the Bureau of Land Management.

4. Encourage mineral activity where mineral extraction is the best use of the site

Federal Power Act Projects * 2770.2

1 To ensure hydroelectric production where it is compatible with National Forest purposes. To ensure that planning, construction, and operation of hydroelectric projects are performed in such a manner to protect or effectively utilize National Forest System land and resources.

Minerals and Geology * 2802

1. Encourage and facilitate the orderly exploration, development, and production of mineral and energy resources within the National Forest System in order to maintain a viable, healthy minerals industry and to promote self-sufficiency in those mineral and energy resources necessary for economic growth and the national defense.
2. Ensure that exploration, development, and production of mineral and energy resources are conducted in an environmentally sound manner and that these activities are integrated with the planning and management of other National Forest resources
3. Ensure that lands disturbed by mineral and energy activities are reclaimed for other productive uses.

Minerals Reservations Outstanding Mineral Rights * 2830.2

1. To administer mineral reservations and outstanding mineral rights consistent with the rights reserved or outstanding and the acquired rights of the United States in a manner that minimizes damage to National Forest System resources.

Mineral Materials * 2850.2

1. To meet the demand for mineral materials consistent with the management of other surface resources.

Reclamation * 2840.2

1. Minimize the environmental impacts resulting from such activities.
2. Ensure that disturbed lands are returned to a use that is consistent with long-term Forest land and resource management plans

Rural Development * 3602

1. To utilize Forest Service programs and authorities to provide more jobs and income opportunities, to improve rural living conditions, to enrich the cultural life of rural America, and to maintain and protect the environment and natural resources of rural areas.
2. Participation in the Rural Conservation and Development Program (RC&D) is to improve the ability of state and local units of government and local sponsors to accelerate the conservation, development, and use of forest resources with the aim of improving the social, economic, and environmental conditions in an authorized RC&D area.

Rural Development * 3610.2

1. To protect and manage the natural resources including scenic, Wilderness, and other special values of forest and range environments in rural areas.
2. To promote research to expand the technological base for forestry and the use of forest products and to lend support for rural housing goals.
3. To encourage the development and transfer of technological improvements to protect and improve the quality of the rural environment, and to extend the supplies of natural resources
4. To maintain or increase the forest land base, improve its productivity, and improve forest landownership patterns.

5 To promote orderly development and wise use of forest resources consistent with sound stewardship to develop and increase rural employment and income with the aim of improving or stabilizing rural social and economic conditions

6. To expand public understanding of environmental conservation and natural resource planning, protection, and management and how stewardship is related to these activities.

7. To provide information and analysis for determining forest resource potentials and opportunities to enhance rural development

Resource Conservation and Development Program * 3620.2

1 To help provide the people of the area with employment and other economic opportunities through the orderly development, improvement, conservation, and utilization of forest land-related resources in the RC&D areas.

2. *To provide state and local leadership with the opportunity to coordinate and use the facilities and techniques available under current agricultural programs and any applicable new programs as may be instituted to aid in planning and carrying out a balanced program of development, conservation, and protection of natural resources to meet local, state, and national needs.*

3. To develop a level of state and local leadership that can assume independent programs in forest and related resource management and achieve state and local forestry and related resource goals and objectives.

Research Natural Areas * 4063.02

1 Preserve a wide spectrum of representative areas that typify important forest, shrubland, grassland, alpine, aquatic, geological, and similar natural situations that have special or unique characteristics of scientific interest and importance that in combination form a national network of ecological areas for research, education, and maintenance of biological diversity.

2. Preserve and maintain genetic diversity.

3. Protect against serious environmental disruption.

4 Serve as reference areas for the study of success.

5. Provide on-site and extension education activities.

6. Serve as baseline areas for measuring long-term ecological changes

7. Serve as control areas for comparing results from manipulative research

8. Monitor effects of resource management techniques and practices

Fire Management * 5102

1. To protect, maintain, and enhance the production and quality of National Forest resources through fire protection and use of prescribed fire.

Fire Suppression * 5130.2

1 To suppress wildfires at minimum cost consistent with land and resource management objectives and fire management direction as stated in fire management action plans.

Prescribed Fire * 5140.2

1. To use prescribed fires, from either management ignitions or natural ignitions, in a safe, carefully controlled, cost-effective manner as a means of achieving management objectives defined in the Forest Plan.

Fuel Management * 5150.2

1. To identify, develop, and maintain fuel profiles that contribute to the most cost-efficient fire protection and use program in support of land and resource management direction in the Forest Plan.

Landownership Adjustment * 5402

1. Achieve the optimum landownership pattern to provide for resource use to meet the needs of the people now and in the future.

2 Settle land title claims equitably and promptly

3. Provide resource administrators readily accessible and understandable title information affecting the status and use of lands and resources they administer.

Land Purchases and Donations * 5420.2

1. Enhance the multiple use and sustained yield of the goods and services from the National Forest System.

2. Protect and improve the quality of renewable resources

3 Protect and preserve important historic, cultural, and natural aspects of the national heritage.

4. Provide for access, use, and enjoyment of the forest resources by the public.

5. Improve administrative efficiency and effectiveness of the National Forest System.

Land Exchange * 5430.2

1. To implement land management and resource planning directions to attain an optimum National Forest System landownership pattern that provides for resource uses that best meet the present and future needs of the people.

Partial Interest Acquisition * 5440.2

1. Provide for acquisition of only those interests in land necessary to meet planned program objectives.

2. Provide for continuance of private land uses consistent with planned program objectives.

National Forest System Modification * 5450.2

1. The objectives of National Forest System modifications are to

- a. Obtain National Forest status for all appropriate land within the National Forest System.
- b. Modify existing National Forest System unit boundaries as needed to provide logical exterior boundaries.
- c. Establish purchase units as needed to meet program objectives.
- d. Establish National Forest or other boundaries as needed to facilitate management and administration.

2. The objectives of land transfer are to:

- a. Improve management efficiency of federal lands.
- b. Improve service to the public
- c. Result in net benefits to the government, to the public, or both.

Right-of-Way Acquisition * 5460.2

1. To acquire, across nonNational Forest System land, road and trail rights-of-way that are adequate for the protection, administration, and utilization of the National Forests. Where compatible with National Forest needs, the rights-of-way should also accommodate the utilization and development of resources in other ownerships upon which communities within or adjacent to the National Forest depend.
2. To acquire such rights-of-way in time to meet road and trail construction and resource development program schedules.
3. To acquire all interests to permit use of road and trails to meet the multiple use and sustained yield objectives of the National Forests.

Reservations and Outstanding Rights * 5470.2

1. To accomplish real property adjustments free of encumbrances that would detract from present or future uses of National Forest System land or that would needlessly restrict private land use and impose an unwarranted management obligation on the Forest Service.

Condemnation * 5480.2

1. To acquire real property by condemnation when all other methods of acquisition fail and the property or interest is required for the protection, administration, or utilization of National Forest System lands.

Land Surveying * 7151.02

1. Provide legal land surveys and related service to locate, mark, post, and maintain land corners, property corners, and property lines between National Forest System land and other ownerships for the protection and management of National Forest System lands and resources.

Landline Location Program * 7152.02

1. Provide the land manager and public with visible and legally defensible administrative and property boundary lines on the ground, and to accurately depict the location of landownership lines on administrative maps produced by the Forest Service.

Sign and Poster Program * 7160.2

1. Support accomplishment of management are a direction contained in the Forest Plan for the administration, protection, management, and use of National Forest System lands.
2. Provide information for the safety, enjoyment and convenience of National Forest and National Grassland visitors, users, cooperators, and employees.
3. Provide information about geographic and historical features, and the use, management, and research activities on the National Forest and National Grasslands.
4. Identify National Forests and National Grassland facilities and land.

Portable Water Supply * 7420.2

1. Protect the health of the public and Forest Service personnel Accomplishment of this objective requires that water provided by the Fores Service for human consumption at any administrative side or public use area must be both safe and protected.

Wastewater Collection Systems and Treatment Works * 7430.2

- a. Avoid creating health hazards or nuisance conditions.
 - b. Restore and maintain the chemical, physical, and biological quality of water resources.
 - c. Manage future pollution or degradation of surface or groundwaters
2. The objective of this program is to plan, design, construct, operate, and maintain wastewater disposal facilities and other effluent-disposal activities to ensure that discharge and/or infiltration of pollutants do not create health hazards or nuisance conditions, nor alter the quality or characteristics of either groundwater or surface water beyond applicable federal and/or state water-quality and effluent-discharge standards Where no standards exist, the quality of characteristics of surface and groundwater shall.
- a. Be maintained as near to their existing conditions as measurable.
 - b. Not be degraded to adversely affect either present or projected beneficial uses (FSH 7409 11 Ch 20).
 - c. Not be allowed to degrade the quality of subsequent ground- or surface-receiving waters beyond the standards when such have been established.

Transportation System * 7702

1. To plan, develop, and operate a network of transportation facilities and transportation modes that provide user safety, convenience, and efficiency of operations.
- 2 To provide access to National Forest System lands to accomplish management direction and protection objectives that is coordinated with national and state-wide transportation needs.
3. To minimize the total transportation present value cost including user, maintenance, construction, restoration, realignment, and betterment costs.

Transportation Planning * 7710.2

1. To efficiently provide facilities that will achieves Forest management direction and that are appropriate for this intended use.
- 2 To direct the orderly development and management of the transportation system and to ensure the documentation of decisions affecting the system.
3. Document desired future condition for highway corridors (existing and planned) across National Forest System lands.

Development * 7720.2

1. To locate, survey, design, and construct transportation facilities in accordance with FSM 7702.

Operation and Maintenance * 7730

- 1 Operate and maintain the Forest Development Transportation System in a manner to provide cost effective support of resource management direction and safe travel for users of the system while protecting the environment, adjacent resources and the public investment.

Highway Safety Program * 7733.02

1. Reduce traffic accident, deaths, injuries and the resulting property damage.

Federal Lands Highway Program * 7740

1. To assist the Federal Highway Administration with the administration of the Forest highway program to plan and develop access roads to:
 - a. Enhance the value of National Forest System resources.
 - b. Protect, develop, and use the National Forest System and its renewable resources.
 - c. Enhance economic development at the local, regional, and national levels
 - d. Serve local needs and communities dependent on the National Forest System activities.
 - e Provide for economy of operation and maintenance and the safety of the users.
 - f. Provide safe and adequate rural highways connection the National Forest System with major highway systems

AMERICAN INDIANS (FSM 1563)

1. On October 22, 1992, the United States Department of Agriculture issued a policy statement on Indian tribes. The outlined policies include:
 - a. Supporting the principles of self-governance delineated in the Indian Self-Determination Act and Education Assistance Act.
 - b. Consulting with tribal governments regarding the influence of USDA activities on water, land, forest, air and other natural resources of tribal governments

- c. Seeking input from tribes on USDA policies and issues affecting tribes and reconciling Indian needs with the principles of good resources management.
- d. Observing the American Indian Religious Freedom Act.
- e. Working with tribal governments, high schools and universities to encourage the development of agribusiness skills and sharing of information through exchange of technical staff and skills.
- f. Encouraging early communication and cooperation between agencies with responsibilities to tribal governments.
- g. Consistent with applicable law or regulation, facilitating tribal participation in program planning and activities

For more on American Indians, see Chapter 3 * Forestwide Standards and Guidelines.

BIOLOGICAL DIVERSITY (FSM 2670)

Sensitive Species

1. Manage sensitive species habitat as directed in interim directive 2600-93-1

For more on Biological Diversity, see Chapter 3 * Forestwide Standards and Guidelines.

CAVES (FSM 2356)

1. Caves will be protected and evaluated under provisions of the Federal Cave Resources Protection Act of 1988. Caves determined to be significant under the Act or being evaluated are exempt from locational disclosure under the Freedom of Information Act. The location of caves will be kept confidential when needed to protect important archeological resources, habitat for endangered wildlife, sensitive cave biota, and unique geological features.
2. Management plans will be prepared for caves determined to be significant
3. Coordinate the management of cave and surface resources.
 - a. Manage the cave resource in partnership with caving organizations, other governmental agencies, scientists, researchers, and outdoor recreationists.
 - b. Interpret cave resources and provide public evaluation for increased public understanding and awareness of the need to protect and preserve these unique ecosystems.
 - c. Provide for public health and safety while recognizing that no cave is completely safe and that risk-taking is part of the caving experience.
4. Adjust silvicultural prescriptions to protect caves.
 - a. Retain a vegetative buffer area around cave entrances.
 - b. Do not alter cave entrances with timber harvest activities.
 - c. Do not dispose of slash, refuse, or burn slash at cave entrances.

5. Road or trail signs should not direct public attention to wild caves.
6. Access for exploration and development of locatable mineral resources will be analyzed in response to a proposed operating plan.
7. Potential impacts to cave resources will be considered in reviewing any project.
8. The water, sediment, nutrient and temperature regimes of caves and karst features will be protected so these environments can function naturally.

DAMS (FSM 7500)

1. For administrative Class A, B, C and high hazard Class D dams located on National Forest System lands, annually update the National Inventory of Dams (PL99-662) in accordance with data elements required by the Federal Emergency Management Agency (FSM 7514).
2. Maintain a record for all dams on National Forest System lands over six feet high (vertical difference between the lowest point on the crest of the dam and the lowest point in the original stream bed). As a minimum, the record should include the dam identification, location, purpose, owner, administrative classification, hazard-potential classification, height, and maximum storage (FSM 7514).

FIRE AND FUELS (FSM 5100)

Fire Suppression

1. *Structural firefighting is the responsibility of local fire service agencies. Structural fire protection from advancing wildfire within the National Forest Protection Boundary is the responsibility of local fire service agencies and the Forest Service (FSM 5133.1).*

Fuel Treatment

2. Cooperate with state and local governments and fire protection districts in the development of fire hazard reduction plans and ordinances by providing technical assistance (FSM 3172, 3173, 3174).
3. Provide a level of protection from wildfire outside of incorporated towns that minimizes the risk of building damage or firefighter exposure. A fire management plan will be written for all facilities on National Forest lands and will be maintained in the Forest's Fire Management Action Plan. National Fire Protection Association (NFPA) standards will be used as guidelines for the development of individual plans. Each plan will provide guidance for structural, vegetative, and infrastructure management of the facilities on the Forest. Planning standards will be used to provide guidance for private landowners requesting direction for wildland fire-protection improvements

Prescribed Fire

4. Use prescribed fire to accomplish resource management objectives, such as reducing fuel load buildup, wildlife habitat improvement, etc. Identify objectives in conjunction with a burning plan approved by a line officer. Prescribed burns adjoining private or other federal or state lands will be coordinated with the adjoining landowner (FSM 5140).
5. Use prescribed fire where it will meet management objectives in the most economically and ecologically acceptable way (FSM 5140). For more on Fire and Fuels, see Chapter 3 * Forestwide Standards and Guidelines.

GEOLOGY (FSM 2800)

1. Permit appropriate prospecting and collecting proposals for fossils and minerals by noncommercial, scientific, and/or educational institutions, and provide appropriate opportunities for recreational collection of mineral and fossil materials, where consistent with Forest Plan goals and objectives FSM 2860.3).
2. Prevent unauthorized removal of fossil and mineral resources (FSM 5302).

3. Propose significant paleontologic sites for designation as special interest areas or geologic areas (FSM 2360, 2372, 4063).

4. Identify special geologic hazards and problems that affect land and resource management and encourage research in those areas (FSM 2880, 2883, 2884).

HERITAGE RESOURCES (FSM 2360)

1. Locate, evaluate, protect and foster public use and enjoyment of heritage resources.
 - a. Protect all heritage resources listed on or eligible for the National Register of Historic Places (NRHP).
 - b. Nominate all eligible heritage resources to the NRHP.
 - c. All projects will be reviewed by a Forest Service professional heritage resources specialist.
 - (1) Complete heritage resource inventories, evaluations and mitigation measures for a project's area of potential effect prior to issuing environmental decision notices (FSM 2361)
 - d. Avoid effects to heritage resources until evaluated and determined ineligible for the NRHP.
 - e. Implement appropriate mitigative measures in consultation with the State Historic Preservation Officer (SHPO) and/or the President's Advisory Council on Historic Preservation (ACHP) when eligible heritage resources will be affected.
 - f. Maintain, stabilize, or enhance all eligible heritage resources. <F2P8B>

For more on Heritage Resources, see Chapter 3 * Forestwide Standards and Guidelines.

INTEGRATED PEST MANAGEMENT (FSM 4500)

1. Use only chemicals registered with the Environmental Protection Agency and follow label instructions.

For more on Integrated Pest Management, see Chapter 3 * Forestwide Standards and Guidelines.

LANDS (FSM 5400)

Landownership Adjustments

1. Work with other federal agencies to consolidate ownership and propose jurisdictional transfers that achieve the following objectives.
 - a. Develop more effective and efficient work units.
 - b. Reduce administrative costs

- c. Improve, maintain and simplify user access to public lands.
- 2. Adjust National Forest System and private lands to create a landownership pattern that meets objectives of the Forest Service and other landowners.
- 3 Manage National Forest System lands identified for exchange or sale consistent with surrounding management area goals and in accordance with the following:
 - a Terminate special-use permits on an opportunity basis and in compliance with applicable regulations and Forest Service policy.
 - b. Renew or extend special-use permits on an annual basis only with specific notice of the potential sale or exchange included in the authorization
 - c. Do not authorize construction of additional permanent facilities.
 - d Do not adversely affect land values by management activities.
 - e. Do not adversely affect land values through issuance of special-use permits.
 - f. Acquire unrestricted rights-of-way whenever possible to maintain the value of the public land.
 - g. Ensure needed public rights-of-way are retained across all lands conveyed out of public ownership (FSM 5403.1).
- 4 Convey lands only if:
 - a. Flood hazards on and downstream from conveyed lands are not increased.
 - b. Natural and beneficial values of acquired wetlands equal or exceed those of conveyed wetlands.
 - c Natural water regimes in wetlands downstream from conveyed lands are not disrupted.
 - d. Lands have been evaluated for the presence of hazardous materials and known hazardous materials have been removed.
 - e. Lands do not contain habitat identified by the U.S. Fish and Wildlife Service as necessary for recovery of federally listed threatened and endangered species.
 - f. Lands do not contain unique resource characteristics (FSH 5409.13, Chapter 30).
- 5 Effect jurisdictional transfers that achieve the following objectives:
 - a Reduce duplication of efforts by users and agencies in terms of time, cost and coordination
 - b. Improve or maintain user access to the administrating agency.
 - c. Decrease travel and enhance management.
 - d. Improve public understanding of applicable laws, regulations, policies and procedures.
 - e. Develop more effective and efficient work units.

Property Boundary Administration (FSM 7150)

6. Locate, mark and post landlines according to the following priorities:

- a. Lines needed to meet planned activities;
- b. Lines needed to protect NFS lands from encroachment, and
- c. All other lines (FSM 7152).

For more on Lands, see Chapter 3 * Forestwide Standards and Guidelines.

MINERALS (FSM 2800)

General

- 1 Require an operating plan for each significant proposed mineral action that may disturb surface resources (FSM 2817, 2818, 2820).
2. In areas of actively producing sites or areas containing known reserves, consider only surface resource programs compatible with mineral activities.
3. Provide reasonable access to outstanding and reserved mineral rights (FSM 2830.5).
- 4 In designated Wilderness areas, provide for reasonable access to proposed operations and for restoration of disturbed lands as near as practical to their natural condition when they are no longer needed for operation.
5. Consider significant cave discoveries for mineral withdrawal and other protection measures (FSM 2761, 5302)
- 6 Deny drilling, mining or production on withdrawn lands, with the exception of valid existing rights at the time of withdrawal (FSM 2811, 2818, 2822, 2823).
7. Resolve suspected abuse of the mining laws such as occupancy of the land for purposes other than prospecting, mining and related operations.
8. Avoid placing or proposing capital investments or other surface resource activities in areas where they would interfere with operating sites or known mineral resources (FSM 2761).
9. Request mineral leasing withdrawals in situations, such as for classified lands.
10. Cover mining activity by an operating plan and performance bond of the appropriate amount.
11. Reclamation will return disturbed lands to the planned uses.

Leasable Minerals

12. Approve Surface Use Plan of Operation (36 CFR 228.107) in conformance with all stipulations included in the lease and necessary conditions of approval determined during review of the applications (FSM 2800).

Geophysical Operations

13. Permit geophysical operations on withdrawn, classified lands where the operations do not interfere with purposes for which the lands are withdrawn. Do not permit such operations if significant adverse effects cannot be prevented (FSM 2860).

Coal, Uranium and Non-Energy Common Materials

14. In designated Wilderness, Congressionally designated Wilderness study areas, and areas recommended for Wilderness in RARE II upon which Congress has not taken final action:

- a. Prospecting for and disposals of common varieties of mineral materials will not be authorized.
- b. Coal mining in the National Wilderness Preservation System is prohibited by the Coal Leasing Amendments Act of 1975.
- c. Unless there is statutory language to the contrary, in which case the statutory provisions control, recommend, or consent to BLM for issuance of leases or permits where operations, including surface-based access, product transportation and other necessary ancillary facilities, will not cause irreversible and irretrievable damage to surface resources and where the lands disturbed can be restored as near as practical to natural conditions

15. In classified lands other than Wilderness (Wild and Scenic River Systems, RARE II Further Planning areas, National Recreation Areas, National Historic Sites, Natural Areas, Special Areas*such as geological, scenic and zoological, and some other specific classifications):

- a. Authorize common variety exploration and disposals under terms and conditions to protect the purposes for which the lands were classified. The objective of reclamation requirements will be to return lands to a condition suitable for the purposes for which they were classified.

For special areas classified under 36 CFR 294 and 251.23 for specific management purposes, the regulatory provisions permit no use or occupancy inconsistent with the classification.

b. Coal mining is prohibited by the Coal Leasing Amendment Act of 1975, within the National System of Trails and the Wild and Scenic Rivers System, including study rivers designated by that Act.

c. Recommend or consent to BLM for issuance of leases permits or licenses only when terms and conditions can be applied that will protect the purposes for which the lands were classified. <F2P8B>

For more on Minerals, see Chapter 3 * Forestwide Standards and Guidelines.

RANGE (FSM 2200)

1. Allotment management plans (AMPs) need to provide for threatened, endangered and sensitive species (FSM 2203, 2211, 2212).

2. When updating AMPs, display forage utilization factors by type of management, the season of use, and the ecological type by condition and seral stage within the AMP (FSM 2210, 2211).

3. Construct structural improvements to maintain or improve rangeland conditions within classified Wilderness, consistent with Wilderness values (FSM 2323.26).

4. Riparian utilization or stubble-remaining standards are to be developed and included in AMPs. Consider season of use to minimize impacts on riparian zones (FSM 2211, 2212, 2526).

5. Give emphasis to developing livestock management strategies that are economically efficient, environmentally sound and compatible with other resources (FSM 2212.03 - 2212 8).

6. Structural and nonstructural improvements to maintain or improve rangeland conditions will be designed to benefit livestock and wildlife and minimize impacts on wildlife and recreation users (FSH 2209.22, 2209.23, FSM 2240).

For more on Range, see Chapter 3 * Forestwide Standards and Guidelines.

RECREATION (FSM 2300)

Developed

1. Where terrain allows and demand exists, facilities will be considered for development to accommodate people with disabilities. Different challenge levels will be planned, depending upon the nature of the improvement and the principal form of recreation being provided.

2. The customer will be recognized as a spectrum of our society interested in a wide array of dispersed, sedentary, adventure, developed, guided, self- determined, motorized and nonmotorized activities in controlled and uncontrolled environments. Potential customers will be recognized as those who might use National Forest resources if appropriate services and resources were available (FSM 2330)

3. Sites will be managed and maintained according to the needs of our customers using the site. Safety and cleanliness are of utmost importance. Remove hazardous and/or dead trees in developed sites (FSM 2331 R-2 Supplement #70, FSM 2332).

4. The type and level of development sophistication in developed sites may vary, depending upon the situation and need. They are developed by the Forest Service, concessionaires or cooperators and may be managed by any or a mix of these (FSM 2303).

Recreation Opportunity Spectrum

5. A recreation opportunity spectrum (ROS) table is included in Chapter 1 of this Forest Plan. A decision to change an ROS class will be documented in a NEPA decision document (FSM 1922.15, 2310.3).

For more on Recreation, see Chapter 3 * Forestwide Standards and Guidelines.

RESEARCH NATURAL AREAS (FSM 4060)

1. Discourage or prohibit any public use that contributes to impairment of research or natural values (FSM 4063.36)

2. Use special-use permits or cooperative agreements to authorize and document scientific activity (FSM 4063.37).

RIGHTS-OF-WAY (FSM 5460)

Acquisition

1. Acquire rights-of-way on existing and proposed Forest System roads and trails that cross other than National Forest System lands.

2. Acquire rights-of-way using the following criteria:

- a. Legal access for existing roads and trails that provide general access to the National Forest.
- b. Legal access to support planned projects and high priority activities at least two years prior to project implementation (FSM 5461.2).<F2P8B>

For more on Rights-of-Way, see Chapter 3 * Forestwide Standards and Guidelines.

SOILS (FSM 2550)

- 1 Soil should not be displaced more than a continuous area of 100 square feet or more (FSH 2509.18 R-2 Supplement).
2. Soils should not be compacted more than (FSM 2509 18 R-2 Supplement):
 - a A 15 percent increase in bulk density from the average undisturbed density, or
 - b. Bulk density values that exceed the following threshold values:
 - 1 25g/c * silt and clay
 - 1.30 g/cc * silty clay, silty clay loam and silt loam
 - 1.40 g/cc * loam and clay loam
 - 1.50 g/cc * sandy loam, sandy clay loam and sandy clay
 - 1.60 g/cc * sand and loamy sand
3. Maintain adequate plant cover to protect the watershed and maintain plant health consistent with the soil type.
4. Management practices will be designed and implemented to maintain or improve the long-term soil productivity potential of the National Forest (FSH 2509 R-2 Supplement).
5. Soil quality monitoring will be conducted to determine if soil management goals, objectives and standards are being achieved (FSH 2509 R-2 Supplement).
6. Monitoring results will be used to adjust management activities and mitigating measures where necessary to prevent significant impairment of the long-term soil productivity (FSH 2509 R-2 Supplement).

For more on Soils, see Chapter 3 * Forestwide Standards and Guidelines.

SPECIAL LAND USES (FSM 2700)

1. Act on special-use applications according to the following priorities:
 - a Those required by law or regulation, or national in scope.
 - b. Those in the public interest, mainly local or regional in nature.
 - c. All others
- 2 Do not approve any special-use applications that can be reasonably met on nonfederal or other federal lands unless it is clearly in the public interest (FSM 2703.2).
3. Do not approve special-use applications for areas adjacent to developed sites unless the proposed use is compatible with the purpose and use of the developed site.

4. Utilize approved electronic sites where feasible

5. Do not approve applications for use of federal land that involve any hazardous materials as defined in U.S.C. 9601 et seq., 40 CFR 261.30 and 40 CFR 302.4. The hazardous materials listed are individual chemicals. These references do not relate to hazardous waste dumps (FSM 2703).

TIMBER (FSM 2400)

General

1. *Forests are to be managed to provide net public benefits. Many different philosophies and strategies are used that provide benefits desired in the areas of urban interface, those areas used for recreation and viewing, for wildlife habitat, watershed protection, water-yield enhancement, and others, as well as for wood and fiber products. In most cases, these must be integrated. Managers are to develop and use a wide variety of prescriptions to meet these public priorities and to accept that traditional economic considerations must be supplemented with both the empirical and subjective ones (FSM 2470 3).*

2. Plan areas for timber harvest only if assured, based on existing technology and knowledge, that long-term soil productivity will not be degraded (FSH 2409.26 Chapter 10).

3. Provide for wildlife habitat improvement and enhancement of other renewable resources in sale area improvement plans.

Tree Stand Improvement (Precommercial Thinning)

4. Provide for accelerated growth, create specific stocking, and improve quality and vigor of timber stands.

Silvicultural Prescriptions

5. Silvicultural prescriptions for tree-stand improvement, including thinning, should evaluate the tradeoffs associated with alternative treatments in terms of increased timber yields, economic efficiency, enhanced wildlife habitat, increased wood-products yield and quality, improved long-term forest health, increased species and structural diversity and the desired future condition for the stand (FSH 2409.26c Chapter 10, FSH 2409 17 Chapter 6).

6. Silvicultural prescriptions will be prepared for all vegetation management activities proposing the management of forested vegetation to work toward achieving the desired future condition (FSH 2409).

7. Apply a variety of silvicultural systems and harvest methods that best meet resource management objectives.

8. Prepare individual silvicultural prescriptions for areas or site specific practices.

9. Use thinning practices that consider genetic diversity, competition among the trees for water, nutrients and light. *The frequency of thinning should depend upon the tree species, financial efficiency, and the site's growing conditions (as commonly measured by site index) (FSH 2409.17 Chapter 6)*

10. Where appropriate, reduce competition between desired trees and other vegetation (FSH 2409.17 Chapter 6)

11. If the silvicultural system being applied to a particular area of the landscape is uneven-aged, harvest trees designated for commercial timber production based on the desired density as determined by age class or size, and the objective for the area (FSH 2409.26).

12. In most circumstances, rely on or make primary use of these silvicultural systems that ensure regeneration of forest stands through natural seeding and suckering (FSH 2409 26b Chapter 70).

13. Use artificial regeneration methods when we cannot rely on the natural sequence of events and/or environmental conditions to regenerate the forests within five years or earlier (FSH 2409.26b Chapter 70).

14. Inventory improvement needs in sale areas during sale reconnaissance. Use KV funds as applicable after sale closure to accomplish needed improvements including education and interpretation (FSH 2409.12 Chapter 10).

For more on Timber, see Chapter 3 * Forestwide Standards and Guidelines.

TRANSPORTATION AND TRAVEL

Transportation System Management (FSM 7700)

1. Unless a proposed road is determined necessary as a permanent addition to the National Forest Transportation System, close it and revegetate it. Revegetation will be achieved within six months. Close or obliterate temporary roads immediately when use ends (FSM 7703.1).

2. Retain access rights (FSM 7712 31).

3. Establish the specific purpose and intended use for each existing and proposed road, based on management direction. Document this purpose by writing specific road management objectives, which include appropriate design, operation, and maintenance criteria. Employ traffic (travel) management strategies of encourage, accept, discourage eliminate, unrestricted, or prohibit on all roads (FSM 7712.31).

4. Develop road management programs to require commercial users to pay their share of road maintenance.

5. Propose state and county roads as Forest Highways where the use and development of National Forest System lands affect the public road system, thus necessitating federal investments to ensure that these roads are safe and adequate. Such designation identifies state and local government roads that qualify for construction and reconstruction funding under the Forest Highway program. Designate and develop Forest Development Roads as Forest Highways when use of the road meets requirements for Forest Highway designation (FSM 7740.3).

6. Coordinate Forest information and directional signs with appropriate transportation agencies (FSH 7109.11).

Trails (FSM 2300)

7. Provide for a wide range of recreational opportunities, both motorized and nonmotorized. The trail system on each National Forest will:

a. Consider barrier-free opportunities for all new construction or rehabilitation proposals.

b. Not be dedicated to single use unless clearly necessary to resolve conflicts or create unique opportunities.

c. Have documentation on the purpose and use of each trail (FSH 2309).

8. Trail systems will be integrated across administrative boundaries, including adjacent Forest Service units, other federal agencies, state, and municipal trails (FSM 2353).

9. Maintain each trail to the standard required for the intended user-types

10. The permanent Forest trail system will be determined and identified in the Forest Trail Development Plan. This plan will include the existing and future quality constraints as they apply to trail experiences (FSM 2353).

11. National Historic, Scenic, or Recreation Trails will receive higher priority than other trails for reconstruction, operation and maintenance (FSM 2353).

12. *Maintain all trails to established Forest standards.*

a. Maintain trails in accordance with standards in the Trail Handbook

b. Schedule trail maintenance in accordance with Regional acceptable work standards

13. Construct or reconstruct trails when needed as part of the transportation system.

For more on Transportation and Travel, see Chapter 3 * Forestwide Standards and Guidelines.

VISUAL QUALITY (FSM 2380)

1. Management activities must be consistent with the visual quality objectives (VQO) in this Forest Plan unless a decision is made to change the VQO. A decision to change the VQO will be documented in project NEPA decision documents (FSM 2382.21).

2. At the project implementation stage, the VQO should be refined to the project scale.

3. As new viewer platforms (such as roads, trails, recreation areas or major housing developments outside National Forests) are developed, the VQOs should be reassessed (FSM 2382.32).

4. For areas which do not currently meet the VQO, use landscape rehabilitation as a short-term alternative to restore landscapes containing undesirable-visual impacts to a desired visual quality (FSM 2383).

For more on Visual Quality, see Chapter 3 * Forestwide Standards and Guideline and Appendix G

WATER (FSM 2520)

Water Quality

1. Develop integrated soil/water/fishery improvement schedules for watersheds, coordinated with other resources. Coordinate with state wildlife agencies. Apply treatment and land-use controls as needed to restore soil productivity, water quality, channel stability and aquatic habitat (FSM 2522.03, 2522 2).

For more on Water, see Chapter 3 * Forestwide Standards and Guidelines.

WILD AND SCENIC RIVERS (FSM 2354)

The following guidelines set forth standards for determining the classification (wild, scenic, or recreational) and eventual management of designated Wild and Scenic Rivers (FSH 1909.12).

Wild Rivers

1 Cutting of trees will not be permitted except when needed in association with a primitive recreation experience (such as clearing for trails and protection of users) or to protect the environment (such as

control of fire) Timber outside the boundary but within the visual corridors will be managed and harvested in a manner to provide special emphasis to visual quality

2 All water supply dams and major diversions are prohibited.

3. No development of hydroelectric power facilities is permitted.

4 No flood control dams, levees, or other works are allowed in the channel or river corridor. The natural appearance and essentially primitive character of the river must be maintained.

5 New mining claims and mineral leases are prohibited within 1/4 mile of the river. Valid claims would not be abrogated Subject to regulation (36 CFR 228) that the Secretaries of Agriculture and Interior may prescribe to protect the rivers included in the National System, other existing mining activity would be allowed to continue. Existing mineral activity must be conducted in a manner that minimizes surface disturbance, sedimentation, and visual impairment. Reasonable access will be permitted.

6. No roads or other provisions for overland motorized travel would be permitted within a narrow incised river valley or, if the river valley is broad, within 1/4 mile of the river bank. A few inconspicuous roads leading to the boundary of the river area at the time of study will not disqualify wild river classification. Also, unobtrusive trail bridges could be allowed.

7. Agricultural use is restricted to a limited amount of domestic livestock grazing and hay production to the extent currently practiced. Row crops are prohibited

8. Major public use areas, such as large campgrounds, interpretive centers, or administrative headquarters are located outside the wild river area. Simple comfort and convenience facilities, such as fireplaces or shelters, may be provided as necessary within the river area. These should harmonize with the surroundings

9 A few minor existing structures could be allowed assuming such structures are not incompatible with the essentially primitive and natural values of the viewshed. New structures would not be allowed except in rare instances to achieve management objectives (i.e. structures and activities associated with fisheries enhancement programs)

10. New transmission lines, gas lines, water lines, etc. are discouraged Where no reasonable alternative exists, additional or new facilities should be restricted to existing rights-of-way. Where new rights-of-way are indicated, the scenic, recreational, and fish and wildlife values must be evaluated in the selection of the site.

11. Motorized travel on land or water could be permitted, but is generally not compatible with this classification.

Scenic Rivers

12. A wide range of silvicultural practices could be allowed provided that such practices are carried on in such a way that there is not substantial adverse effect on the river and its immediate environment. The river area should be maintained in its near-natural environment. Timber outside the boundary but within the visual scene-area should be managed and harvested in a manner that provides special emphasis on visual quality.

13. All water supply dams and major diversions are prohibited.

14 No development of hydroelectric power facilities is allowed

15. Flood control dams and levees would be prohibited

16. Subject to regulations at 36 CFR 228 that the Secretaries of Agriculture and the Interior may prescribe to protect the values of rivers included in the National System, new mining claims and mineral leases could be allowed and existing operations allowed to continue. However, mineral activity must be conducted in a manner that minimizes surface disturbance, sedimentation and pollution, and visual impairment.

17. Roads may occasionally bridge the river area and short stretches of conspicuous or longer stretches of inconspicuous and well-screened roads or screened railroads could be allowed. Consideration will be given to the type of use for which roads are constructed and the type of use that will occur in the river area.

18. A wider range of agricultural uses is permitted to the extent currently practiced. Row crops are not considered as an intrusion of the largely primitive nature of scenic corridors as long as there is not a substantial adverse effect on the natural like appearance of the river area

19 Larger scale public use facilities, such as moderate size campgrounds, public information centers, and administrative headquarters, are allowed if such structures are screened from the river. Modest and unobtrusive marinas also can be allowed

20 Any concentrations of habitations are limited to relatively short reaches of the river corridor. New structures that would have a direct and adverse effect on river values would not be allowed.

21. New transmission lines, gas lines, water lines, etc. are discouraged. Where no reasonable alternative exists, additional or new facilities should be restricted to existing rights-of-way. Where new rights-of-way are indicated, the scenic, recreational, and fish and wildlife values must be evaluated in the selection of the site

22. Motorized travel on land or water may be permitted, prohibited or restricted to protect the river values.

Recreational Rivers

23. Timber harvesting would be allowed under standard restrictions to protect the immediate river environment, water quality, scenic, fish and wildlife, and other values.

24. Existing low dams, diversion works, rip rap and other minor structures are allowed provided the waterway remains generally natural in appearance. New structures are prohibited.

25. No development of hydroelectric power facilities is allowed.

26 Existing flood control works may be maintained. New structures are prohibited.

27 Subject to regulations (36 CFR 228) that the Secretaries of Agriculture and the Interior may prescribe to protect values of rivers included in the National System, new mining claims and mineral leases are allowed and existing operations are allowed to continue. Mineral activity must be conducted in a manner that minimizes surface disturbance, sedimentation and pollution, and visual impairment.

28. Paralleling roads or railroads could be constructed on one or both riverbanks. There can be several bridge crossings and numerous river access points.

29. Lands may be managed for a full range of agricultural uses to the extent currently practices.

30. Campgrounds and picnic areas may be established in close proximity to the river. However, recreational classification does not require extensive recreation development.

31. Small communities as well as dispersed or cluster residential developments are allowed. New structures are allowed for both habitation and for intensive recreation use.

32. New transmission lines, gas lines, water lines, etc. are discouraged. Where no reasonable alternative exists, additional or new facilities should be restricted to existing rights-of-way. Where new rights-of-way are indicated, the scenic, recreational, and fish and wildlife values must be evaluated in the selection of the site.

33. Motorized travel on land or water may be permitted, prohibited or restricted. Controls will usually be similar to surrounding lands and waters.

For more on Wild and Scenic Rivers, see Chapter 3 * Forestwide Standards and Guidelines.

WILDLIFE AND FISH (FSM 2600)

1. Manage animal damage in cooperation with the state wildlife agencies and the Animal and Plant Health Inspection Service to prevent or reduce damage to other resources and direct control toward preventing damage or removing only the offending animal.

2. Provide forage for big game. Allocate forage to big game based on direction in management area prescriptions and FSM 2210, range analysis and allotment management planning.

Endangered or Threatened Species

3. Provide habitat for federally listed or proposed endangered or threatened species on National Forest System lands (FSM 2672.24, 2676).

4. Complete biological evaluations on actions authorized through NEPA decision documents, funded or carried out by the Forest Service to determine the effects on federally listed or proposed endangered or threatened species (FSM 2672.4).

5. Carry out consultation, informal or formal as appropriate, with the U.S. Fish and Wildlife Service when biological assessments determine that Forest Service actions may affect federally listed or proposed endangered or threatened species (FSM 2671.45).

For more on Wildlife and Fish, see Chapter 3 Forestwide Standards and Guidelines.

STATUTES

American Indian Religious Freedom Act
Act of August 11, 1978

Americans with Disabilities Act of 1990

Anderson-Mansfield Reforestation and Revegetation
Act of October 11, 1949

Antiquities Act
Act of June 8, 1906

Archaeological Resources Protection Act of 1979, as amended 1988
Act of October 31, 1979

Architectural Barriers Act of 1968

Bankhead-Jones Farm Tenant Act of 1937
Act of July 22, 1937

Clarke-McNary Act of 1924
Act of June 7, 1924

Clean Air Act Amendments of 1977
Act of August 7, 1977

Clean Water Act of 1977

Clean Water Amendments (*Federal Water Pollutions Control Act Amendments of 1972*)
Act of October 18, 1972

Color of Title
Act of December 22, 1928

Common Varieties of Mineral Materials
Act of July 31, 1947

Comprehensive Environmental Response, Compensation and Liability Act, as amended
Act of December 11, 1980

Cooperative Forestry Assistance Act of 1978
Act of July 1, 1978

Disaster Relief Act of 1974
Act of May 22, 1974

Eastern Wilderness Act
Act of January 3, 1975

Economy Act of 1932
Act of June 30, 1932

Emergency Flood Prevention (Agricultural Credit Act of 1978)
Act of August 4, 1978

Endangered Species Act of 1973
Act of December 28, 1973

Energy Security Act
Act of June 30, 1980

Federal Advisory Committee Act of 1972
Act of October 6, 1972

Federal Cave Resources Protection Act of 1988
Act of November 18, 1988

Federal Coal Leasing Amendments Act of 1975
Act of August 4, 1976

Federal Insecticide, Rodenticide, and Fungicide Act
Act of October 21, 1972

Federal Land Policy and Management Act of 1976
Act of October 21, 1976

Federal Noxious Weed Act of 1974
Act of January 3, 1975

Federal Onshore Oil and Gas Leasing Reform Act of 1987
Act of December 22, 1987
Federal Power Act of 1920
Act of June 10, 1920
Federal-State Cooperation for Soil Conservation
Act of December 22, 1944
Federal Water Pollution Control Act of 1956, as amended (Water Quality Act of 1965, Clean Water
Restoration Act of 1966)
Act of July 9, 1956
Federal Water Project Recreation Act of 1965
Act of July 9, 1965
Fish and Wildlife Conservation
Act of September 15, 1960
Fish and Wildlife Coordination Act
Act of March 10, 1934
Forest Highways
Act of August 27, 1958
Forest and Rangeland Renewable Resources Planning Act of 1974
Act of August 17, 1974
Forest and Rangeland Renewable Resources Research Act of 1978
Act of June 30, 1978
Freedom of Information Act
Act of November 21, 1974
Geothermal Steam Act of 1970
Act of December 24, 1970
Granger-Thye Act
Act of April 24, 1950
Historic Preservation Act
Act of October 15, 1966
Intermodal Surface Transportation Efficiency Act
Act of December 18, 1991
Joint Surveys of Watershed Areas Act of 1962
Act of September 5, 1962
Knutson-Vandenberg Act
Act of June 9, 1930
Land Acquisition
Act of March 3, 1925
Land Acquisition-Declaration of Taking
Act of February 26, 1931
Land Acquisition-Title Adjustment
Act of July 8, 1943
Land and Water Conservation Fund Act of 1965
Act of September 3, 1964
Law Enforcement Authority
Act of March 3, 1905
Leases Around Reservoirs
Act of March 3, 1962
Mineral Leasing Act
Act of February 25, 1920
Mineral Leasing Act for Acquired Lands
Act of August 7, 1947
Mineral Resources on Weeks Law Lands
Act of March 4, 1917

Mineral Springs Leasing
Act of February 28, 1899

Mining Claims Rights Restoration Act of 1955
Act of August 11, 1955

Mining and Minerals Policy Act of 1970
Act of December 31, 1970

Multiple-Use Sustained-Yield Act of 1960
Act of June 12, 1960

National Environmental Policy Act of 1969
Act of January 1, 1970

National Forest Management Act of 1976
Act of October 22, 1976

National Forest Roads and Trails Act
Act of October 13, 1964

National Historic Preservation Act
Act of October 15, 1966

National Historic Preservation Act Amendments of 1980 and 1992
Act of December 12, 1980

National Trails System Act
Act of October 2, 1968

Occupancy Permits
Act of March 4, 1915

Organic Administration Act of 1897
Act of June 4, 1897

Petrified Wood
Act of September 28, 1962

Pipelines
Act of February 25, 1920

Preservation of Historical and Archaeological Data
Act of May 24, 1974

Public Land Surveys
Act of March 3, 1899

Public Rangelands Improvement Act of 1978
Act of October 25, 1978

Rehabilitation
Act of 1973, as amended

Renewable Resources Extension Act of 1978
Act of June 30, 1978

Research Grants
Act of September 6, 1958

Right of Eminent Domain
Act of August 1, 1888

Rural Development Act of 1972
Act of August 30, 1972

Safe Drinking Water Amendments on 1977
Act of November 16, 1977

Sikes Act
Act of October 18, 1974

Small Tracts Act
Act of January 22, 1983

Smokey Bear Act
Act of May 23, 1952

Soil and Water Resources Conservation Act of 1977
Act of November 18, 1977
Solid Waste Disposal (*Resource Conservation and Recovery Act of 1976*)
Act of October 21, 1976
Supplemental National Forest Reforestation Fund
Act of September 18, 1972
Surface Mining Control And Reclamation Act of 1977
Act of August 3, 1977
Sustained Yield Forest Management
Act of March 29, 1944
Timber Export
Act of March 4, 1917
Timber Exportation
Act of April 12, 1926
Title Adjustment
Act of April 28, 1930
Toxic Substances Control Act
Act of October 11, 1976
Transfer Act
Act of February 1, 1905
Twenty-Five Percent Fund
Act of May 23, 1908
Uniform Federal Accessibility Standards (in accordance with the Architectural Act of 1968)
U.S. Criminal Code (*Title 18, United States Code, Chapter 91 * Public Lands*)
Act of June 25, 1948
U.S. Mining Laws (Public Domain Lands)
Act of May 10, 1872

Volunteers in the National Forests Act of 1972
Act of May 18, 1972
Water Quality Improvement Act of 1965
Act of April 3, 1965
Water Resources Planning Act
Act of July 22, 1965
Watershed Protection and Flood Prevention Act of 1954
Act of August 4, 1954
Weeks Act Status for Certain Lands
Act of September 2, 1958
Weeks Act of 1911
Act of March 1, 1911
Wild and Scenic Rivers Act
Act of October 2, 1968
Wilderness Act of 1964
Act of September 3, 1964
Wildlife Game Refuges
Act of August 11, 1916
Wood Residue Utilization Act of 1980
Act of December 19, 1980
Woodsy Owl/Smokey Bear Act
Act of June 22, 1974
Youth Conservation Corps
Act of August 13, 1970

2 CAP = REGULATIONS

- 36 CFR 60 - National Register of Historic Places
- 36 CFR 212 - Forest Development Transportation System
- 36 CFR 213 - Administration Under Bank-Jones Act
- 36 CFR 219 - Planning
- 36 CFR 221 - Timber Management Planning
- 36 CFR 222 - Range Management
- 36 CFR 223 - Sale and Disposal of NFS Timber
- 36 CFR 228 - Minerals
- 36 CFR 241 - *Fish and Wildlife*
- 36 CFR 251 - Land Uses
- 36 CFR 254 - Landownership Adjustments
- 36 CFR 261 - *Prohibitions*
- 36 CFR 291 - Occupancy and Use of Developed Sites and Areas of Concentrated Public Use
- 36 CFR 292 - National Recreation Areas
- 36 CFR 293 - *Wilderness - Primitive Areas*
- 36 CFR 294 - Special Areas
- 36 CFR 295 - Use of Motor Vehicles off Forest Development Roads
- 36 CFR 296 - Protection of Archaeological Resources
- 36 CFR 297 - Wild and Scenic Rivers
- 36 CFR 800 - Advisory Council on Historic Preservation
- 40 CFR 1500-1508 - Council on Environmental Quality
 - National Electrical Code
 - National Fire Code
 - Uniform Building Code
 - Uniform Mechanical Code
 - Uniform Plumbing Code

2 CAP = EXECUTIVE ORDERS

- E.O. 11593 - Protection and Enhancement of Cultural Environment
- E.O. 11990 - Protection of Wetlands
- E.O. 11644/11989 - Use of Off-Road Vehicles
- E.O. 11988 - Floodplain Management
- E.O. 12113 - Independent Water Project Review

Specifics to the Targhee National Forest:

Decomposition Classes for Down Logs, USFS 1985
Bald Eagle Zones Publication

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1994a. The Reintroduction of Gray Wolves to Yellowstone National Park and Central Idaho - Final Environmental Impact Statement. U.S Fish and Wildlife Service, Helena, MT.
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1994b Establishment of a Nonessential Experimental Population of Gray Wolves in Yellowstone National Park in Wyoming, Idaho, Montana; Central Idaho and Southwestern Montana; Final Rules. Federal Register, Vol. 59, No. 224. pp. 60252 to 60281.

GLOSSARY

-A-

Abiotic - Nonliving substances or environmental factors.

Accelerated Soil Erosion - Erosion much more rapid than normal, natural, geological erosion, primarily as a result of the influence of the activities of man or, in some cases, of animals.

Acceptable Storage/Acceptably Stored - (a) stored in a bear resistant container or, (b) stored in a closed vehicle constructed of solid, nonpliable material or; (c) suspended at least 10 feet clear of the ground at all points and 4 feet horizontally from any supporting tree or pole.

Acre-foot - A measure of water or sediment volume equal to the amount which would cover an area of one acre to a depth of one foot (325,851 gallons).

Activity Area - A land area impacted by a management activity, excluding specified transportation facilities, dedicated trails, and mining excavations, and dumps. Activity areas include harvest units within timber sale areas, prescribed burn areas, and grazing areas within range allotments. Riparian and other environmentally sensitive areas may be monitored and evaluated as individual activity areas.

Adaptation - A change in either the genetic makeup or behavior of an organism that enhances its ability to cope with or survive in its environment.

Adaptive Management - A type of natural resource management that implies making decisions as part of an ongoing process. Monitoring the results of actions will provide a flow of information that may indicate the need to change a course of action. Scientific findings and the needs of society may also indicate the need to adapt resource management to new information

Adaptive Planning - A strategy whereby planning efforts are directed towards meeting temporary crises which arise in response to changing conditions.

Aerial Logging - Removing logs from a timber harvest area by helicopter. Fewer roads are required, so the impact to an area is minimized.

Affected Environment - The natural environment that exists at the present time in an area being analyzed.

Afforestation - The establishment of a tree crop on an areas from which it has always or very long been absent

Age Class - An age grouping of trees according to an interval of years, usually 20 years. A single age class would have trees that are within 20 years of the same age, such as 1-20 years or 21-40 years and so on.

Air Pollution - The undesirable addition to the atmosphere of substances (gases, liquids, or solid particles) that are either foreign to or are in quantities exceeding their natural concentrations.

Air Quality - The composition of air with respect to quantities of pollution therein; used most frequently in connection with "standards" of maximum acceptable pollutant concentrations.

Air Shed - A geographic area that because of topography, climate and meteorology share the same air mass.

All-Aged Stand - A portion of a forest or a stand that contains trees of all, or almost all, age classes.

Allocation - The assignment of management practices to specific land areas to achieve established goals and objectives; such as the allocation of a wilderness management zone to an opportunity class.

Allotment (range allotment) - The area designated for use by a prescribed number of livestock for a prescribed period of time. Though an entire Ranger District may be divided into allotments, all land will not be grazed, because other uses, such as recreation or tree plantings, may be more important at a given time.

Allotment Management Plan (AMP) - A document that specifies the program of action designated to reach a given set of objectives for a livestock allotment. It is prepared in consultation with the permittee(s) involved and prescribes the manner and extent to which the permittee's livestock operations will be conducted in order to meet multiple use, sustained yield, economic, and other needs and objectives as determined for the lands involved. It describes the type, location, ownership, and specifications for the range improvements in place or to be installed and maintained on the lands to meet the livestock grazing and other objectives for the land. It contains such other provisions relating to the permittee's livestock management responsibilities and other objectives as may be prescribed by the Forest Service.

Allowable Sale Quantity (ASQ) - The quantity of timber that may be sold from the area of suitable land covered by the Forest Plan for a time period specified by the Plan. This quantity is usually expressed on an annual basis as the "average annual allowable sale quantity."

Allowable Use - The degree of utilization considered desirable and attainable on various specific parts of an allotment considering the present nature and condition of the resource, management objectives, and level of management.

Alternative - One of several policies, plans or projects proposed for decisionmaking.

AMP - Allotment Management Plan

Analysis - A detailed examination of anything complex in order to understand its nature or determine its essential features.

Analysis Area - A geographic area used for environmental analysis. Analysis areas will vary in size, depending on the type of activity and/or project being analyzed, and the associated issues, concerns and opportunities.

Anthropogenic - Involving the impact of humans on natural systems.

Animal Carcass - The dead body or parts thereof, of any mammal, bird, or fish, including domestic livestock.

Animal Unit - Considered to be one mature dry cow of approximately 1000 pounds based upon an average daily forage consumption of 26 pounds dry matter per day. (Abbr. A.U.)

Animal Unit Conversion Factor - A numerical figure expressing the forage requirements of a particular kind or class of animal relative to the requirement for an animal unit. A conversion factor is satisfactory with respect to the amount of forage required to maintain an animal, but may not be applicable in determining stocking rates for range use for particular kinds or classes of animals because of different grazing preferences.

Animal Unit Month (AUM) - The amount of feed or forage required by one mature (1,000 lb.) cow with calf, or equivalent, for 1 month; average daily forage consumption is 26 pounds per day. Each wildlife species will utilize some fraction of this as follows: Elk = 7, Deer = .3, and Antelope = .3.

Apparent Trend - An estimate of trend drawn from the presence or absence of indicators noted or measured during a onetime observation. Conclusion drawn from such a method can be borne out or refuted only by making additional observations or measurements over time. Apparent trend is described in the same terms as measured trend except that when no trend is apparent it shall be described as "not apparent."

Appeal - A request to a higher ranking Forest Service official for relief from a written decision.

Appropriate Suppression Response - The planned strategy for wildfire suppression action, in terms of kind, amount and timing, which most efficiently meets fire management direction under current and expected burning conditions. The response may range from a strategy of prompt control to one of containment, confinement or surveillance.

ASQ - Allowable Sale Quantity

Aquatic Connectivity - The level of connection between aquatic habitat patches. Aquatic ecosystems and species coevolved to function within certain limits of connectivity. When aquatic habitat patches are fragmented beyond natural limits, the key ecological linkages between the biological

(aquatic biota, soil microbes, riparian plants) and physical (water, parent material, gradient) elements are weakened and result in reduced aquatic ecosystem health.

Aquatic Influence Zone - Used in the context of a land management prescription, the area encompassing aquatic and riparian ecosystems and adjacent lands which directly affect the hydrologic, geomorphic, and ecological processes controlling aquatic and riparian ecosystem health and function.

Aquatic Ecosystem - Any body of water, such as streams, lakes, or springs, and all organisms and nonliving components within it, functioning as a natural system and interacting with associated terrestrial ecosystems.

Aquatic Macroinvertebrates - Invertebrates living within aquatic systems that are large enough to be seen with the naked eye, i.e. most aquatic insects.

Aquifer - A water-bearing geologic formation or structure that transmits water.

Artificial Regeneration - Replacement of forest stands by planting young trees or applying seed (direct seeding).

Aspect - The direction a slope faces. A hillside facing east has an eastern aspect.

Assessment - The Renewable Resource Assessment required by the Resources Planning act (RPA).

Associated Species - A species found to be numerically more abundant in a particular forest successional stage as compared to other stages.

Association - Any assemblage of populations living in a prescribed area or physical habitat; it is a loosely organized unit to the extent that it has characteristics additional to its individual components.

AUM - Animal Unit Month

Avoidance Areas - Areas having one or more physical, environmental, institutional or statutory impediments to corridor designation. These are two types of avoidance areas.

Discretionary - areas that may be crossed by corridors only if necessary and reasonable mitigation or avoidance of significant impacts can be obtained.

Nondiscretionary - areas that may not be crossed by corridors unless authorized by the appropriate official (for example, Governor, President, etc.)

-B-

BA - Biological Assessment

Background - The visible terrain beyond the foreground and middleground where individual trees are not visible but are blended into the total fabric of the stand. (See "Foreground" and "Middleground".)

Background Level (Background, Natural Background) - The ever-present environmental conditions or effects above which a phenomenon must manifest itself in order to be detected

Bark Beetle - An insect that bores through the bark of trees to eat the inner bark and lay its eggs. Bark beetles are important killers of forest trees.

Basal Area - The area of the cross section of a tree trunk near its base, usually 4.5 feet above the ground. Basal area is a way to measure how much of a site is occupied by trees. The term basal area is often used to describe the collective basal area of trees per acre.

Base Sale Schedule - A timber sale schedule formulated on the basis that the quantity of timber planned for sale and harvest for any future decade is equal to or greater than the planned sale and harvest for the preceding decade and that this planned sale and harvest for any decade is not greater than the long-term sustained-yield capacity. This definition expresses the principle of nondeclining flow.

BE - Biological Evaluation

Bear Management Units - 18 land units delineated within the Yellowstone Grizzly Bear Recovery Zone. These units are used for grizzly bear population and habitat analysis. There are three bear management units which encompass portions of the Targhee National Forest.

Bear Resistant Container - A securable container constructed of solid nonpliable material capable of withstanding 200 foot-pounds of energy (using the approved bear-resistant container impact testing machine). When secured and under stress the container will not have any cracks, openings, or hinges that would allow a bear to gain entry by biting or pulling with its claws. Wood containers are not considered bear-resistant unless they are reinforced with metal

Benchmark - (1) A permanent reference point. (2) In range monitoring, it is used as a point where changes in vegetation through time are measured.

Best Management Practices (BMP's) - Practices which have been designed to prevent or reduce the amount of nonpoint pollution, to a level compatible with State water quality standards and quality goals. These practices may be determined by the State, the Forest, a designated area wide planning agency, or on a project level basis. Also referred to as Soil and Water Conservation Practices (SWCP's).

Big Game - Those species of large mammals normally managed for sport hunting.

Biodegradable - Chemicals or substances which can be readily broken down into their component parts by biological action.

Biodiversity - The distribution and abundance of different plant and animal species and communities within an area Diversity encompasses four levels: genetics, species, ecosystems and landscapes.

Biological - Relating to, or affecting life and living organisms.

Biological Assessment (BA) - A document that reviews and evaluates proposed actions of Federal agencies for possible effects on any species listed, or proposed to be listed, as threatened or endangered, and their designated or proposed critical habitat.

Biological Control - The use of natural means to control unwanted pests. Examples include introduced or naturally occurring predators such as wasps, or hormones that inhibit the reproduction of pests. Biological controls can sometimes be alternatives to mechanical or chemical means.

Biological Diversity - See Biodiversity.

Biological Evaluation (BE) - A document that reviews all Forest Service planned, funded, executed, or permitted programs and activities for possible effects on endangered, threatened, proposed, or sensitive plant and animal species.

Biological Potential - The maximum possible resource output limited only by inherent physical and biological characteristics.

Biomass - The total weight of the living organisms in some biological system.

Biosphere - That part of the earth's crust, waters and surrounding air-layer which is inhabited by living organisms.

Biota - The plants and animals of an area, taken collectively.

Biotic - All the living organisms in an areas and their life processes.

Biotic Climax - A climax caused by a permanent influence or culmination of influences caused by one or more kinds of organisms, including humans. See Climax.

Biotic Community - See Community.

Biotic Diversity - See Biodiversity.

BMP - Best Management Practices.

Board Foot - The amount of wood equivalent to a piece 1 foot long by 1 foot wide by 1 inch thick. Generally, five board feet log measure is approximately equivalent to 1 cubic foot of round wood.

Broadcast Burn - Allowing a prescribed fire to burn over a designated area within well-defined boundaries for reduction of fuel hazard, improve forage for wildlife and livestock, or encourage successful regeneration of trees.

Browse - Twigs, leaves and young shoots of trees and shrubs that animals eat. Browse is often used to refer to the shrubs eaten by big game, such as elk and deer.

Brush - Stands of vegetation dominated by shrubby, woody plants or low growing trees.

Buffer - A designated land or water area, along the perimeter of some feature (e.g., a stream), whose use is regulated so as to resist, absorb or preclude unwanted effects to the protected feature.

Buffer Strip - A protective area adjacent to an area requiring special attention or protection.

Burning Index (BI) - A number related to the contribution of fire behavior to the effort of containing a fire. BI is represented in NFDRS by a calculation of flame length in feet multiplied by 10.

-C-

C&H Allotment - A cattle and horse allotment.

Cable Logging - Logging that involves the transport of logs from stump to collection points by means of suspended steel cables. Cable logging reduces the need for the construction of logging roads.

Candidate Species - A species being considered for listing as a federally threatened or endangered species.

Canopy - The more or less continuous cover of branches and foliage formed collectively by the crown of adjacent trees and other woody growth. It usually refers to the uppermost layer of foliage, but it can be used to describe lower layers in a multi-storied forest.

Canopy Closure - The degree to which the collective forest canopy, as projected onto the surface, occupies or covers that surface, i.e. the degree to which the sunlight is blocked or the sky obscured.

Canopy Cover - The percentage of ground covered by a vertical projection of the outermost perimeter of the natural spread of foliage of plants. Small openings within the canopy are included. The sum of canopy cover of several species may exceed 100 percent. (Syn. crown cover).

Capability - The potential of an area of land to produce resources, supply goods and services, and allow resource uses under an assumed set of management practices and at a given level of management intensity. Capability depends upon current

conditions and site conditions such as climate, slope, landform, soils and geology, as well as the application of management practices, such as silviculture or protection from fire, insects and disease.

Carnivore - A organism that feeds on animal substances.

Carrying Capacity - The number of organisms that the resources of a habitat can support. Usually used with respect to specific species even though the carrying capacity of a habitat depends on the interactions of both its abiotic and biotic components.

Catastrophic Condition - A significant change in forest conditions on the area that affects Forest Plan resource management objectives and their projected and scheduled outputs, uses, costs, and effects on local communities and environmental quality.

Catastrophic Event - A large-scale, high-intensity natural disturbance that occurs infrequently.

Cavity - The hollow excavated in trees by birds or other natural phenomena; used for roosting and reproduction by many birds and mammals.

CEM - Cumulative Effects Model (Bear)

Channel - A natural or artificial conduit which periodically or continuously contains moving water, such as a stream. A channel has defined bed and banks.

Chargeable Volume - All volume included in the growth and yield projections for the selected management prescriptions used to arrive at the allowable sale quantity, based on regional utilization standards.

Chemical Control - The use of pesticides and herbicides to control pests and undesirable plant species

Class I Areas (Airsheds) - Regarding air quality, an area designated for the most stringent degree of protection by the Clean Air Act. Included are National parks established before August 1977 and wildernesses designated by the 1964 Wilderness Act

Class II Areas (Airsheds) - The level of air quality protection assigned to areas other than Class I Areas.

Class of Livestock - Age and/or sex group of a kind of livestock. (cf. class of animal)

Classification - The forming, sorting, apportioning, grouping or dividing of objects into classes to form an ordered arrangement of items having a defined range of characteristics.

Clean Air Act - (42 U.S.C. 7609) Section 309 provides authority for the Environmental Protection Agency to review other agency environmental impact statements.

Clearcutting - The cutting method where merchantable trees are removed from a designated area during one operation.

Clearcutting with Reserves Regeneration Method - A variant of the Clearcutting Method in which varying numbers of reserve trees are not cut to attain goals other than regeneration. The method normally creates a two-aged stand.

Climate - The average course or condition of the weather at a particular place over a period of many years as exhibited in extremes, means, ranges and seasonal distributions

Climax - The culminating stage in plant succession for a given site where the vegetation has reached a highly stable condition.

Climax Community - The final stage in succession, its nature is determined largely by the climate and soil of a region.

Climax Species - Species that are self-perpetuating in the absence of disturbance.

Climax Vegetation - The pattern or complex of climax communities in a landscape corresponding to the pattern of environmental gradients or habitats.

Closed Allotment/Area - An allotment or area where livestock grazing is not permitted.

Coarse-filter analysis - An analysis of aggregates of elements such as cover type or plant community.

Coarse Filter Management - Land management that addresses the needs of all associated species, communities, environments, and ecological processes in a land area. (See fine filter management.)

Collector Roads - These roads serve small land areas and are usually connected to a Forest System Road, a county road, or a state highway.

Commercial Forest Land - Forest land that is producing or is capable of producing crops of industrial wood and (a) has not been withdrawn by Congress, the Secretary, or the Chief; (b) existing technology and knowledge is available to ensure timber production without irreversible damage to soils productivity, or watershed conditions; and (c) existing technology and knowledge, as reflected in current research and experience, provides reasonable assurance that adequate restocking can be attained within 5 years after final harvesting.

Commercial Thinning - Selective cutting in immature stands in which all or part of the felled trees are extracted for useful products and designed to improve the quality and growth of the remaining trees.

Commodity - A resource product for which a monetary value has been established.

Community - All of the organisms inhabiting a common environment and interacting with one another, or an association of interacting populations usually defined by the nature of their interaction in the place in which they live.

Community cohesion - The degree of unity and cooperation within a community in working toward shared goals and solutions to problems.

Community stability - A community's capacity to handle change without major hardships or disruptions to component groups or institutions. Measurement of community stability requires identification of the type and rate of proposed change and an assessment of the community's capacity to accommodate that level of change.

Community type - An aggregation of all plant communities distinguished by floristic and structural similarities in both overstory and undergrowth layers. A unit of vegetation within a classification.

Compartment - A unit of forested land, usually between 1,000 and 3,000 acres in size, defined by natural and man-made features and used to facilitate timber planning.

Competition - The general struggle for existence and dominance in which living organisms compete for a limited supply of the necessities of life.

Composition - What an ecosystem is composed of. Composition could include water, minerals, trees, snags, wildlife, soil, microorganisms, and certain plant species.

Concern - (Also management concern.) An issue, problem or condition which constrains the range of management practices identified by the Forest Service in the planning process.

Confine - To limit fire spread within a predetermined area principally by use of natural or preconstructed barriers or environmental conditions. Suppression action may be minimal and limited to surveillance under appropriate conditions.

Conifer - A tree that produces cones, such as a pine, spruce, or fir tree.

Connected Actions - Closely related actions which automatically trigger other actions, cannot proceed unless other actions are taken previously or simultaneously, or are interdependent parts of a larger action and depend on the larger action for justification.

Connectivity (of habitats) - The linkage of similar but separated vegetation stands by patches, corridors or "stepping stones" of like vegetation. This term can also refer to the degree to which similar habitats are linked.

Connectivity - The condition in which the spatial arrangement of land or water habitats allows biological and ecological processes to function across the landscape. Connectivity is the opposite of fragmentation.

Constraint - A limitation; action which cannot be taken or must be taken.

Conservation - The careful protection, utilization and planned management of natural resources to prevent their depletion, exploitation, destruction, waste or neglect.

Consistency - All resource plans and permits, contracts and other instruments for the use and occupancy of National Forest System land must be consistent with the Forest Plan.

Consumer Organism - A organism which ingests other organisms or food particles, depending upon their position in the food chain.

Consumptive Use - A use of resources that reduces the supply, such as logging and mining (See also nonconsumptive use).

Contain - To surround a fire, and any spot fires therefrom, with control lines as needed, which can reasonably be expected to check the fire's spread under prevailing and predicted conditions.

Contingency Plan - A plan for providing timely recognition of approaching critical fire situations, priority setting, and deployment of forces and other action to resolve those situations.

Continuous Grazing System - Unrestricted grazing throughout the entire grazing season every year.

Contour - A line drawn on a map connecting points of the same elevation.

Contrast - The degree to which adjacent landscape elements differ from each other, with respect to species composition and physical attributes.

Control - To complete the control line around a fire, any spot fires therefrom, and any interior islands to be saved; burn out any unburned area adjacent to the fire side of the control line; and cool down all hot spots that are immediate threats to the control line, until the line can reasonably be expected to hold under foreseeable conditions.

Coordinated Resource Management (CRM) - The process whereby various user groups are involved in discussion of alternative resource uses and collectively diagnose management problems, establish goals and objectives, and evaluate multiple use resource management.

Core Area - A term used to describe a component of grizzly bear habitat. Core areas are free of motorized access during the nondenning period. Core areas must meet the following criteria:

No motorized use of roads and trails during the nondenning period. Within the core area, restricted roads require closure devices that are permanent such as tank traps, large boulders, dense vegetation, etc.

No roads or trails that receive nonmotorized, high intensity use as defined in established cumulative effects activity definitions.

Minimum of .3 miles from any open road or motorized trail. This will be accomplished by buffering all open roads and open motorized trails.

Consideration should be given to ensure that the core areas meet seasonal bear habitat needs by assuring that spring, summer, fall and denning habitat within the core areas are representative of these seasonal habitats in the entire analysis area.

Once core areas become established and effective, these areas should remain in place for at least 10 years. This duration is based upon the generation time for a female grizzly bear or the time it takes a female grizzly bear to replace herself.

Corridor - A linear strip of land managed for specific vegetational and other (roads) characteristics to allow the movement wildlife species between areas of suitable habitat. The landscape elements that connect similar patches through a dissimilar matrix or an aggregation of dissimilar patches.

Cost-efficiency - The usefulness of specified inputs (costs) to produce specified outputs (benefits). In measuring cost efficiency, some outputs, including environmental, economic, or social impacts, are not assigned monetary values but are achieved at specified levels in the least cost manner. Cost efficiency is usually measured using present net value, although use of benefit-cost ratios and rates-of-return may be appropriate.

Council of Environmental Quality (CEQ) - The Council issues regulations binding on all federal agencies, to implement the procedural provisions of the National Environmental Policy Act. The regulations address the administration of the NEPA process, including preparation of Environmental Impact Statements (EIS) for major federal actions which significantly affect the quality of the human environment.

Cover - Any feature that conceals wildlife or fish. Cover may be dead or live vegetation, boulders, or undercut streambanks. Animals use cover to escape from predators, rest or feed

Cover Class - Represents a percentage range for a fixed area covered by the crowns of plants. It is measured as a vertical projection of the outermost portion of the foliage. Cover Class A = <40% canopy cover; Cover Class B = 40-60% canopy cover; Cover Class C = >60% canopy cover.

Cover-forage Ratio - The ratio of hiding cover to foraging areas for wildlife species

Cover, Percent - The area covered by the combined aerial parts of plants and vegetative ground cover expressed as a percent of the total area.

Cover type (forested cover type) - Stands of a particular vegetation type that are composed of similar species. The aspen cover type contains plants distinct from the pinyon-juniper cover type.

Created Opening - An opening in the forest cover created by the application of even-aged silvicultural practices. (Clearcuts, seed chutes of a shelterwood, or group selection (nonstocked and seedling stages)).

Critical Area - A portion of rangeland which has a critical issue related to it, such as a threatened or endangered or sensitive species, a high use recreation area, or a key wildlife habitat. The area serves as a monitoring and evaluation site for the critical issue.

Critical Habitat - Specific area occupied by threatened or endangered species, on which are found those physical and/or biological features that are essential to the conservation of the species.

Crop Tree - A tree that forms, or is selected to form, a component of the final stand; specifically, one selected to be carried through to maturity. Also known as a final crop tree or growing stock tree.

Crown - The upper part of a tree or other woody plant carrying the main branch system and foliage above a more or less clean stem.

Crown Closure - See cover class.

Crown Cover - The amount of canopy provided by branches and foliage of trees, shrubs, and herbs in a plant community. May be specified by species, growth form or collectively.

Crown Fire - A fire that advances from top to top of trees or shrubs more or less independently of the surface fire. Sometimes crown fires are classed as either running or dependent, to distinguish the degree of independence from the surface fire.

Crown Height - The distance from the ground to the base of the crown of a tree.

CU Allotment - An allotment grazed by both sheep and cattle (common use)

Culmination of Mean Annual Increment - The age at which the average annual growth is greatest for a stand of trees. Mean annual increment is expressed in cubic feet measure and is based on expected growth according to the management intensities and utilization standards assumed in accordance with 36 CFR 219.16 (a)(2)(i) and (ii). Culmination of mean annual increment (CMAI) includes regeneration harvest yields and any additional yields from planned intermediate harvests.

Cultural Resource - The remains of sites, structures, or objects used by humans in the past - historical or archaeological.

Cultural Sensitivity - Refers to the likelihood of encountering significant cultural volumes (quantity and/or quality) that may affect and may be affected by ground-disturbing activities

Cumulative Actions - Actions which when viewed with other proposed actions have cumulatively significant impacts

Cumulative Effects or Impacts - The impact on the environment which results from the incremental impact of an action when added to other past, present and reasonably foreseeable future actions regardless of what agency or person undertakes such other action. Cumulative effects or impacts can result from individually minor but collectively significant actions taking place over a period of time.

Cumulative Effects Analysis - An analysis of the effects on the environment which results from the incremental impact of a proposed action when

added to other past, present and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions.

Cutting Cycle - The planned lapse of time between successive cuttings in a stand.

Cutting Method - Describes cuttings used either to help reproduce forest stands (reproduction or harvest cuttings) or to maintain their vigor and desired composition and structure in terms of tree species, ages, and size classes (intermediate cuttings).

Cycling - One of the ways functions are described; resources which are transported within the system (i.e., animal migration, nutrient cycling in a forest stand, snow melt becoming part of the surface or groundwater flow.)

-D-

Data - Any measurements, facts, evidence or observations reduced to a recorded and retrievable format.

DB - Database

DBH - Diameter at Breast Height

Decomposer - An organism, usually a bacterium or fungus, that breaks down the bodies or parts of dead plants and animals into simpler compounds.

Decomposition - The process of separating into constituent parts, elements, or simpler compounds. In biological systems, a process usually accomplished by fungi and bacteria.

Decomposition Class - Any of five stages of decomposition of logs left in the forest; stages range from essentially sound to almost total decomposition. (See end of glossary for additional information)

Defoliation - The removal of leaves from plants, especially by herbicides or plant eating animals.

Density. Numbers of individuals or stems per unit area. (Density does not equate to any kind of cover measurement.)

Dependent Species - A species for which a habitat element (e.g. snags) is deemed essential for the species to occur regularly or to reproduce.

Departure - A sale schedule that deviates from the principle of nondeclining flow by exhibiting a planned decrease in the sale schedule at any time during the planning horizon. A departure is characterized by a temporary increase, usually in the beginning decade(s) of the planning horizon, over the base sale schedule originally established. This increase does not impair the future attainment of the long-term sustained yield capacity.

Desired Condition (DC) - A portrayal of land or resource conditions which are expected to result if planning goals and objectives are fully achieved.

Desired Future Condition (DFC) - A description of the cumulative results of implementing the goals expressed in the Forest Plan.

Desired Future Condition - Rangelands - The specific future condition of rangeland resources that meets management objectives as identified in the Forest Plan and Allotment Management Plan. Desired future condition of rangelands can be expressed in terms of ecological status of the vegetation, it could include species composition, diversity of habitats, or age classes of species, desired soil protection, including conditions of soil cover, erosion, compaction, and loss of soil productivity; in riparian areas, it includes conditions of streambank and channel stability, stream habitat, streamside vegetation, stream sedimentation, and water quality.

Desired Future Vegetation - The future state of the plant community on a site or an ecological unit which meets forest plan or other management objectives

Desired Plant Community - A plant community which produces the kind, proportion, and amount of vegetation necessary for meeting or exceeding the Forest Land Management Plan or Allotment Management Plan objectives established for an ecological type(s). The desired plant community must be consistent with the type's capability to produce the desired vegetation through management, land treatment, or a combination of the two. The desired plant community must conserve to the extent practicable the long-term potential of the site to produce vegetation, and produce in the short-term those combinations of desired goods and service.

Desirable Plant Species - Species which contribute to the management objectives.

Desired Riparian Vegetation Conditions (DVC) - Those conditions resulting from meeting the Forest Plan objective to "maintain or improve riparian vegetation, aquatic habitat, and water quality." Achieving DVC on the Forest would result in a complex of native riparian plant communities, in predominately mid to late seral stages, with the potential to produce high plant species diversity.

Desired Soil Protection - Desired soil quality standards which meet forest plan or other management objectives for maintaining soil productivity potential, including thresholds for soil cover, erosion, compaction and soil displacement.

Developed Recreation Sites - Relatively small, distinctly defined and developed areas where facilities are provided for concentrated public use, (i.e., campgrounds, picnic areas, and swimming areas). These areas have more than \$50,000 of investment and two or more developed facilities are present.

Development Scale

1 Minimum site modification. Rustic or rudimentary improvements designed for protection of the site rather than comfort of the users. Use of synthetic materials excluded. Minimum controls are subtle. No obvious regimentation Spacing informal and extended to minimize contacts between users. Motorized access not provided or permitted.

2 Little site modification. Rustic or rudimentary improvements designed primarily for protection of the site rather than the comfort of the users. Use of synthetic materials avoided. Minimum controls are subtle. Little obvious regimentation. Spacing informal and extended to minimize contacts between users. Motorized access provided or permitted. Primary access over primitive roads Interpretive services informal, almost subliminal

3 Site modification moderate. Facilities about equal for protection of site and comfort of users Contemporary/rustic design of improvements is usually based on use of native materials. Inconspicuous vehicular traffic controls usually provided. Roads may be hard surfaced and trails

formalized. Development density about 3 family units per acre. Primary access may be over high standard roads. Interpretive services informal, but generally direct.

4 Site heavily modified. Some facilities designed strictly for comfort and convenience of users. Luxury facilities not provided. Facility design may incorporate synthetic materials. Extensive use of artificial surfacing of roads and trails. Vehicular traffic control usually obvious. Primary access usually over paved roads. Development density 3-5 family units per acre. Plant materials usually native. Interpretive services often formal or structured.

5 High degree of site modification. Facilities mostly designed for comfort and convenience of users and usually include flush toilets; may include showers, bathhouses, laundry facilities, and electrical hookups. Synthetic materials commonly used. Formal walks or surfaced trails. Regimentation of users is obvious. Access usually by high-speed highways. Development density 5 or more family units per acre. Plant materials may be foreign to the environment. Formal interpretive services usually available. Designs formalized and architecture may be contemporary. Mowed lawns and clipped shrubs not unusual.

Detrimental Compaction - Soil compaction is a reduction in soil volume, resulting in decreased porosity and increased bulk density. Soil compaction that adversely affects hydrologic function and site productivity is detrimental.

Detrimental Displacement - Soil displacement is the movement of soil from one place to another by mechanical forces such as blade, wheel slippage, and dragging logs. Displacement is detrimental if it adversely affects hydrologic function or site productivity.

Detrimental Disturbance - Refers to areas that have had detrimental compaction, detrimental puddling, detrimental displacement and/or which have been severely burned.

Detrimental Puddling - Soil puddling is a physical change in soil properties due to shearing forces that alter soil structure and reduce permeability and infiltration. Soil puddling that adversely affects hydrologic function and site productivity is detrimental.

tal. Clearly identifiable ruts or hoof prints in mineral soil, or in a horizon of an organic soil, are indicators of detrimental puddling.

Developed Recreation Sites - Relatively small, distinctly defined area where extensive facilities are provided for concentrated public use, (i.e., campgrounds, picnic areas, and swimming areas).

DFC - Desired Future Condition

Diameter at Breast Height (DBH) - The diameter of a tree measured 4 feet 6 inches above the ground.

Direct Effect - An effect that is caused by an action and occurs in [generally] the same time and place as the action.

Discount rate - An interest rate that represents the cost or time value of money in determining the present value of future costs and benefits. A "real" discount rate is one adjusted to exclude the effects of inflation.

Discounting - An adjustment, using a discount rate, for the value of money over time so that costs and benefits occurring in the future are reduced to a common time, usually the present, for comparison.

Dispersal - The movement of plants and animals away from their point of origin to another location where they subsequently get established and produce offspring.

Dispersed Recreation - Recreational activities that do not require developed facilities. These include undeveloped camping sites, hiking, fishing, hunting, biking, etc.

Dispersed Recreation Sites - Relatively small, undeveloped areas where public recreation use occurs. These areas have less than \$50,000 of investment in facilities such as toilets, tables, fencing, etc. These sites are generally adjacent to roads or trails and are used for dispersed recreation activities, such as camping, fishing, hunting, hiking, etc.

Dispersion - To spread out the impacts of timber harvest by distributing harvest units more or less uniformly throughout a drainage.

Distinctive (Class A) landscape - Areas where features of landform, vegetative patterns, water forms, and rock formations are of unusual or outstanding visual quality.

Disturbance - Any event, such as a forest fire or insect infestation that alters the structure, composition, or function of an ecosystem.

Disturbed Soil - see 'soil disturbance.'

Diversity - The distribution and abundance of different plant and animal communities and species within the area covered by a land and resource management plan. See also "Edge," "Horizontal Diversity," and "Vertical Diversity."

Diversity - See Biodiversity.

Dominant - A taxon or group of taxa which by their collective size, mass, or numbers exert the most influence on other components of the ecosystem.

Drainage - A large area mostly bounded by ridges, encompassing part, most or all of a watershed.

Drought Index - A number representing net effect of evaporation, transpiration, and precipitation in producing cumulative moisture depletion in deep duff or upper soil layers.

Durability - The ability of resources to tolerate sustained use, without degradation of the resource base (i.e., productivity or quality).

Dwarf Mistletoe (*Arceuthobium* spp.) - Dwarf mistletoes are parasitic, seedbearing plants that attack most western conifers. Infected trees can be recognized by presence of witch's brooms, cankers, swellings, and other abnormalities. Economic losses can be heavy, as damage results in smaller trees, lower timber quality, and increased mortality.

-E-

EA - Environmental Assessment

Early Forest Succession - The biotic (or life) community that develops immediately following the removal or destruction of vegetation in an area. For instance, grasses may be the first plants to grow in an area that was burned

Ecocentric - A conservation strategy that focus on providing habitat patterns that are manifestations of ecological processes operating at several scales. Also, a philosophical viewpoint which emphasizes the maintenance of natural systems at the expense of commodity production and other human uses. The goal of this philosophy is to permit natural ecological processes to operate as freely as possible, because wild land values for society ultimately depend on the retention of naturalness.

Ecoclass - Classification system for the biological and earth sciences based on linking together existing disciplinary classifications of the major ecosystem components.

Ecology - The interrelationships of living things to one another and to their environment, or the study of these interrelationships.

Ecomap - This was the name given to the Forest Service workgroup that developed the National Hierarchy of Ecological Units for the United States.

Economic impacts -

direct economic impact - Effects caused directly by forest product harvest or processing or by forest uses.

indirect economic impact - Effects that occur when supporting industries sell goods or services to directly affected industries.

induced economic impact - Effects that occur when employees or owners of directly or indirectly affected industries spend their income within the economy.

Ecoregion. A continuous geographic area over which the macroclimate is sufficiently uniform to permit development of similar ecosystems on sites with similar properties. Ecoregions contain multiple landscapes with different spatial patterns of ecosystems.

Ecosystem - An arrangement of living and nonliving things and the forces that move among them. Living things include plants and animals. Nonliving parts of ecosystems may be rocks and minerals. Weather and wildfire are two of the forces that act within ecosystems.

Ecosystem composition - The constituent elements of an ecosystem.

Ecosystem function - The processes through which the constituent living and nonliving elements of ecosystems change and interact, including biogeochemical processes and succession.

Ecosystem Health - Ecosystem health is defined in terms of four major characteristics applicable to any complex system: sustainability, which is a function of activity, organization, and resilience. An ecological system is healthy and free from "distress syndrome" if it is stable and sustainable -that is, if it is active and maintains its organization and autonomy over time and is resilient to stress ("distress syndrome" refers to the irreversible process of system breakdown leading to collapse).

Ecosystem Management - The use of an ecological approach to achieve productive resource management by blending social, physical, economic and biological needs and values to provide healthy ecosystems.

Ecosystem pattern - The structure that results from the distribution of organisms in, and their interaction with their environment. Includes zonation, stratification, activity or periodicity, food-webs, reproductive, social and stochastic.

Ecosystem restoration - Returning an ecosystem from a nonsustainable to a sustainable condition.

Ecosystem Stability - When the ecosystem process and function are operating within the ecosystems historical operating range. The historical range of variability identifies the ecosystem amplitude of historical responses to perturbations and disturbances.

Ecosystem structure - The spatial arrangement of the living and nonliving elements of an ecosystem.

Ecosystem sustainability - The ability to sustain diversity, productivity, resilience to stress, health, *renew ability, and/or yields of desired values, resource uses, products, or services* from an ecosystem while maintaining the integrity of the ecosystem over time.

Edge - The margin where two or more vegetation patches meet, such as a meadow opening next to a mature forest stand, or a Douglas-fir stand next to an aspen stand

Edge Effect - The increased richness of plants and animals resulting from the mixing of two communities where they join.

Effects - Environmental consequences as a result of a proposed action. Included are direct effects, which are caused by the action and occur at the same time and place, and indirect effects, which are caused by the action and are later in time or further removed in distance, but which are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air, water and other natural systems, including ecosystems.

Effects and impacts as used in this statement are synonymous. Effects include ecological (such as the effects on natural resources and on the components, structures and functioning of affected ecosystems), aesthetic quality, historic, cultural, economic, social or health whether direct, indirect or cumulative. Effects may also include those resulting from actions that may have both beneficial and detrimental effects, even if on balance the agency believes that the effects will be beneficial.

EHE - Elk Habitat Effectiveness

EIS - Environmental Impact Statement

Elk Habitat Effectiveness (EHE) - A measure of the quality of an area for elk during the spring/summer/fall seasons. Two habitat parameters are considered to be most important for EHE. 1) motorized road and trail densities (measured in miles/square mile, 2) elk hiding cover (measured as a percentage of an area in cover).

Elk Hiding Cover - Vegetation capable of hiding 90 percent of a standing adult elk from the view of a human at a distance equal to or less than 200 feet

Elk Vulnerability (EV) - The percent mortality of bull elk during the fall general rifle hunting season. Three parameters are considered to be most important for EV: 1) aspect variability; 2) hunter densities (measured in hunter-days/square mile); 3) motorized road and trail densities (measured in miles/square mile).

Emission - A release of air contaminants into the outdoor atmosphere.

Endangered Species - Any species of animal or plant that is in danger of extinction throughout all or a significant portion of its range. Plant or animal species identified by the Secretary of the Interior and endangered in accordance with the 1973 Endangered Species Act.

Endangered Species Act - The Act which requires consultation with U.S. Fish and Wildlife Service if practices on National Forest System lands may impact a threatened or endangered species (plant or animal).

Endemic - Restricted in distribution to a defined area. (Not epidemic)

Environment - The complex of climatic, soil and biotic factors that act upon and influence an ecosystem.

Environmental Analysis - An analysis of alternative actions and their predictable long and short-term environmental effects. Environmental Analyses include physical, biological, social and economic factors.

Environmental Assessment (EA) - A document providing evidence and analysis relating to a proposed action by a Federal Agency. It establishes whether an environmental impact statement (EIS) must be written, or a finding of no significant impact (FONSI) will be issued. It includes the proposed action and alternatives, and evaluates their potential environmental impacts.

Environmental Impact Statement (EIS) A statement of the environmental effects of a proposed action and alternatives to it. It is required for major Federal actions under Section 102 of the National Environmental Policy Act (NEPA) and released to the public and other agencies for comment and review. It is a formal document that must follow the requirements of NEPA, the Council on Environmental Quality (CEQ) guidelines, and directives of the agency responsible for the project proposal.

Ephemeral Streams - Streams that flow only as the direct result of rainfall or snowmelt. They have no permanent flow.

Erosion - The wearing away of the land surface by wind or water.

ESA - Endangered Species Act

Escaped Fire - A fire which has exceeded, or is anticipated to exceed, initial action capabilities or the fire management direction or prescription.

EV - Elk Vulnerability

Even-aged forest - A forest stand comprising trees with less than a 20-year difference in age.

Even-aged Management - Timber management actions that result in the creation of stands of trees in which the trees are essentially the same age. Clearcut, shelterwood, or seed tree cutting methods produce even-aged stands.

Even-aged Stand - A portion of a forest or a stand composed of trees having no, or relatively small, differences in age, although differences of as much as 30 percent are admissible in rotations greater than 100 years.

Even-aged System - A silvicultural system that produces stands in which all trees are about the same age; that is, the difference in age between trees forming the main crown canopy level will usually not exceed 20 percent of the rotation length.

EWU - Ecological Water Unit.

Exclusion Areas - Areas having a statutory prohibition to rights-of-way for lineal facilities or corridor designation

Extensive Management - The practice of forestry on a basis of low operating and investment costs per acre. Also known as extensive forestry.

Extinct - A species is extinct when it no longer exists.

Extinction - The process which results in the complete elimination of a species leaving no living descendants. Extinctions may be local or global.

Eyrie - A ledge along a cliff used for nesting peregrine falcons.

-F-

Fauna - The animal life of an area.

Facilities - Transportation planning, road management and operation, fleet equipment, and engineering services (for example, administrative buildings, water and sanitation systems, sanitary landfills, dams, bridges and communication systems).

Felling - Cutting down trees.

Final Cut - The removal of the last seed bearers or shelter trees after regeneration of new trees has been established in a stand being managed under the shelterwood system of silviculture.

Final Removal - All overstory trees are removed to release an adequately stocked salvageable understory.

Final Removal Cut - A type of cut that releases established regeneration from competition with seed trees under the Seed Tree and Shelterwood Regeneration Methods. Reserve trees may or may not be retained.

Fine Fuels - Fast drying fuels such as grass, leaves, draped pine needles, and small twigs that when dry ignite readily. Fine fuels are considered 1 hour timelag fuels (see timelag definition).

Fine Organic Matter - Organic material on top of mineral soil consisting of fallen vegetative matter in various stages of decomposition. Specifically referred to as horizons in soil descriptions. Fine organic matter includes woody material up to 3 inches in diameter.

Fines - waterborn particles the size of sand and smaller.

Fire - The rapid, persistent chemical reaction of a fuel and oxygen that releases heat, light and unburned particulate (smoke).

Fire Ecology - Area of study addressing the relationships among fire, the environment, and living organisms.

Fire Frequency - The number of wildland fires started in a given area over a given time.

Fire Group - A collection of similar habitat types and their associated fire ecology.

Fire Hazard - A fuel complex, defined by volume, type condition, arrangement, and location, that determines the degree of ease of ignition and of resistance to control.

Fire Management - All activities required for the protection of burnable wildland values from fire and the use of fire to meet land management goals and objectives

Fire Management Area - One or more parcels of land having a common set of fire management objectives.

Fire Occurrence - Number of fires per unit time in a specified area.

Fire Regime - The characteristic frequency, extent, intensity, severity and seasonality of fires in an ecosystem.

Fire Risk - The chance of fire starting, as affected by the nature and incidence of causative agents; an element of the fire danger in any area.

Fire Suppression - All work and activities associated with fire extinguishing operations beginning with discovery and continuing until the fire is completely extinguished.

Fireline Intensity - The amount of heat released in BTU's per foot of fire front per second. It is related to the difficulty of containment of a fire.

Fish - Any of numerous cold-blooded aquatic vertebrates having fins, gills and a streamlined body.

Fish-bearing Stream Reaches - Those portions of streams and rivers that support fish of any species during all, or a portion of, their life cycle.

Fisheries Habitat. Streams, lakes, and reservoirs that support fish, or have the potential to support fish.

Floodplain - The lowland and relatively flat area adjoining waters, including, at a minimum, the area subject to a one percent chance or greater chance of flooding in any given year (100 year recurrence).

Flora - The plant life of an area.

FOIA - Freedom of Information Act.

Food Chain - A series of spatially associated species, each of which lives as a predator, parasite or absorber of the next lower species down in the series.

FOR - FORPLAN or FORPLAN Alternative

Forage - All browse and herbaceous foods that are available to grazing animals. It may be grazed or harvested for feeding

Forb - A broadleaf plant that has little or no woody material in it.

Foreground - The part of a scene or landscape that is nearest to the viewer.

Forest - An ecosystem characterized by a more or less dense and extensive tree cover. Usually supporting or capable of supporting forests at a density of 10 percent crown closure or better

Forest and Rangeland Renewable Resources Planning Act (RPA) (1974) - This act requires the development of long term strategies for the management and inventory of the renewable forest and range resources of Forest Service lands.

Forest Health - A measure of the robustness of forest ecosystems. Aspects of forest health include biological diversity, soil, air, and water productivity, natural disturbances, and the capacity of the forest to provide a sustaining flow of goods and services for people.

Forest Land - See "Timber Classification."

Forest Plan - Source of management direction for an individual National Forest unit, specifying allowable activities, minimum requirements, expected outputs and land use allocations for a 10 to 15 year period.

Forest Roads and Trails - A legal term for Forest roads or trails that are under the jurisdiction of the Forest Service.

Forest Structure - Often divided into four conceptual aspects: age, species composition, horizontal or mosaic pattern, and vertical.

Forest Supervisor - The official responsible for administering National Forest lands on an administrative unit, usually one or more National Forests. The Forest Supervisor reports to the Regional Forester.

Forest Trees - Woody plants having a well-developed stem and usually more than 12 feet in height at maturity.

Forest Type - A descriptive term used to group stands of similar character of development and species composition by which they might be differentiated from other groups of stands.

Fragile - Those land or water areas containing ecosystems, possibly but not necessarily rare, that are sensitive to external stimuli which may disturb their balance, especially in an irreversible direction

Fragmentation - The splitting or isolating of patches of similar habitat, typically forest cover, but including other types of habitat. Habitat can be fragmented naturally or from forest management activities, such as clearcut logging.

Freedom of Information Act (FOIA) (1966) - The freedom of information act provides public access to records of the agencies and departments of the Executive Branch of the U.S. government.

Frequency - A quantitative expression of the presence or absence of individuals of a species in a population.

FRES - Forest Range Environmental Study.

Frissell Condition Classes - A classification system which rates the degree of man-caused change that a wilderness, dispersed campsite or concentrated-use area has undergone. There are 5 classes as follows:

Frissell Condition Class 1 - Visible Indicators: Ground vegetation flattened, but not permanently injured. Minimal physical change except for possibly a simple rock fireplace.

Frissell Condition Class 2 - Visible Indicators: Ground vegetation worn away around fireplace or center of activity.

Frissell Condition Class 3 - Visible Indicators
Ground vegetation lost on most of the site, but humus and litter still present in all but a few areas.

Frissell Condition Class 4 - Visible Indicators:
Bare mineral soil widespread. Tree roots exposed on the surface.

Frissell Condition Class 5 - Visible Indicators:
Soil erosion obvious. Trees reduced in vigor or dead.

Fuel Loading - The dry weight of fuels in a given area, usually expressed in tons per acre. Fuel loading may be referenced to fuel size and may include total biomass.

Fuel Management - The treatment of fuels that would otherwise interfere with effective fire management or control. For instance, prescribed fire can reduce the amount of fuels that accumulate on the forest floor before the fuels become so heavy that a natural wildfire in the area would be explosive and impossible to control

Fuel Model - Simulated fuel complex for which all fuel descriptors required for the solution of a mathematical rate of spread model have been specified.

Fuel Moisture Content - The quantity of moisture in fuel expressed as a percentage of the weight when thoroughly dried at 212 degrees F.

Fuels - Plants and woody vegetation, both living and dead, that are capable of burning.

Fuelwood - Wood that is round, split, or sawn and/or otherwise generally refuse material cut into short lengths or chipped for burning.

Function - All the processes within an ecosystem through which the elements interact, such as succession, the food chain, fire, weather, and the hydrologic cycle.

Functional Planning - Planning which focuses on a single aspect or resource of a total complex

Game Species - Any species of wildlife or fish that is harvested according to prescribed limits and seasons.

Geographic Information System (GIS) - A set of procedures and computer hardware and software for organizing, storing, retrieving, analyzing, and displaying data that includes a geographic position component.

GIS - Geographic Information Systems.

Goal - A concise statement that describes a desired condition to be achieved sometime in the future. It is normally expressed in broad, general terms and may not have a specific date for accomplishment.

Goods and Services. The various outputs, including on-site users, produced from forest and rangeland resources.

Grassland - Plant communities whose potential natural and dominant vegetation is comprised of grasses and grasslike plants.

Grasslike Plant - A plant of the Cyperaceae or Juncaceae families which vegetatively resembles a true grass of the Gramineae family.

Grazing - Consumption of forage by animals.

Grazing Formula - The specific order of grazing or sequence within a grazing system.

Grazing period - The time period in which domestic livestock are permitted to graze a specific pasture and/or portion of an allotment.

Grazing Season - The total length of time which domestic livestock are permitted to graze all pastures and/or portions of an allotment

Grazing System - A specialization of grazing management which defines systematically recurring periods of grazing and deferment for two or more pastures or management units. (cf. deferred grazing, intermittent grazing, deferred-rotation grazing, and short-duration grazing.)

Greater Yellowstone Area - A term for 11.7 million acre area that makes up parts of six National Forests and two National Parks in northwest Wyoming, eastern Idaho, and southwest Montana.

Greenline - The first perennial vegetation from the waters edge. Riparian areas that are in late seral status with stable stream banks will exhibit a continuous line of vegetation at the bankfull discharge level. Rocky stream types may have a significant amount of rock causing breaks in the vegetation. This rock is considered part of the green line. Other breaks may occur in the first perennial band of vegetation (watercourses or bare ground). The amounts of these (perennial vegetation, rock, and bare ground) should be recorded.

Grizzly Bear Security Cover - Forested areas (all tree species) which have not been managed or burned in the last 20 years, and managed or burned forested areas within the last 20 years which meet the following criteria:

The overstory and understory categories are to be considered separately. A stand having either 130 sq. ft. of basal area per acre or 250 understory trees per acre over 7 ft. tall would meet the requirements for full security cover. Both live and dead tree basal areas were used for overstory calculations.

Ground Cover - The percentage of material, other than bare ground, covering the land surface. It may include live vegetation, standing dead vegetation, litter, cobble, gravel, stones and bedrock. Ground cover plus bare ground would total 100 percent.

Ground Fire. A fire that burns along the forest floor and does not affect trees with thick bark or high crowns

Ground Water - The supply of fresh water under the earth's surface in an aquifer or in the soil.

Group Selection - A method of tree harvest in which trees are removed periodically in small groups. This silvicultural treatment results in small openings that form mosaics of age class groups in the forest.

Group Selection Regeneration Method - A method of regenerating uneven-aged stands in which trees are cut, and new age classes are established, in small groups.

Growing Stock Trees - Live trees, meeting specified standards of quality or vigor, included in growth and yield projections to arrive at the allowable sale quantity.

Guideline - Guidelines represent a preferred or advisable course of action that is generally expected to be carried out. Deviation from compliance with a guideline does not require a Forest Plan amendment, but the rationale for such a deviation shall be documented in the project decision document.

Guilds - A group of organisms that share a common food resource.

-H-

Habitat - The area where a plant or animal lives and grows under natural conditions.

Habitat Capability - The ability of a land area or plant community to support a given species of wildlife.

Habitat Diversity - The number of different types of habitat within a given area.

Habitat Type - A way to classify land area. A habitat can support certain climax vegetation, both trees and undergrowth species. Habitat typing can indicate the biological potential of a site.

Harvest Activity - A reference to a specific type of cut applied under a regeneration or intermediate treatment method. Refer to FSH 2409.14, Chapter 78 for valid values.

Harvest Cutting - The felling of the final crop of trees either in a single cutting or in a series of regeneration cuttings. Generally, the removal of financially or physically mature trees, in contrast to cuttings that remove immature trees. Also referred to as main felling and major harvest.

Harvesting - A loose term for the removal of natural resource for human use or consumption.

Healthy ecosystem - An ecosystem in which structure and functions allow the maintenance of the desired condition of biological diversity, biotic integrity, and ecological processes over time

Herb - Any flowering plant except those developing persistent woody stems above ground.

Herbivore - Any animal (mammal, bird, insect, etc.) that consumes living plants or their parts.

HGL - Hydric Greenline.

Hiding Cover - Vegetation or other surface characteristics (rocks, downed logs, etc.) that will hide 90% of an animal from the view of a human at some distance that varies by species. For deer and elk that distance is 200 feet.

Hierarchical - A type of classification technique whose successively lower level units must fit entirely within the separate units delineated by the next higher level in that system.

Hierarchical approach - An analysis approach accounting for differences in space and time (USDA Forest Service 1994).

Historical variation - Range of the spatial, structural, compositional, and temporal characteristics of ecosystem elements during a period specified to represent natural conditions.

Home Range - The area in which an animal conducts its activities during a defined period of time

Horizontal Diversity - The distribution and abundance of plant and animal communities or different stages of plant succession across an area of land. The greater the numbers of communities in a given area, the higher the degree of horizontal diversity.

Human dimension - An integral component of ecosystem management that recognizes people are part of ecosystems, that people's pursuits of past, present, and future desires, needs, and values (including perceptions, beliefs, attitudes, and behaviors) have and will continue to influence ecosystems and that ecosystem management must include consideration of the physical, emotional, mental, spiritual, social, cultural, and economic well-being of people and communities.

Human impact or influence - A disturbance or change in ecosystem composition, structure, or function caused by humans.

Hydric Soil - A soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth regeneration of hydrophytic vegetation.

Hydric Greenline - A belt of perennial riparian vegetation found closest to the water's edge. It is the area where recovery of riparian and aquatic ecosystems is first expressed and, therefore, can be monitored to test the impacts of livestock grazing. It is also the area which approximates the geographic location (level) of the active floodplain, a feature otherwise difficult to locate.

Hydrologic Cycle - Also called the water cycle, this is the process of water evaporating, condensing, falling to the ground as precipitation, and returning to the ocean as runoff.

Hydrology - The science dealing with the study of water on the surface of the land, in the soil and underlying rocks and in the atmosphere.

Hydrologically Disturbed Condition - Changes in natural canopy cover (vegetation removal) or a change in surface soil characteristics (e.g., compaction) that may alter natural streamflow quantities and character.

-I-

Idaho Stream Segment of Concern - A specified stream segment or body of water that has been designated by the water Quality Advisory Working Committee or the Governor to receive priority for water quality monitoring and management by state and federal agencies.

Idaho and Wyoming Species of Concern - Plant or animal species which are officially listed by state agencies due to concerns for habitats and/or populations.

Igneous Rock - Rocks formed when high temperature, molten mineral matter cooled and solidified.

Implementation Schedules - The schedules of projects and specific actions to implement a Land and Resource Management Plan. Implementation schedules are normally revised annually. They include site-specific actions, responsibilities and target dates.

Improvement Cutting - The elimination or suppression of less valuable trees in favor of more valuable trees, typically in a mixed, uneven-aged forest.

Increaser - Plant species of the original vegetation that increase in relative amount, at least for a time, under overuse.

Index - A number derived from a formula to characterize a complex set of information.

Indicator - An organism or an ecologic community that is so strictly associated with particular environmental conditions, that its presence (or absence) is a fairly certain sign or symptom of the existence of these conditions.

Indicator Species - A plant or animal species adapted to a particular kind of environment. Its presence is sufficient indication that specific habitat conditions are also present.

Indigenous Species - Any species of flora or fauna that naturally occurs in an area and that was not introduced by man.

Indirect Effect - Those effects occurring at a later time or distance from the triggering action.

Individual (Single) Tree Selection - The removal of individual trees from certain size and age classes over an entire stand area. Regeneration is mainly natural, and an uneven-aged stand is maintained.

Individual Tree Selection Cutting - An uneven-aged cutting method in which selected trees from specified size or age classes are removed over the entire stand area to meet a predetermined goal of size or age distribution and species composition in the remaining stand.

Infrastructure - The foundation (transportation, communications, utilities, schools, etc.) underlying an area's economy.

Input - Broadly referring to anything thing that is taken in by or enters into the workings of a system.

Insect Pests - There are a variety of insects in the Intermountain Region that can impact forest health by damaging or killing trees. Insect population levels may also affect other forest resources and activities like wildlife habitat, visual quality and fire

management. Some of the important insects in the area include Douglas-fir beetle (*Dendroctonus pseudotsugae*), Douglas-fir tussock moth (*Orgyia pseudotsugata*), Fir engraver (*Scolytus ventralis*), Mountain pine beetle (*Dendroctonus ponderosae*), Spruce beetle (*Dendroctonus rufipennis*), Western balsam bark beetle (*Dryocoetes confusus*) and Western spruce budworm (*Choristoneura occidentalis*).

Instream Flows - The minimum water volume (cubic feet per second) in each stream necessary to meet seasonal streamflow requirements for maintaining aquatic ecosystems, visual quality, recreational opportunities, and other uses

Integrated Pest Management (IPM) - A process for selecting strategies to regulate forest pests in which all aspects of a pest-host system are considered, including: the impact of the unregulated pest population to resources, alternative regulation strategies, and benefit/cost estimates of these alternatives strategies.

Integrated Resource Management - A management strategy which emphasizes no resource element to the exclusion or violation of the minimum legal standards of others.

Interdisciplinary Team - A team of individuals with skills from different disciplines that focuses on the same task or project.

Intermediate Cut - The removal of trees from a stand sometime between the beginning or formation of the stand and the regeneration cut. Types of intermediate cuts include thinning, release, and improvement cuttings

Intermittent Stream - A stream that flows only at certain times of the year when it receives water, usually from a surface source such as melting snow. These streams have a defined bed and banks.

Intermountain Region - The portion of the USDA Forest Service, also referred to as Region Four, that includes National Forests in Utah, Nevada, southern Idaho and southwestern Wyoming.

Invader - Plant species that were absent in the original vegetation and will invade under disturbance or continued overuse

Inventoried Roadless Area. (West of the 100th meridian) An area which meets the statutory definition of wilderness, does not contain improved roads maintained for travel by standard passenger-type vehicles, and meets one or more of the following criteria:

- Contains 5,000 acres or more
- Contains less than 5,000 acres, but:
 - Due to physiography or vegetation, is manageable in a natural condition.
 - Is a self-contained ecosystem such as an island.
 - Is contiguous to existing wilderness, primitive area, Administration-endorsed wilderness, or roadless area in other Federal ownership, regardless of size.

Inventoried Roadless Area - (East of the 100th meridian) An area which contains no more than a half mile of improved road for each 1,000 acres, and the road is under Forest Service jurisdiction and:

- The land is regaining a natural, untrammelled appearance.
- Improvements existing in the area are being affected by the forces of nature rather than humans and are disappearing or muted.
- The area has existing or attainable National Forest System ownership patterns, both surface and subsurface, that could ensure perpetuation of identified wilderness values.
- The location of the area is conducive to the perpetuation of wilderness values, considering the relationship of the area to sources of noise, air and water pollution and other unsightly conditions that would have an effect on the wilderness experience.

Inventory - The gathering of data for future use.

Inversion - A condition in which air temperatures increase rather than decrease with height in the atmosphere. Vertical motion in the atmosphere is inhibited by this stratification and allows for pollutants to be trapped near the surface.

Irretrievable - Applies to losses of production, harvest or commitment of renewable natural resources. For example, some or all of the timber

production from an area is irretrievably lost during the time an area is used as a winter sports site. If the use is changed, timber production can be resumed. The production lost is irretrievable, but the action is not irreversible.

Irreversible - Applies primarily to the use of non-renewable resources, such as minerals or cultural resources, or to those factors that are renewable only over long time spans, such as soil productivity. Irreversible also includes loss of future options.

Issue - A point, matter or question of public discussion or interest to be addressed or decided through the planning process.

Preliminary issue is an issue identified early in the scoping phase and is sometimes referred to as a tentative issue.

Significant issue is an issue within the scope of the proposed action which is used to formulate alternatives in an Environmental Analysis (EA) or Environmental Impact Statement (EIS).

-K-

Key Area - A relatively small portion of rangeland which because of its location, grazing or browsing value, and/or use, serves as a monitoring and evaluation site. (A key area guides the general management of the entire area of which it is a part, and will reflect the overall acceptability of current grazing management over the range.)

Key Species - (1) Forage species whose use serves as an indicator to the degree of use of associated species. (2) Those species which must, because of their importance, be considered in the management program.

Key Summer Range - The portion of a wildlife species' summer range that is essential for the animal's pre, post, and reproduction cycles. Deer require "fawning areas" where does give birth and hide their fawns for an essential period of time in the spring

Key Winter Range - That portion of big game's range where the animals find food and cover during severe winter weather.

Kind of Livestock - Species of animal.

LAC - Limits of Acceptable Change

Ladder Fuels - Vegetation located below the crown level of forest trees which can carry fire from the forest floor to tree crowns. Ladder fuels may be low-growing tree branches, shrubs, or smaller trees

Land - A term denoting the entire complex of surface and near-surface attributes of the solid portion of the surface of the earth which are significant to mankind

Land Class - The topographic relief of a unit of land. Land classes are separated by slope. This coincides with the timber inventory process. The three land classes used in the Forest Plan are defined by the following slope ranges: 0 to 35%, 36-55%, and greater than 55%.

Landform - Any physical, recognizable form or feature of the earth's surface having a characteristic shape and produced by natural causes.

Landscape - A large land area composed of interacting ecosystems that are repeated due to factors such as geology, soils, climate, and human impacts. Landscapes are often used for coarse grain analysis

Landscape Ecology - The body of knowledge pertaining to the ecological effects of spatial patterns in ecosystems.

Landtype - A group of defined and named taxonomic soil units occurring together in an individual and characteristic pattern over a geographic region.

Land Unit - One of the hierarchy levels used for project planning, encompassing one to tens of acres.

Land Use Allocation - The committing of a given area of land or resources to one or specific uses, e.g., to campgrounds, wilderness, etc.

Large Woody Debris - Organic materials such as plant stems and branches with a diameter greater than 3 inches. Included are both natural materials and management induced post-harvest slash. Large trees, or parts of them, that accumulate in streams or other water bodies. This material is

important for aquatic habitat and stream channel stability, and in maintenance of on-site productivity.

Late-Successional Forests - Forest seral stages that include mature and old-growth age classes.

Legal Notice - A notice of a decision which can be appealed that is published in the Federal Register or in the legal notice section of a newspaper of general circulation.

Lentic - Relating to, or living in, still waters (as lakes, ponds and swamps).

Limiting Factor - Any environmental factor whose presence, absence or abundance is the main factor restricting the distribution numbers or condition of an organism.

Limits of Acceptable Change (LAC) - A planning framework that establishes explicit measures of the acceptable and appropriate resource and social conditions in wilderness settings as well as the appropriate management strategies for maintaining or achieving those desired conditions

Line Officer - The officer (District Ranger, Forest Supervisor, Regional Forester, etc.) that has authority for a specific district, forest, region, etc.

Litter (forest litter) - The freshly fallen or only slightly decomposed plant material on the forest floor. This layer includes foliage, bark fragments, twigs, flowers and fruit.

Long-term Sustained Yield Capacity (LTSYC) - The highest uniform wood yield from lands being managed for timber production that may be sustained, under a specified management intensity, consistent with multiple-use objectives.

Logging Residues - The residue left on the ground after timber cutting. It includes unused logs, up-rooted stumps, broken branches, bark, and leaves. Certain amounts of "slash" provide important ecosystem roles, such as soil protection, nutrient cycling, and wildlife habitat

LTSL - Less-Than-Standard Service Level

LTSYC - Long-term Sustained Yield Capacity.

-M-

M - Thousand Five thousand board feet of timber can be expressed as 5M board feet.

MAI - Mean Annual Increment

Maintenance Class -

Maintenance Class 1, Satisfactory. Facility is safe and sanitary. Annual maintenance will not exceed 10 percent of replacement cost.

Maintenance Class 2, Substandard. Facility is safe and sanitary, although substandard as to type, construction standard, or not in keeping with planned experience-level for the site. Annual maintenance will not exceed 10 percent of current replacement cost of standard type facility. May be scheduled for eventual elimination or replacement but will serve intended purpose for next 3-5 years.

Maintenance Class 3, Heavy Maintenance. Facility unsafe or otherwise unsatisfactory. May be put back in good condition at a cost not to exceed 50 percent of current replacement of like kind facility.

Maintenance Class 4, Replacement. Facility unsafe or otherwise unsatisfactory. To put back in good condition would cost more the 50 percent of the replacement cost. Replace with like kind and standard of facility. Cost includes both removal of old facility and replacement.

Management - To treat with care; handle or direct with skill.

Management Action - Any activity undertaken as part of the administration of the National Forest.

Management Area - Units of land small enough for Districts and the public to relate to, but large enough to provide for management flexibility. A desired future condition developed for the management area will assist in achieving the shared land expectations.

Management Concern - An issue, problem or a condition which constrains the range of management practices identified by the Forest Service in the planning process.

Management Direction - A statement of multiple-use and other goals and objectives, the associated management prescriptions, and standards and guidelines for attaining them.

Management Ignition - A fire started by a scheduled, deliberate management action.

Management Indicator Species - A wildlife species whose population and trend in a certain habitat type indicates the population and trend of other species that are also dependent upon the same habitat.

Management Intensity - A management practice or combination of management practices and associated costs designed to obtain different levels of goods and services.

Management Practice - A specific activity, measure, course of action or treatment.

Management Prescription - Management practices and intensity selected and scheduled for application on a specific area to attain multiple-use and other goals and objectives.

Management Situation 1 - Population and habitat conditions. The area contains grizzly population centers (areas key to the survival of grizzly where seasonal or yearlong grizzly activity, under natural, free-ranging conditions is common) and habitat components needed for the survival and recovery of the species or a segment of its population. The probability is very great that major Federal activities or programs may affect (have direct or indirect relationships to the conservation and recovery of) the grizzly.

Management Situation 2 - Population and habitat conditions Current information indicates that the area lacks distinct population centers, highly suitable habitat does not generally occur, although some grizzly habitat components exist and grizzlies may be present occasionally. Habitat resources in Management Situation 2 either are unnecessary for survival and recovery of the species, or the need has not yet been determined but habitat resources may be necessary. Certain management actions are necessary. The status of such areas is subject to review and change according to demonstrated grizzly population and habitat needs. Major Federal activities may affect the conservation of the grizzly bear primarily in that they may

contribute toward (a) human-caused bear mortalities or (b) long-term displacement where the zone of influence could affect habitat use in Management Situation 1.

Management Situation 3 - Population and habitat conditions. Grizzly presence is possible but infrequent. Developments, such as campgrounds, resorts, or other high human use associated facilities, and human presence result in conditions which make grizzly presence untenable for humans and/or grizzlies. There is a high probability that major Federal activities or programs may affect the species' conservation and recovery.

Market-Value Outputs - Goods and services valued in terms of what people are willing to pay for them rather than go without, as evidenced by market transactions.

Mass Movement/Wasting - The downslope movement of large masses of earth material by the force of gravity. Also called a landslide or earthflow.

Mature Forest - Generally used in an economic sense to indicate that a forest has attained harvest age.

Mature Timber - Trees that have attained full development, especially height, and are in full seed production.

Maximum Modification - See "Visual Quality Objectives."

MBF - Thousand board feet (See board feet.)

Mean Annual Increment - The average yearly growth of trees in a stand over a period of years, usually expressed in annual cubic feet of growth per acre.

Mean Annual Increment of Growth - The total increase in size or volume of individual trees. Or, it can refer to the increase in size and volume of a stand of trees at a particular age, divided by that age in years.

Mean Fire Interval - Arithmetic average of all fire intervals determined in years, in a designated area during a specified time period; the size of the area and the time period must be specified.

Micro climate - The climate of a small site. It may differ from the climate at large of the area due to aspect, tree cover (or the absence of tree cover), or exposure to winds

Microhabitat - A restricted set of distinctive environmental conditions that constitute a small habitat, such as the area under a log.

Microsite - A localized area in which environmental conditions differ in a significant or important way from those of the region outside the area.

Middleground - A term used in the management of visual resources, or scenery. It refers to the visible terrain beyond the foreground where individual trees are still visible but do not stand out distinctly from the stand.

Mineral Soil - Soil that consists mainly of inorganic material, such as weathered rock, rather than organic matter. Any soil composed chiefly of mineral matter (e.g., sand, silt, clay, rocks, etc.)

Minimum Streamflow - A specified minimum level of flow through a channel that must be maintained by the users of the stream for biological, physical, or other purposes.

MIS - Management Indicator Species.

Mitigate/mitigation. To lessen the severity. Actions taken to avoid, minimize or rectify the impact of a land management practice.

Mixed Stand - A stand of trees in which less than 80 percent of the trees in the main crown canopy are of a single species.

MM - Million

MMBF - Million board feet (See board feet.)

Modification - A visual quality objective; management activities may visually dominate the original characteristic landscape, but they must borrow from naturally established form, line, color or texture so that the activity blends with the surrounding area.

Monitoring - The determination of how well project or plan objectives have been met and how closely management practices should be adjusted. (See adaptive management.)

Mortality - Trees that were merchantable and have died within a specified period of time. The term mortality can also refer to the rate of death of a species in a given population or community.

Mountain Pine Beetle - A tiny black insect, ranging from 1/8 to 1/4 inch in size, that bores through a pine tree's bark. When trees are attacked by large numbers they have the ability to stop the tree's intake and transport of the food and nutrients, thus killing the tree.

Multiple-Use - The management of all the various renewable surface resources of the National Forest System lands for a variety of purposes such as recreation, range, timber, wildlife and fish habitat, and watershed.

-N-

National Environmental Policy Act (NEPA) (1970) - The basic national charter for the protection of the environment. It establishes policy, sets goals and provides means for carrying out the policy. The NEPA process helps public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment.

National Forest Management Act (NFMA) (1976) - This act amends the Forest and Rangeland Renewable Resources Planning Act of 1974, and lays out the process for developing, adopting and revising land and resource management plans of the National Forest System lands.

National Forest System (NFS) Land - Federal lands that have been designated by Executive Order or statute as National Forests, National Grasslands, Purchase Units, and other lands under the administration of the Forest Service, including Experimental Areas and Bankhead-Jones Title III lands.

Native - Species indigenous to an area of consideration.

Native organism - Animals or plants which originated in the area in which they are found, were not introduced and naturally occur in the area.

Native Species - Any species of flora or fauna that naturally occurs in the United States and that was not introduced by man.

Natural - Existing in, or formed by, nature; not artificial.

Natural Barrier - A natural feature, such as a dense stand of trees or downfall, that will restrict animal travel

Natural Catastrophic Condition - A significant change in forest conditions on the area that affects Forest Plan resource management objectives and their projected and scheduled outputs, uses, costs, and impacts on local communities and environmental quality.

Natural Ignition - A fire started at random by either natural or human causes, or a deliberate incendiary fire.

Natural Regeneration - Renewal of a tree crop by self-sown seed or from sprouts.

Natural Range of Variability - Applied to specific components or elements of an ecosystem there is a distinctive variation in the status of these components, measured at a sufficiently large geographic scale and over a given time period. For example, the total number of nesting owl pairs in a given river basin is expected to have varied around some average number over the last 200 years. The entire spread of owl numbers describes its NRV for the given area. NRV includes aboriginal influences on ecosystems.

Natural Range of Variability - See Range of variability.

Natural Resource - A feature of the natural environment that is of value in serving human needs.

Nest Survey - A way to estimate the size of a bird population by counting the number of nests in a given area.

Net Public Benefits. An expression used to signify the overall long-term value to the Nation of all outputs and positive effects (benefits) less all associated inputs and negative effects (costs) whether they can be quantitatively valued or not. Net public benefits are measured by both quantitative and qualitative criteria rather than a single measure or

index. The maximization of net public benefits to be derived from management of units of the National Forest System is consistent with the principle of multiple-use and sustained-yield.

NFRS - National Forest recreation sites that have been inventoried

No Action Alternative - The most likely condition expected to exist in the future if management practices continue unchanged

Nonchargeable Volume - All volume not included in the growth and yield projections for the selected management prescriptions used to arrive at the allowable sale quantity.

Noncommercial Vegetative Treatment - The removal of trees for reasons other than timber production

Nonconsumptive Use - The use of a resource that does not reduce its supply; for example, nonconsumptive uses of water include hydroelectric power generation, boating, swimming and fishing.

Noncontinuous Grazing System - Rotational and repeated seasonal grazing systems.

Nondeclining Flow - See base sale schedule.

Nondegradation - A policy of not allowing resources to deteriorate any further than what exists at a chosen point of time. The objective is to either maintain the status quo, or to improve resource conditions.

Nonforest Land - See "Timber Classification."

Nongame - Species of animals not managed for sport hunting.

Nonmarket-Valued Outputs - Goods and services not generally traded in the marketplace, but valued in terms of what reasonable people would be willing to pay for them rather than go without. Those obtaining the actual outputs do not necessarily pay what they would be willing to pay for them.

Nonnative species - A species introduced into an ecosystem through human activities

Nonpoint Source Pollution - Pollution whose source is not specific in location. The sources of discharge are dispersed, not well-defined, or constant. Rain storms and snow melt often make this type of pollution worse. Examples include sediments from logging activities, and runoff from agricultural chemicals.

Nonrenewable Resource. A resource whose total quantity does not increase measurably over time, so that each use of the resource diminishes the supply.

Notice of Intent. A notice printed in the Federal Register announcing that an Environmental Impact Statement (EIS) will be prepared.

Noxious plant - A plant specified by law as being especially undesirable, troublesome, and difficult to control.

Noxious weed - See Noxious plant.

Nutrient Cycle - The circulation of chemical elements and compounds, such as carbon and nitrogen, in specific pathways from the nonliving parts of ecosystems into the organic substances of the living parts of ecosystems, and then back again to the nonliving parts of the ecosystem. For example, nitrogen in wood is returned to the soil as the dead tree decays; the nitrogen again becomes available to living organisms in the soil, and upon their death, the nitrogen is available to plants growing in that soil

Nutrient Cycling - The path of an element through the ecosystem including its assimilation by organisms and its release in a reusable inorganic form.

-0-

Objective - A clear and quantifiable statement of planned results to be achieved within a stated time period. Something aimed at or striven for within a predetermined time period. An objective must be achievable, be measurable, have a stated time period for completion, be quantifiable, be clear, and its results must be described.

Off-Highway Vehicle (OHV) - Any motorized vehicle 50 inches or less in width, having a dry weight of 600 pounds or less (includes trail bikes, motor-

cycles, 3-wheelers, 4-wheelers, etc.; does not include snowmachines).

-P-

Off-Road Vehicles (ORV's) - Vehicles such as motorcycles, all-terrain vehicles, four-wheel drive vehicles and snowmobiles.

OHV - Off-Highway Vehicle.

Old Growth - Terrestrial ecosystems characterized by vegetation and associated animals requiring the most mature successional stages (seres). Old growth forests contain trees normally beyond the age of optimum maturity for economic harvest. The precise definition of old growth varies with the tree species comprising the stand.

Opportunities - Ways to address or resolve public issues or management concerns in the land and resource management planning process.

Optimum - A level of production that is consistent with other resource requirements as constrained by environmental, social, and economically sound conditions.

Organism - A plant or animal.

OROMTRD (Open Road and Open Motorized Trail Route Density) - Includes all open roads and open motorized trails. Density may be displayed as follows: 1) Density (miles/square mile) for an analysis area (such as a watershed or a management prescription area). 2) Density is displayed as a percentage of the analysis area in a defined density category (example. 20% >2.0 miles per square mile).

ORV's - Off-road vehicles.

Output - One of the ways functions are described; resources which leave a system, i.e., animals migrating out of an area, mass erosion, removal of commercial timber from an area.

Overmature Timber - Trees that have obtained full development, particularly in height, and are declining in vigor, health, and soundness.

Overstory - The upper canopy or canopies of plants. Usually refers to trees, tall shrubs, and vines.

Overstory Removal - The final harvest cut of the shelterwood method in which overstory trees are removed releasing the established regeneration.

Packing - A temporary influx of organisms of various sex and age classes into remaining suitable habitat as previously available habitat is changed to unsuitable conditions.

PAOT - Persons-At-One-Time.

Parasites - Organisms that absorb their nutrients from the body fluids of living hosts. Parasites may be fungal, bacterial, plant or animal, (e.g. braconid wasp that parasitizes the fir engraver beetle, or dwarf mistletoe).

Parent Material - The unconsolidated and more or less chemically weathered, mineral or organic matter from which soils developed by soil-forming processes.

Partial Retention - A visual quality objective which, in general, means human activities may be evident, but must remain subordinate to the characteristic landscape.

Particulates - Small particles suspended in the air and generally considered pollutants.

Partnership - A cooperative, working relationship between the Forest Service and individuals, corporations, organizations or public agencies to pool financial and human resources to complete projects on National Forest System lands.

Patch - A small (20-60 acres) part of the forest. An area of vegetation that is internally homogeneous, differing from what surrounds it (matrix).

Patch Cut - A clearcut that creates small openings in a stand of trees, usually between 15 and 40 acres in size. Patch cuts are used to provide the disturbance needed to regenerate aspen.

Payment in lieu of taxes (PILOT) - Payments to local or State governments based on ownership of Federal land and not directly dependent on production of outputs or receipt sharing. Specifically, they include payments made under the payments in Lieu of Taxes Act of 1976 by U.S. Department of the Interior.

Payments to Local Government - The portion of receipts derived from Forest Service resource management that is distributed to State and county governments such as the Forest Service 25 percent fund payments.

Percent Use - The percentage of current year's forage production that is consumed or destroyed by grazing animals. May refer to a single species or to the vegetation as a whole.

Percolation - Downward flow or infiltration of water through the pores or spaces of rock or soil.

Perennial Streams - Streams that flow continuously throughout most years. These streams have defined bed and banks.

Permitted Grazing - Grazing on a National Forest range allotment under the terms of a grazing permit.

Personal Use - Normally used to describe the type of permit issued for removal of wood products (firewood, posts, poles, and Christmas trees) from National Forest land when the product is for home use and not to be resold for profit.

Persons-At-One-Time (PAOT) - A recreation capacity measurement term indicating the number of people who can use a facility or area at one time.

Planning - The act of deciding in advance, what to do. A dynamic problem solving effort used to guide future actions and decisions.

Planning Area - The area covered by a Regional Guide or Forest Plan.

Planning Period - One decade. The time interval within the planning horizon that is used to show incremental changes in yields, costs, effects, and benefits.

Planning Regulations - The rules which guide land and resource management planning on the National Forests.

Plant Association - A potential natural plant community of definite floristic composition and uniform appearance. See Association.

Plantation - Clearcut harvested area that has regenerated with natural and/or planted seedlings.

Plant Community - An aggregation of plants that are similar in species composition and structure, and occupy similar habitats over the landscape. See Community.

Plant Vigor - Plant health. (cf. plant vigor index.)

PM-10 - Smoke and debris particles with an aerodynamic diameter smaller than or equal to a nominal ten micrometers.

PNV - Present net value or Potential Natural Vegetation.

Pole/sapling - The stage of forest succession in which trees are between 3 and 7 inches in diameter and are the dominant vegetation.

Pole Timber - Trees of at least 5 0 inches DBH, but smaller than 8 0 inches in DBH, (except lodgepole pine and aspen which includes trees up to 7.0 inches in DBH).

Policy - A guiding principle which is based on a specific decision or set of decisions.

Pollution - The presence of matter or energy whose nature, location or quantity produces undesired environmental effects.

Porosity - Pertaining to landscapes, the density of a particular type of patch within a matrix. Porous landscapes have many small patches of similar type contained within the matrix.

Potential Natural Community (PNC) - The biotic community that would become established on an ecological type if all successional sequences were completed without interference by man under the present environmental conditions. Natural disturbances, such as drought, floods, wildfire, grazing by native fauna, insects, and disease, are inherent in its development. The PNC may include acclimatized or naturalized nonnative species. (IREG)

Potential vegetation - Vegetation that would develop if all successional sequences were completed under present site conditions (e.g., habitat type).

Practice (Also Management Practice) - A specific activity, measure, course of action, or treatment.

Practicable - When funding is obtained or a project is initiated

Precommercial Thinning - Removal of trees from a young stand to promote increased growth on the remaining stems and maintain a specific stocking or stand density range, controlling species composition and stand quality through selection of trees that are to remain in the stand.

Predator - An animal (rarely a plant) that kills and eats animals. Sometimes used in the sense of an insect consuming a seed.

Preparatory Cut - The removal of trees near the end of a rotation, which opens the canopy and enables the crowns of residual trees to enlarge, to improve conditions for seed production and natural regeneration. Typically done in the shelterwood system.

Prescribed Fire - Controlled application of fire to wildland fuels in either their natural or modified state, under specified environmental conditions which allow fire to be confined to a predetermined area and at the same time to produce the intensity of heat and rate of spread required to attain planned resource management objectives.

Prescribed Fire or Burn - A wildland fire ignited by humans under pre-planned, specified conditions, to accomplish specific, planned resource management objectives. This practice is common in California and is also known as "controlled burning".

Prescribed Natural Fire - A wildland fire ignited by natural sources such as lightning or vulcanism. These fires are allowed to burn in designated areas under carefully established conditions to provide for safety and fire control. If these conditions are exceeded, or predicted to worsen, a fire is reclassified as a wildfire and suppressed.

Prescription - Management practices selected to accomplish specific land and resource management objectives.

Present Net Value - The difference between the discounted value (benefits) of all outputs to which monetary values or established market prices are assigned and the total discounted costs of managing the planning area.

Preservation - See "Visual Quality Objectives."

Presuppression - Activities organized in advance of fire occurrence to assure effective suppression action.

Prey - Animals eaten by predators.

Primary Succession - The concept in which there is a sequence of vegetation development initiated on newly formed soils or upon surfaces exposed for the first time (as by landslides) which have never borne vegetation before.

Primitive ROS (Recreation Opportunity Spectrum) - A classification of wilderness and recreation opportunity. It is characterized by an essentially unmodified environment, where trails may be present but structures are rare, and, where it is highly probable to be isolated from the sights and sounds of people. (See ROS.)

Probability of Ignition - A rating of the probability that a firebrand (glowing or flaming) will cause a fire, provided it lands on receptive fuels. It is calculated from air temperature, fuel shading, and fuel moisture.

Production - One of the ways functions are described, resource which are "manufactured" within the system (i.e., plant growth, animal reproduction, snags falling and becoming down woody material).

Productive - The ability of an area to provide goods and services and to sustain ecological values.

Productivity - The amount of material (wood, forage, meat, etc.) yielded by an ecosystem, or its inherent potential to yield such material.

Program - When capitalized, the Renewable Resource Program required by the RPA. Generally, sets of activities or projects with specific objectives, defined in terms of specific results and responsibility for accomplishment.

Project - A single activity or an integrated group of activities designed to accomplish a specific on-the-ground purpose or result.

Proposal - Exists at the stage in the development of an action when an agency is actively preparing to make a decision on one or more alternative means of accomplishing a goal and the effects can be meaningfully evaluated.

Proposed Action - A proposal by the Forest Service to authorize, recommend or implement an action.

Province - See Physiographic Province.

Public Issue - A subject or questions of widespread public interest relating to management of the National Forest System.

Public Land - Land for which title and control rests with a government - federal, state, regional, county or municipal.

Public Participation - Meeting, conferences, seminars, workshops, tours, written comments, responses to survey questionnaires, and similar activities designed and held to obtain comments from the public about Forest Service planning and decisionmaking.

Purpose and Need - A statement which briefly specifies the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action.

-R-

Raptor - A bird of prey; primarily meat eating birds with strong hooked bills and sharp talons. Includes but is not limited to members of the Strigidae (Owls), Cathartidae (New World Vultures), Accipitridae (Hawks and Eagles), Falconidae (Falcons), and shrikes.

Range (of a species) - The area or region over which an organism occurs.

Range - Land on which the principle natural plant cover is composed of native grasses, forbs, and shrubs that area available as forage for big game and livestock

Range Allotment - An area designated for the use of a prescribed number and kind of livestock under one management plan.

Range Analysis - Systematic acquisition and evaluation of rangeland resources data needed for planning allotment management and overall land management.

Range Inspection - A field inspection of rangeland to determine if the Forest Plan Standards and Guides, the Allotment Management Plan Goals and Objectives, and the Grazing Permit requirements are being met and followed.

Range of Natural Variation - The observed limits of change in composition, structure, and function of an ecosystem considering both temporal and spatial factors as influenced by frequency, magnitude, and pattern of disturbances (other synonymous terms include 'natural variation' and 'range of variability').

Rangeland - All land-producing or capable-of-producing native vegetation, and lands that have been revegetated naturally or artificially. It includes all grasslands, shrublands, and those forest lands which will continually or periodically, naturally or through management, support an understory of herbaceous or shrubby vegetation

Rangeland Condition - The state of vegetation, soil cover, and soils in relation to a standard or ideal for a particular ecological type. (See satisfactory rangeland and unsatisfactory rangeland condition.)

Range Management - The art and science of planning and directing range use intended to yield the sustained maximum animal production and perpetuation of the natural resources.

Range of Variability - (Natural Variability, Historical Variability.) The components of healthy ecosystems fluctuate over time. The range of sustainable conditions in an ecosystem is determined by time, processes such as fire, native species, and the land itself. For instance, ecosystems that have a 10-year fire cycle have a narrower range of variation than ecosystems with 200-300 year fire cycles Past management has placed some ecosystems outside their range of variability. Future management should move such ecosystems back toward their natural, sustainable range of variation.

Ranger District - The administrative subunit of a National Forest that is supervised by a District Ranger who reports directly to the Forest Supervisor.

Raptor - A bird of prey, such as an eagle or hawk.

RARE II - Roadless Area Review and Evaluation. The national inventory of roadless and undeveloped areas within the National Forests and Grasslands.

Reach - A continuous unbroken stretch of a stream, with homogeneous characteristics.

Real Dollar Value - A monetary value that compensates for the effects of inflation.

Recharge - The addition of water to ground water by natural or artificial processes

Record of Decision - An official document in which a deciding official states the alternative that will be implemented from a prepared EIS.

Recovery - The achievement of viable populations of threatened or endangered plant or animal species.

Recreation Capacity - The number of people that can take advantage of any supply of recreation opportunity at any one time without substantially diminishing the quality of the experience sought after.

Recreation Opportunity Spectrum (ROS) - Six categories have been defined as follows:

Primitive (P or Class I): Very high probability of experiencing solitude, freedom, closeness to nature, tranquility, self-reliance, challenge and risk. Unmodified natural or natural appearing environment. Very low interaction between users. Minimal evidence of other users. Restrictions and controls not evident after entry. Access and travel is nonmotorized on trails or cross country. No vegetative alterations. Access for people with disabilities can be most difficult and very challenging. No site modifications for facilities. Interpretation through self-discovery. No on-site facilities. No facilities for user comfort. Rustic and rudimentary ones for site protection only. Use undimensioned native materials. (USDA Forest Service 1994).

Semi-Primitive Nonmotorized (SPNM or Class II): High probability of experiencing solitude, closeness to nature, tranquility, self-reliance, challenge and risk. Natural appearing environment. Low interaction between users. Some evidence of other users. Minimum of

subtle on-site controls. Access and travel is nonmotorized on trails, some primitive roads or cross country. Vegetative alterations. sanitation salvage to very small units in size and number, widely dispersed and not evident. Access for people with disabilities is difficult and challenging. Rustic and rudimentary facilities primarily for site protection. No evidence of synthetic materials. Use undimensioned native materials. Interpretation through self-discovery. Some use of maps, brochures, and guidebooks. No on-site facilities.

Semi-primitive Motorized (SPM or Class III): Moderate probability of experiencing solitude, closeness to nature, tranquility. High degree of self-reliance, challenge and risk in using motorized equipment. Predominantly natural appearing environment. Low concentration of users but often evidence of others on trails. Minimum on-site controls and restrictions present but subtle. Vegetative alterations very small in size and number, widely dispersed and visually subordinate. Access for people with disabilities is difficult and challenging. Rustic and rudimentary facilities primarily for site protection. No evidence of synthetic materials. Use undimensioned native materials. Interpretation through very limited on-site facilities. Use of maps, brochures and guidebooks.

Roaded Natural (RN or Class IV): Opportunity to affiliate with other users in developed sites but with some chance of privacy. Self-reliance on outdoor skill of only moderate importance. Little challenge and risk. Mostly natural appearing environment as viewed from sensitive roads and trails. Interaction between users at camp sites is of moderate importance. Some obvious on-site controls of users. Access and travel is conventional motorized including sedan, trailers, RV's and some motor homes. Vegetative alterations done to maintain desired visual and recreational characteristics. Access for people with disabilities is of only moderate challenge. Rustic facilities providing some comfort for the user as well as site protection. Use native materials but with more refinement in design. Synthetic materials should not be evident. Moderate site modification for facilities. Interpretation through simple wayside exhibits. Use native-like materials with some refinement in design. Some casual interpretation by forest staff.

Rural (R or Class V): Opportunity to observe and affiliate with other users is important as is convenience of facilities. Self-reliance on outdoor skills of little importance. Little challenge and risk except for activities such as downhill skiing. Natural environment is culturally modified yet attractive. Backdrop may range from alterations not obvious to dominant. Interactions between users may be high as is evidence of other users. Obvious and prevalent *on-site controls*. *Access and travel facilities* are for individual intensified motorized use. Access for people with disabilities is easy and meets ADAAG standards. Some facilities designed primarily for user comfort and convenience. Some synthetic but harmonious materials may be incorporated. Design may be more complex and refined. Moderate to heavy site modification. Interpretation through more complex wayside exhibits including small lighted structures. Interpretive facilities such as kiosks and portals may be staffed part-time.

Urban (U or Class VI): Opportunity to observe and affiliate with other users is very important as is convenience of facilities and recreation opportunities. Outdoor skills, risk, and challenge are unimportant except for competitive sports. Urbanized environment with dominant structures, traffic lights and paved streets. May have natural appearing backdrop. Recreation places may be city parks and large resorts. Interaction between large numbers of users is high. Intensive on-site controls are numerous. Access and travel facilities are highly intense, motorized and often with mass transit supplements. Vegetation is planted and maintained. Access for people with disabilities is easy and meets ADAAG standards. Facilities mostly designed for user comfort and convenience. Synthetic materials are commonly used. Facility design may be highly complex and refined but in harmony or complimentary to the site. Heavy site modifications for facilities. Interpretation through very sophisticated exhibits in staffed visitor centers, wayside exhibits, etc.

Recreation Visitor Day (RVD) - Twelve visitor hours, which may be aggregated continuously, intermittently, or simultaneously by one or more persons.

Recruitment - The addition to a population from all causes, including reproduction, immigration and stocking.

Reforestation - The natural or artificial restocking of an area with forest trees.

Regeneration - The renewal of a tree crop, whether by natural or artificial means. Also, the young crop itself, which commonly is referred to as reproduction.

Regeneration Method - A harvest method by which a new age class is created. The major methods are clearcutting, Seed-Tree, Shelterwood, Selection, and Coppice Regeneration Methods and their variants).

Regional Forester - The official of the USDA Forest Service responsible for administering an entire region of the Forest Service.

Regulations - Generally refers to the Code of Federal Regulations, Title 36, Chapter II, which covers management of the Forest Service.

Rehabilitation - A short-term management activity used to return visual impacts in the natural setting to a desired visual quality.

Release - Freeing trees from competition for light, water, and nutrients by removing or reducing the vegetation growth that is overtopping or closely surrounding them.

Release Cutting - Removal of competing vegetation to allow desired tree species to grow

Release Treatment - A treatment designed to free young trees from undesirable, usually overtopping, competing vegetation. Treatments include: liberation, cleaning, and weeding.

Removal Cut - The removal of the last seed bearers or shelter trees after regeneration is established

Renewable Resource - Resources whose total physical quantity is replenished over time and is thus can sustain some rate of consumption.

Repeated Seasonal Grazing - A situation in which a pasture is grazed at the same time each year.

Research Natural Area (RNA) - Lands that are protected for the purpose of maintaining biological diversity, conducting nonmanipulative research and monitoring, and promoting education.

Reserve Trees - Deliberate retention of trees in a stand for a specific resource use.

Resident Fish - Fish that are not migratory and complete their entire life cycle in fresh water.

Resource - A broad term denoting anything that is useful for something

Resource Value - The value of an ecosystem for a particular use or benefit on an ecological type. This value may be expressed as the value amount or as a relative rating, when compared to the maximum value for an ecological type.

Responsible Official - The Forest Service employee who has been delegated the authority to carry out a specific planning action.

Restoration - Actions taken to modify an ecosystem in whole or in part to achieve a desired condition.

Restoration Ecology - The study of recreating entire communities of organisms closely modeled after communities that occur naturally.

Retention - A visual quality objective; management activities that are not visually evident; activities repeat form, line, color, and texture characteristics found in the landscape.

Revalidation - Pertaining to prescribed natural fire, the daily certification by the approving line officer that the fire is within prescription and will remain in prescription through the ensuing 24-hour period, given reasonably foreseeable weather conditions and fire behavior.

Revegetation - The reestablishment and development of a plant cover by either natural or artificial means, such as reseeding.

Right-of-Way - An accurately located strip of land with defined width, point of beginning, and point of ending. It is the area within which the user has authority to conduct operations approved or granted by the landowner in an authorizing document, such as a permit, easement, lease, license, or Memorandum of Understanding (MOU).

Riparian - Of, on, or relating to the bank of a natural course of water.

Riparian Area - Geographically definable area with distinctive resource values and characteristics that are comprised of the aquatic and transitional ecosystems. Riparian areas may be associated with lakes, reservoirs, potholes, springs, bogs, wet meadows, and ephemeral, intermittent, or perennial streams

RNA - Research Natural Area.

Road

All created or evolved travel routes that are greater than 500 feet long (minimum inventory standard for the Forest Service Route Management System), which are reasonable and prudently drivable with a conventional passenger car or pickup (vehicles greater than 50 inches wide and having a dry weight of 600 pounds or more).

System Road/Managed Road: A road which is part of the official Forest Transportation Management System; these roads usually have a number and a name; they are usually on the Forest travel plan maps.

Nonsystem Road/Unmanaged Road/Ghost Road: A road which is not part of the official Forest Transportation Management System; these roads usually do not have a number or a name; they are not on the Forest travel plan maps.

Open Road/Motorized Road: Any road without restriction on motorized vehicle use.

Restricted Road: Any road on which motorized vehicle use is restricted seasonally or yearlong. The road requires physical obstruction (generally gated) and motorized vehicle use is legally restricted. Motorized administrative use by personnel of resource management agencies is acceptable at low intensity levels as defined in existing cumulative effects analysis models. This includes contractors and permittees in addition to agency employees.

Reclaimed/Obliterated Road: Any road which has been treated in such a manner so as to no longer function as a road or trail. This can be accomplished through one or a combination of

several means including, recontouring to original slope, placement of logging, road, or forest debris, planting of shrubs or trees, etc.

TMARD (Total Motorized Access Route Density) Includes all open and restricted roads and motorized trails. Density may be displayed as follows: 1) Density (miles/square mile) for an analysis area (such as a watershed or a management prescription area). 2) Density is displayed as a percentage of the analysis area in a defined density category (example: 20% >2.0 miles per square mile)

OROMTRD (Open Road and Open Motorized Trail Route Density): Includes all open roads and open motorized trails. Density may be displayed as follows: 1) Density (miles/square mile) for an analysis area (such as a watershed or a management prescription area). 2) Density is displayed as a percentage of the analysis area in a defined density category (example: 20% >2.0 miles per square mile).

A. Calculating OROMTRD for elk habitat effectiveness (the spring/summer/fall period, but not including the general big game rifle seasons):

1. OROMTRD will be calculated on the basis of principal watersheds. The area in square miles of each principal watershed will be calculated, and the miles of open roads and open trails within that principal watershed will also be calculated to determine the OROMTRD (expressed as miles/square mile). The acreage and road and trail mileage included in the calculation will include all acres (NF and private) within the principal watershed.

a. Open roads includes: (a) all system (managed) roads which are open for motorized use on the Forest Plan Travel Maps; plus (b) all system (managed) and nonsystem (unmanaged) roads which have more than 1 to 2 motorized vehicle trips per week for the majority of the weeks during the spring/summer/fall period, even if they are designated closed on

the Forest Plan Travel Maps, plus (c) all highways and county roads and private roads which are open for motorized use

b. Open motorized trails includes: (a) all system (managed) trails which are open for motorized use on the Forest Plan Travel Maps; plus (b) all system (managed) and nonsystem (unmanaged) trails which have more than 1 or 2 motorized vehicle trips per week for the majority of the weeks during the spring/summer/fall period, even if they are designated closed on the Forest Plan Travel Maps.

c. Open roads and open motorized trails which are on the boundary of principal watersheds will be calculated as having one-half the total mileage of that road or trail in each of the watersheds it separates. Open roads and open motorized trails which form the Forest boundary will likewise have one-half of that boundary mileage counted as occurring within the Forest

B. Calculating OROMTRD for elk vulnerability (the general big game rifle seasons):

1. OROMTRD will be calculated on the basis of principal watersheds. The area in square miles of each principal watershed will be calculated. The miles of open roads and open motorized trails within the principal watershed will also be calculated. In addition, "infinitely open areas" will be determined and included in the calculation using a factor of 6 miles of open road per square mile of infinitely open area. Open road and open motorized trail density will be expressed as miles/square mile. The acreage and road and trail mileage included in the calculation will include all acres (NF and private) within a principal watershed.

a. Open roads includes: (a) all system (managed) roads which are open for motorized use on the Forest Plan Travel Maps during the general big

game rifle seasons; plus (b) all system (managed) and nonsystem (unmanaged) roads which have motorized vehicle use during the general big game rifle seasons, even if they are designated closed on the Forest Plan Travel Maps except game retrieval permits are not included; plus (c) all highways and county roads and private roads which are open for motorized use during the general big game rifle seasons.

b. Open motorized trails includes: (a) all system (managed) trails which are open for motorized use on the Forest Plan Travel Maps during the general big game rifle seasons; plus (b) all system (managed) and nonsystem (unmanaged) trails which have motorized vehicle use during the general big game rifle seasons, even if they are designated closed on the Forest Plan Travel Maps, except game retrieval permits are not included.

c. Infinitely open areas include: areas which have terrain and vegetation which allow OHV use and they are not closed to OHV use on the Forest Plan Travel Maps during the general big game hunting seasons. Game retrieval permits in areas which are closed to OHV use are not included in calculations of infinitely open areas. Calculate the total square miles for these areas, and use a factor of 6 miles of open road for each square mile of area.

d. Open roads and open motorized trails which are on the boundary of principal watersheds will be calculated as having one-half the total mileage of that road or trail in each of the watersheds it separates. Open roads and open motorized trails which form the Forest boundary will likewise have one-half of that boundary mileage counted as occurring within the Forest.

C. Calculating OROMTRD for Management Prescription Areas. Follow the same procedure as for elk habitat effectiveness, except the boundaries will be contiguous management prescription areas (and in some cases adjacent management prescription areas as directed in the management prescriptions).

D. Calculating OROMTRD for Grizzly Bear Management Units Follow the procedures outlined in the Interagency Grizzly Bear Committee Taskforce Report - Grizzly Bear/Motorized Access Management, Final, approved by the IFBC, July 21, 1994.

Roadless Areas - Areas of National Forest land which qualify for placement on the inventory of potential wilderness if, in addition to meeting the statutory definition of wilderness, they meet one or more of the following criteria:

- 1 They contain 5,000 acres or more.
2. They contain less than 5,000 acres but.
 - a. Due to physiography of vegetation, they are manageable in their natural condition.
 - b. They are self-contained ecosystems such as an island.
 - c. They are contiguous to existing wilderness, primitive areas, Administration-endorsed wilderness, or roadless areas in other Federal ownership, regardless of their size.
3. They do not contain improved roads maintained for travel by standard passenger-type vehicles, except as permitted in areas east of the 100th meridian.

ROD - Record of Decision

ROS - Recreation Opportunity Spectrum.

Rosgen Channel Types - A classification system developed by Dave Rosgen which places stream reaches into categories based on physical characteristics. This system is useful in comparing the existing classification (condition) of a stream to its natural potential.

Rotation - The number of years required to establish (including the regeneration period) and grow timber crops to a specific condition or maturity for regeneration harvest. Selected management prescriptions in the forest plan provide the basis for the rotation age.

Rotational Grazing System - Animals are moved from pasture to pasture on a scheduled basis

RPA - The Forest and Rangeland Renewable Resources Planning Act of 1974. Also refers to the National Assessment and Recommended Program developed to fulfill the requirements of this Act.

Runoff - The portion of precipitation that flows over the land surface or in open channels.

RVD - Recreation Visitor Day

RVR - Resource Value Rating.

-S-

S&G Allotment - A sheep and goat allotment.

Sale Schedule - The quantity of timber planned for sale by time period from the area of suitable land covered by a forest plan. The first period, usually a decade, of the selected sale schedule provides the allowable sale quantity. Future periods are shown to establish that long-term sustained yield will be achieved and maintained.

Salvage Cutting - The harvest of trees that are dead, dying, or deteriorating (because they are overmature or have been materially damaged by fire, wind, insects, fungi, or other injurious agencies) before their timber becomes worthless.

Salvage Harvest - Harvest of trees that are dead, dying, or deteriorating because they are overmature or have been materially damaged by fire, wind, insects, fungi, or other injurious agents before the wood becomes unmerchantable.

Sanitation Cutting - The removal of dead, damaged, or susceptible trees, done primarily to prevent the spread of pests and pathogens and so promote forest hygiene.

Sanitation Harvest - The harvest of dead, damaged or susceptible trees done primarily to prevent the spread of pests or disease and to promote forest health.

Sapling - A young tree larger than a seedling but smaller than a pole. Size is with the range of 1.0 to 4.9 inches DBH.

Satisfactory Condition - When the desired future rangeland condition is being met or short term objectives are being achieved to move the rangeland toward the desired future condition.

Sawtimber - Trees that are 9 inches in diameter at breast height or larger and can be made into lumber.

Scoping - The ongoing process to determine public opinion, receive comments and suggestions, and determine issues during the environmental analysis process. It may involve public meetings, telephone conversations or letters.

SDI - Stand Density Index.

Second Growth - Forest growth that was established after some kind of interference with the previous forest crop, such as cutting, fire, or insect attack.

Security Cover - See grizzly bear security cover.

Sediment - Solid material, both mineral and organic, transported from its site of origin by air, water, gravity or ice.

Sedimentation - The action or process of forming or depositing excessive amounts of sediment.

Seed cut - A type of cut that prepares the seed bed and creates a new age class in an even-aged or two-aged stand under the Seed-Tree or Shelterwood Regeneration Method. Reserve trees may or may not be retained.

Seed Tree Cutting - An even-aged cutting method in which most of the mature timber from an area is removed in one cut except for a small number of desirable trees retained to provide seed or shelter for regeneration.

Seed-Tree Regeneration Method - A method of regenerating a stand in which a new age class develops from seeds that germinate in a fully-exposed microenvironment after removal of the previous stand, except for a small number of trees left to provide seed. This method creates an even-aged stand.

Seedling - A young tree less than 0.9 inches DBH.

Seed Tree Cutting - Removal in one cut of the mature timber crop from an area, except for a small number of seed bearers left singly or in small groups

Seed Tree Harvest. Removal of the mature timber crop from an area in one cut, except for a small number of seed bearers.

Selection - See "Group Selection" and "Individual (Single) Tree Selection."

Selection Cutting - The annual or periodic removal of trees (particularly mature trees), individually or in small groups, from an uneven-aged forest, to realize the yield and to maintain age stratification.

Selection System - An uneven-aged silvicultural system in which trees are removed individually or in groups, from a large area on a set temporal cycle.

Sensitivity Level - A particular degree of measure of viewer interest in scenic qualities of the landscape. Three sensitivity levels are employed, each identifying a different level of user concern for the visual environment.

Level 1 - Highest Sensitivity

Level 2 - Average Sensitivity

Level 3 - Lowest Sensitivity

Sensitive Species - Those species that (1) have appeared in the Federal Register as proposed for classification and are under consideration for official listing as endangered or threatened species or (2) are on an official state list or (3) are recognized by the U.S. Forest Service or other management agency as needing special management to prevent their being placed on federal or state lists.

Seral - The stage of succession of a plant or animal community that is transitional. If left alone, the seral stage will give way to another plant or animal community that represents a further stage of succession.

Seral Stage - The series of relatively transitory planned communities that develop during ecological succession from bare ground to the climax stage. There are five stages:

Early seral stage - The period from disturbance to crown closure of conifer stands managed under the current forest management regime. Grass, herbs, or brush are plentiful.

Mid-Seral stage - The period in the life of a forest stand from crown closure to first merchantability usually ages 15-40. Due to stand density, brush, grass, or herbs rapidly decrease in the stand. Hiding cover may be present

Late seral stage - The period in the life of a forest stand from first merchantability to culmination of mean annual increment. This is under a regime including commercial thinning, or to 100 years of age, depending on wildlife habitat needs. During this period, stand diversity is minimal, except that conifer mortality rates will be fairly rapid. Hiding than thermal cover may be present. Forage is minimal.

Mature seral stage - The period in the life of a forest stand from culmination of mean annual increment to an old-growth stage or to 200 years. This is a time of gradually increasing stand diversity. Hiding cover, thermal cover, and some forage may be present.

Old-growth seral stage - This stage constitutes the potential plant community capable of existing on a site given the frequency of natural disturbance events. For forest communities this stage exists from approximately age 200 until when stand replacement occurs and secondary succession begins again. Depending on fire frequency and intensity, old growth forests may have different structures, species composition, and age distributions. In forests with longer periods between natural disturbance, the forest structure will be more even-aged at late mature or early old-growth stages

Series - An aggregation of taxonomically related plant associations which take the name of (climatic) climax species that dominate, or have the potential to dominate, the principal vegetative layer in a time frame appropriate to the vegetative or taxonomic group under consideration. See Subseries.

Severely Burned - The main effect of burning is organic matter and nutrient loss. Severely burned is detrimental if it adversely affects site productivity or hydrologic function

Shade-Tolerant Plants - Plants that grow well in shade.

Shelterwood Regeneration Method - A method of regenerating a stand in which a new age class develops beneath the partially-shaded microenvironment provided by the residual trees. The method creates an even-aged stand

Shelterwood Removal Cut - A type of cut that releases established regeneration from competition with seed trees while retaining some trees needed for shelter under the Shelterwood Regeneration Method. Reserve trees may or may not be retained.

Shrub - A plant that has persistent, woody stems and a relatively low growth habit, and that generally produces several basal shoots instead of a single bole. It differs from a tree by its low stature and nonarborescent form.

Sight Distance - The distance at which 90 percent or more of a deer or elk is hidden from an observer. Hiding cover exists when 90 percent or more of a standing deer or elk is hidden at a distance of 200 feet or less.

Significance - As used in NEPA, requires consideration of both context and intensity.

Silvicultural System - The cultivation of forests; the result is a forest of a distinct form. Silvicultural systems are classified according to harvest and regeneration methods and the type of forest that results

Silviculture - The art and science that promotes the growth of single trees and the forest as a biological unit.

Single-Tree Selection - See "Individual (Single) Tree Selection"

Site - A small area or parcel of land considered in terms of its environment

Site Development Scale:

Site Development Level 1: Minimum Site Modification - Rustic or rudimentary improvements designed for protection of the site rather than comfort of the users. Use of synthetic materials excluded. Minimum controls are subtle. No obvious regimentation. Spacing informal and extended to minimize contacts between users. Motorized access not provided or permitted.

Site Development Level 2. Little Site Modification - Rustic or rudimentary improvements designed primarily for protection of the site rather than the comfort of the users. Use of synthetic materials avoided. Minimum controls are subtle. Little obvious regimentation. Spacing informal and extended to minimize contacts between users. Motorized access provided or permitted. Permitted access over primitive roads. Interpretive services informal, almost subliminal.

Site Development Level 3: Site Modification Moderate - Facilities about equal for protection of site and comfort of users. Contemporary or rustic design of improvements is usually based on use of native materials. Inconspicuous vehicular traffic controls usually provided. Roads may be hard surfaced and trails formalized. Development density about 3 family units per acre. Primary access may be over high standard roads. Interpretive services informal, but generally direct

Site Development Level 4: Site Heavily Modified - Some facilities designed strictly for comfort and convenience of users. Luxury facilities not provided. Facility design may incorporate synthetic materials. Extensive use of artificial surfacing of roads and trails. Vehicular traffic control usually obvious. Primary access usually over paved roads. Development density 3 to 5 family units per acre. Plant materials usually native. Interpretive services often formal or structured.

Site Development Level 5: High Degree of Site Modification - Facilities mostly designed for comfort and convenience of users and usually include flush toilets; may include showers, bathhouses, laundry facilities, and electrical hookups. Synthetic materials commonly used. Formal walks or surfaced trails. Regimentation

of users is obvious. Access usually by high-speed highways. Development density 5 or more family units per acre. Plant materials may be foreign to the environment. Formal interpretive services usually available. Design formalized and architecture may be contemporary. Mowed lawns and clipped shrubs not unusual.

Site Preparation - The general term for removing unwanted vegetation, slash, roots, and stones from a site before reforestation. Naturally occurring wild-fire, as well as prescribed fire can prepare a site for natural regeneration.

Site Productivity - Production capability of specific areas of land.

Size Class - One of the three intervals of tree stem diameters used to classify timber in the Forest Plan data base. The size classes are: Seedling/Sapling (less than 5 inches in diameter); Pole Timber (5 to 7 inches in diameter), Sawtimber (greater than 7 inches in diameter)

Skidding - Hauling logs by sliding, not on wheels, from stump to a collection point.

Skid Trail - Narrow path on which logging equipment travels when moving logs from the forest to a designated landing location.

SL - Standard Service Level.

Slash - The residue left on the ground after timber cutting and/or accumulating there as a result of storm, fire, or other damage. It includes unused logs, uprooted stumps, broken or uprooted stems, branches, twigs, leaves, bark and chips.

Small Game - Birds and small mammals typically hunted or trapped.

Snag - A standing dead tree greater than 20 feet tall from which the leaves and most of the limbs have fallen

Snowmachine - Any motorized vehicle which is used for over snow travel

Soil - The unconsolidated mineral material on the immediate surface of the earth that serves as a natural medium for the growth of land plants.

Soil Compaction - The reduction of soil volume. For instance, the weight of heavy equipment on soils can compact the soil and thereby change it in some ways, such as its ability to absorb water. Compaction is generally evaluated from 5 to 30 centimeters below the mineral soil surface. Substantial compaction in any 5-centimeter increment in the top 30 centimeters of soil is considered to be detrimental. Compaction that doubles the soil strength or that decreases soil porosity by 10 percent or more from undisturbed values is considered to be substantial. In soils with sand or sandy loam textures and less than 50% very fine sand (0.05-0.10 mm) in the sand fraction (0.05-2.0 mm), the porosity must be reduced more than 12% to be considered substantial compaction. Infiltration is another alternative for determining compaction. Forests are encouraged to develop infiltration guidelines that relate to detrimental compaction.

Soil Displacement - Detrimental displacement is the loss of either 5 centimeters or one-half of the humus-enriched top soil A-horizon, whichever is less, from an area that is 1 meter by 1 meter or larger.

Soil Disturbance - Detrimentally disturbed soil is soil that has been detrimentally displaced, compacted, puddled, or severely burned. At least 85% of the total area within an activity areas must have soil that is in satisfactory condition. Stated another way, no more than a total of 15% of an activity area may have detrimentally disturbed soil. Some examples of management options limiting the effects of soil disturbance and mitigation measures are listed in Exhibit 1.

Soil and Water Conservation Practices (SWCPs) - See Best Management Practice.

Soil Cover - Refers to ground cover, which consists of vegetation, litter, and rock fragments larger than three-fourths inch in diameter in contact with the soil. Also, it includes perennial canopy cover that is within 3 to 30 feet of the ground.

Soil Disturbance/Disturbed Soil - Soil that has been detrimentally displaced, compacted, puddled, or severely burned. No more than 15% of an activity area may have disturbed soils.

Detrimentially displaced. the loss of either 2 inches or one-half of the humus-enriched top soil (A-horizon), or both, from an area of 1 square meter or larger.

Detrimental compaction/puddling. decreases in soil porosity by 10% or more from undisturbed values, or doubling of the soil strength, in any 2 inch increment in the top foot of soil.

Soil Hydrologic Function - Is the inherent capacity of a soil to intake, retain and transmit water.

Soil Organic Matter - Is the organic fraction of soil. Includes plant, animal and microbial residues, fresh and at all stages of decomposition, and the relatively resistant soil humus.

Soil Productivity - The capacity of a soil to produce a specific crop. Productivity depends on adequate moisture and soil nutrients, as well as favorable climate.

Soil Puddling - Puddling is generally evaluated at the mineral soil surface. Visual indicators of detrimental puddling include clearly identifiable ruts with berms or hoof prints in mineral soil, or in an Oa horizon of an organic soil. Detrimental puddling may occur in conjunction with detrimental compaction. The guidelines for soil compaction (section b) are to be used when this occurs. Detrimentially puddled soils are not always detrimentally compact. Infiltration and permeability are affected by detrimental soil puddling. Forests are encouraged to develop infiltration and/or permeability guidelines that relate to detrimental puddling.

Soil Quality - Refers to the maintenance or improvement of long term soil productivity and soil hydrologic function.

Soil Survey - The systematic examination of soils in the field and laboratory, including description, classification, interpretation of productivity and mapping.

Spatial scale - The level of resolution in space perceived or considered.

Special forest products - Nontimber renewable plant products (such as mushrooms, berries, flowers, etc.).

Special Use Permit - A permit issued to an individual or group by the USDA Forest Service for use of National Forest land for a special purpose. Examples might be a Boy Scout Jamboree or a mountain bike race.

Species - A fundamental category of plant or animal classification

Species Composition - The proportions of various plant or animal species in relation to the total on a given area. Plant species may be expressed in terms of cover, density, weight, and so on.

Stand - A community of trees or other vegetation sufficiently uniform in composition, constitution, age, spatial arrangement or condition to be distinguishable from adjacent communities and so form a silvicultural or management entity.

Stand Exam - The activity of looking at a stand in the field to obtain measure of stand conditions, physical site factors, and other environmental data to help determine future management of the stand.

Stand Replacement Fire - Fire which kills all or most living overstory trees in a forest and initiates regrowth at an earlier successional stage.

Standard - a condition of land, normally a maximum or minimum condition, that is measurable. A standard can also be expressed as a constraint on management activities or practices. Deviation from compliance with a standard requires a Forest Plan amendment.

Standard Service Level (SL) - Management level designed to enhance the recreation experience, ensure public safety, correct resource damage, and maximize the longevity and serviceability of recreation facilities

Standards and Guidelines - Requirements found in a Forest Plan which impose limits on natural resource management activities, generally for environmental protection.

State Air Quality Regulations - The legal base for control of air pollution sources in that State. Prescribed burning is generally covered under these regulations.

State Implementation Plan - A State plan that covers implementation, maintenance, and enforcement of primary and secondary standards in each air quality control Region, pursuant to section 110 of the Clean Air Act.

Stocking - A measure of the proportion of the area in a stand actually occupied by trees expressed in terms of stocked quadrats or percent of canopy closure (as distinct from their stand density).

Stocking level - The number of trees in an area as compared to the desirable number of trees for best results, such as maximum wood production.

Storage - One of the ways functions are described; resources which are conserved within the system (i.e., sediments and water retained in wetlands, carbon and other nutrient storage in down woody material).

Structure - How the parts of ecosystems are arranged, both horizontally and vertically. These parts include vegetation patches, edge, fragmentation, canopy layers, snags, down wood, steep canyons, rocks in streams, and roads. For example, structure might reveal a pattern, mosaic or total randomness of vegetation.

Subregion - One of the hierarchy levels used for RPA assessments and statewide planning, encompassing hundreds to thousands of square miles.

Subsection - An ecological unit of land that has uniform climatic and geologic characteristics. Seven subsections have been delineated within the Targhee National Forest.

Succession - The natural replacement, in time, of one plant community with another. Conditions of the prior plant community (or successional stage) create conditions that are favorable for the establishment of the next stage.

Succession, Plant - The process of vegetational development whereby an area becomes successively occupied by different plant communities of higher ecological order.

Successional Stage - See Seral Stage.

Suitability - The appropriateness of applying certain management practices to a particular area of land, as determined by an analysis of the economic and environmental consequences and the opportunity cost of uses foregone.

Suitability for Timber Production - Timber harvest, other than salvage sales or sales to protect other multiple-use values, cannot occur on lands not suited for timber production.

Suitable Forest Land - See Timber Classification

Suitable Habitat - The biological and physical components necessary to meet some or all of the life needs of a species.

Suitable Range - Rangeland that is accessible and used by grazing animals, that produces forage or has inherent forage producing capabilities, and that can be grazed on a sustained yield basis under reasonable management goals. (cf. unsuitable range.)

Suppression - The action of extinguishing or confining a fire.

Surface Resources - Renewable resources that are on the surface of the earth, such as timber and forage, in contrast to ground water and minerals which are located beneath the surface.

Sustainability - The ability of an ecosystem to maintain ecological processes and functions, biological diversity, and productivity over time.

Sustainable - The yield that a renewable resource can produce continuously at a given intensity of management is said to be sustainable.

Sustainable Development - The use of land and water so sustain production indefinitely without environmental deterioration, ideally without loss of native biodiversity.

Sustainable Ecosystem Management - Management directed towards developing or maintaining a synergistic complex of plants and animals which can be perpetuated indefinitely.

Sustained-Yield - The yield that a renewable resource can produce continuously at a given intensity of management.

Swing Allotment - Any cattle or sheep allotment without a permanent permittee, that is open and available for grazing on a temporary basis to existing Targhee permittees. The intent of a "swing" allotment is to provide a place for grazing animals that are moved from their "permanent" allotment because of unplanned events and situations. A "swing" allotment may or may not have an allotment management plan and usually is not grazed by the same permittee on a yearly basis. An example of a "swing" allotment is an allotment that is

grazed by a band of sheep, that had to be removed from their "permanent" allotment because of Grizzly Bear conflicts, for a portion or all of their permitted grazing season.

-T-

Target - A National Forest's annual goal for accomplishment for natural resource programs. Targets represent the commitment of the Forest Service has with Congress to accomplish the work Congress has funded, and are often used as a measure of the agency's performance.

Technically Suitable Forest Land - See Timber Classification.

Tentatively Suitable Forest Land - Forest land that is producing or is capable of producing crops of industrial wood and (a) has not been withdrawn by Congress, the Secretary, or the Chief, (b) existing technology and knowledge is available to ensure timber production without irreversible damage to soils productivity, or watershed conditions; and (c) existing technology and knowledge, as reflected in current research and experience, provides reasonable assurance that it is possible restock adequately within 5 years after final harvest, and (d) adequate information is available to project responses to timber management activities.

Thermal Cover - Cover used by animals to moderate the effects of weather. Thermal cover may represent protection from heat or cold. Thermal cover requirements vary with species and the prevailing climate.

Thinning - An intermediate cutting made in an immature stand primarily to maintain or accelerate diameter increment and also to improve the average form of the remaining trees without permanently breaking the canopy. An intermediate cutting.

Threatened Species - Any species listed in the Federal Register which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Timber Base - The lands within the Forest capable, available and suited for timber production.

Timber Classification - The classification of forested lands into land management alternatives according to how the land relates to management of the timber resource there.

Nonforest Land - Lands never having or incapable of having greater than 10 percent of the area occupied by forest trees and lands formerly forested and currently developed for nonforest use.

Forest Land - Land at least 10 percent occupied by forest trees of any size or formerly having had such tree cover and not currently developed for nonforest use. Lands developed for nonforest use include areas for crops, improved pasture, residential, or administrative areas, improved roads of any width and adjoining road clearing and powerline clearing of any width. The term occupancy when used to define forest land will be measured by canopy cover of live forest trees at maturity. The minimum area for classification of forest land is 1 acre. Unimproved roads, trails, streams and clearings in forest areas are classified as forest if they are less than 120 feet in width.

Suitable Forest Land - Land that is managed for timber production on a regulated basis.

Unsuitable Forest Land (Not Suited) - Forest land that is not managed for timber production because: (1) the land has been withdrawn by Congress, the Secretary or the Chief; (2) technology is not available to prevent irreversible damage to soils, productivity or watershed conditions; (3) there is not reasonable assurance that lands can adequately be restocked within 5 years after final harvest based on existing technology and knowledge; (4) there is at present, a lack of adequate information to responses to timber management activities; or (5) timber management is inconsistent with or not cost-efficient in meeting management requirements and multiple-use objectives specified in the Forest Plan.

Tentatively Suitable (Commercial Forest Land) - Forest Land which is producing or is capable of producing crops of industrial wood and (1) has not been withdrawn by Congress, the Secretary or the Chief; (2) existing technology and knowledge is available to ensure timber production without irreversible damage

to soils, productivity, or watershed conditions, and (3) existing technology and knowledge provides reasonable assurance that adequate restocking can be attained within 5 years after final harvesting.

Timber Harvest Schedule - See "Sale Schedule."

Timber Production - The purposeful growing, tending, harvesting, and regeneration of regulated crops of trees for cutting into logs, bolts, or other round sections for industrial or consumer use. For purposes of forest planning, timber production does not include fuelwood or harvests from unsuitable lands.

Timber Sale Program Quantity (TSPQ) - The volume of timber planned for sale during the first decade of the planning horizon. It includes the allowable sale quantity (chargeable volume) and any additional material (nonchargeable volume) planned for sale. The timber sale program quantity usually is expressed as an annual average for the first decade.

Timber Stand Improvement (TSI) - Measures such as thinning, pruning, release cutting, prescribed fire, girdling weeding, or poisoning of unwanted trees aimed at improving growing conditions of the remaining tree.

Timelag - An indication of the rate a dead fuel gains or loses moisture due to changes in its environment. The time necessary for a fuel particle to gain or lose approximately 63 percent of the difference between its initial moisture content and its equilibrium moisture content. Fuels are usually grouped into the following groups:

Classification	Diameter (Inches)
1 hour	0-1/4
10 hour	1/4-1
100 hour	1-3
1,000 hour	3-8

Total Motorized Access Route Density (TMARD) - Includes all open and restricted roads and motorized trails. Density may be displayed as follows: 1) Density (miles/square mile) for an analysis area (such as a watershed or a management prescription area). 2) Density is displayed as a percentage of the analysis area in a defined density category (example 20% >2.0 miles per square mile).

Tractor Logging - A logging method that uses tractors to carry or drag logs from the stump to a collection point.

Trail -

All created or evolved travel (access) routes that do not qualify as a road, they are used for both motorized and nonmotorized modes of travel. For motorized travel, they are generally routes for vehicles less than 50 inches wide and which have a dry weight of 600 pounds or less. They are not reasonably and prudently drivable with a conventional passenger car or pickup.

System Trail/Managed Trail: A trail which is part of the official Forest Transportation Management System; these trails usually have a number and a name; they are usually on the Forest travel plan maps.

Nonsystem Trail/Unmanaged Trail/Ghost Trail: A trail which is not part of the official Forest Transportation Management System; these trails usually do not have a number or a name; they are not on the Forest travel plan maps.

Open Motorized Trail: A trail without restriction on motorized use and is used by motorized vehicles. Trails used by 3-wheelers, 4-wheelers, and motorized trail bikes are examples of this type of access route.

Restricted Motorized Trail: A trail on which motorized use is restricted seasonally or yearlong. Motorized use is legally restricted. Motorized administrative use by personnel of resource management agencies is acceptable at low intensity levels as defined in existing cumulative effects analysis models. This includes contractors and permittees in addition to agency employees.

Trail Maintenance - There are five levels of trail maintenance which are defined as follows:

Level 1: Trails maintained for primitive experience level. Custodial care only. No tread maintenance. Drainage functional and not likely to fail. Trailsides not brushed but tread is kept passable. Small slides may remain except for those with erosion potential. Structures maintained as needed. Signing may be deferred.

Level II: Trails maintained for near-primitive experience level. Tread maintained for public safety. Logs or similar rustic structures may be provided at stream crossing. Drainage same as Level I. Signing at a minimum level commensurate with level of trail use

Level III: Trails maintained for intermediate experience level. Tread maintained for public safety and user convenience. Drainage same as level I. Trailsides brushed out at Handbook standards. Signing same as Level II.

Level IV Trails maintained at relatively high standards to provide for public safety and convenience. Tread relatively smooth, firm and may require stabilization. Signing at high level, all other elements same as Level III. These trails are generally maintained for family or senior citizen use.

Level V. Trails maintained for high use and experience levels, including special purposes such as VIS trails, bicycle trails, trails to major vista points, trails for the handicapped, etc. Basic care same as Level IV but patching of paved tread may be needed annually. Trailsides maintained to meet high visual quality standards by brushing and cleanup of debris beyond the trail limits. Vistas are maintained.

Transportation Analysis - Conduct a systematic analysis to determine the transportation facilities and management needed to meet land and resource management objectives.

Transportation System or Network - All existing and proposed roads, trails, airfields, and other transportation facilities wholly or partly within or adjacent to and serving the National Forests and other areas administered by the Forest Service or intermingled private lands.

Treatment Area - The site-specific location of a resource improvement activity.

Tree Opening - An opening in the forest cover created by even-aged silvicultural practices.

TSI - Timber Stand Improvement

TTS - Tentative Timber Suitability

Underburn - A burn by a surface fire that can consume ground vegetation and "ladder" fuels.

Understory - The trees and woody shrubs growing beneath the overstory in a stand of trees.

Uneven-aged - The condition of a forest, crop, or stand composed of intermingling trees that differ markedly in age. In practice a minimum age difference of 25 percent of the length of the rotation usually is used.

Uneven-Aged Management - Actions that maintain a forest or stand of trees composed of intermingling trees that differ markedly in age. Cutting methods that develop and maintain uneven-aged stands are single-tree selection and group selection.

Uneven-aged Stand - A stand of trees of three or more distinct age classes, either intimately mixed or in small groups.

Uneven-aged System - A planned sequence of treatments designed to maintain and regenerate a stand with three or more age classes (see Single-Tree Selection, and Group Selection Regeneration Methods).

Unregulated Harvest - Tree harvest that is not part of the allowable sale quantity (ASQ). It can include the removal of cull or dead material or non-commercial species. It also includes volume removed from nonsuitable areas for research, to meet objectives other than timber production (such as wildlife habitat improvement), or to improve administrative sites such as campgrounds.

Unsatisfactory Rangeland Condition - Unsatisfactory rangeland condition is when the desired future rangeland condition is not being met and short term objectives are not being achieved to move the rangeland toward the desired future condition. (cf. satisfactory range condition.)

Unsuitable Range - Rangeland which has no current value or which should not be used because of physical or biological restrictions, or lack of improvements that would allow use.

Unsuitable Forest Land (Not Suited) - See Timber Classification.

Use, allowable - An estimate of proper range use by grazing animals. It can also mean the amount of forage planned to be used to accelerate range rehabilitation.

Utility and Transportation Corridors - A strip of land, up to approximately 600 feet in width, designated for the transportation of energy, commodities, and communications by railroad, State highway, electrical power transmission (66 KV and above), oil and gas and coal slurry pipelines 10 inches in diameter or larger, and telecommunication cable and electronic sites for interstate use. Transportation of minor amounts of power for short distances, such as short feeder lines from small power projects including geothermal or wind, or to serve customer subservice substations along the line, are not to be treated within the Forest Plan effort.

-V-

Vacant Allotment - An allotment that is available for grazing but is not grazed.

Variability (Range of, Natural, Historic) - The spectrum of conditions possible in ecosystem composition, structure and function considering both temporal and spatial factors. Natural range of the spatial, structural, compositional and temporal characteristics of ecosystem elements specified to represent "natural" conditions. The flux in composition, structure, and function of an ecosystem over the long term in a landscape.

Vegetation - Collectively, the plants growing in a given area

Vegetation Management - Activities designed primarily to promote the health of forest vegetation for multiple-use purposes

Vegetative Structural Stage - A method of describing the growth stages of a stand of living trees. It is based on tree size (DBH = diameter at breast height) and total canopy cover. The stages are: Grass/forb/shrub (VSS 1) = 0-1 inch DBH; Seedling/sapling (VSS 2) = 1-5 inches DBH, Young Forest (VSS 3) = 5-12 inches DBH, Mid-aged Forest

(VSS 4) = 12-18 inches DBH, Mature Forest (VSS 5) = 18-24 inches DBH, Old Forest (VSS 6) = 24+ inches DBH.

Vegetation Type - A plant community with distinguishable characteristics. See Cover Type.

Viable Population - A number of individuals of a species sufficient to ensure the long-term existence of the species in natural, self-sustaining populations adequately distributed throughout their region.

Viewshed - An expansive landscape or panoramic vista seen from a specific viewpoint, such as a road.

Vigor - The relative robustness of a plant in comparison to other individuals of the same species. It is reflected primarily by the size of a plant and its parts in relation to its age and the environment in which it is growing.

Visual Quality Objectives (VQO's) - A set of measurable goals for the management of forest visual resources used to measure the amount of visual contrast with the natural landscape caused by human activities. The following are VQO's:

Preservation - Ecological change only here

Retention - Human activities should not be evident to the casual Forest visitor.

Partial Retention - Human activity may be evident but must remain subordinate to the characteristic landscape

Modification - Human activity may dominate the characteristic landscape but must, at the same time, follow naturally established form, line, color, and texture. It should appear as a natural occurrence when viewed in foreground or middleground.

Maximum Modification - Human activity may dominate the characteristic landscape but should appear as a natural occurrence when viewed as background.

Visual Resource - A part of the landscape important for its scenic quality. It may include a composite of terrain, geologic features, or vegetation.

-W-

Watershed - The area of land above a given point on a stream that contributes water to the streamflow at that point. Also the land that contributes water to a lake or reservoir.

Watershed Improvement Needs (WIN) Inventory - A broad, reconnaissance inventory oriented primarily to problem identification rather than specific project design. It forms the basis for identifying potential soil and water resource restoration project areas and assigning priority for detailed planning and treatment.

Watershed Information System (WIS) - Inventory of Forest Service water rights and uses. The inventory includes such information as location of water right or use, the amounts of water involved, status of the use or right, purpose, etc.

Water Table - The upper surface of groundwater. Below it, the soil is saturated with water.

Water Yield - The runoff from a watershed, including groundwater outflow.

Weeding - A release treatment in stands not past the sapling stage that eliminates or suppresses undesirable vegetation regardless of crown position.

Wet Areas - Often referred to as "moist sites," they are very important components of elk summer range. These sites, often occurring at the heads of drainages, may be wet sedge meadows, bogs, or seeps.

Wetlands - Areas that are inundated by surface or ground water with a frequency sufficient, under normal circumstances, to support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands include wet meadows, springs, seeps, bogs, etc.

Wild and Scenic River - Rivers and their immediate environs designated by congressional action that are managed to be free of impoundments, diversions and unpolluted

Wilderness - Areas designated by congressional action that are managed for primeval characteristics, solitude or unconfined primitive recreation,

natural conditions and where the imprint of man is substantially unnoticeable.

Wilderness Act (1964) - The Wilderness Act allows preservation of designated areas of federal land under the National Wilderness Preservation System for the benefit of present and future generations. The land must be primarily affected by the forces of nature (not man), have outstanding opportunities for solitude or primitive recreation, be at least 5000 acres in size, and may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

Wildfire - Any wildland fire not designated and managed as a prescribed fire within an approved prescription and occurring in natural fuels.

Wildlife - All undomesticated mammals, birds, reptiles and amphibians living in a natural environment. Does not include feral animals, such as wild horses and burros.

Wildlife Habitat Diversity - The distribution and abundance of different plant and animal communities and species within a specific area.

WIN - Watershed Improvement Needs Inventory.

Windthrow - Trees that have been uprooted by the wind.

WIS - Watershed Information System.

Wood Fiber Production - The growing, tending, harvesting and regeneration of harvestable trees.

Woody Plant - Perennial plants that have stems consisting of wood (shrubs, trees, and vines)

Woody Residue/Residue - Organic materials such as plant stems and branches having a minimum diameter of 3 inches (small end). Included are both natural materials and management induced post-harvest materials/slash.

-X-

Xeric - Refers to a habitat characterized by dry soil conditions.

-Y-

Yield - The amount of forest produce that may be harvested periodically from a specified area over a stated period in accordance with the objectives of management.

-Z-

ZOI (Zone of Influence) - The are influenced by Forest Service management activities.

Zoning - The demarcation of a planning area into zones, which the establishment of regulations to govern the types of activities and uses within each zone.

Zoological Area - A protective area designated for its authentic, significant and interesting evidence of important animals, animal groups and animal communities.

--

Decomposition Class (cont.)

Log Characteristics	Log decomposition class				
	1	2	3	4	5
Bark	intact	intact	trace	absent	absent
Twigs < 3 cm	present	absent	absent	absent	absent
Texture	intact	intact to partly soft	hard, large pieces	small, soft, blocky pieces	soft and powdery
Shape	round	round	round	round to oval	oval
Color of wood	original color	original color	original color to faded	light brown to faded brown or yellowish	faded to light yellow or gray
Portion of log on ground	log elevated on support points	log elevated on support points but sagging slightly	log is sagging near ground	all of log on ground	all of log on ground

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United States
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Forest Service

Intermountain
Region

Targhee
National
Forest



Final Environmental Impact Statement

1997 Revised Forest Plan
Targhee National Forest



FINAL ENVIRONMENTAL IMPACT STATEMENT
for the
TARGHEE NATIONAL FOREST
FOREST PLAN REVISION

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Lemhi, Madison, and Teton Counties, Idaho

and

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ABSTRACT This Final Environmental Impact Statement documents the analysis of seven alternatives, which were developed for possible management of the 1.8 million acres administered by the Targhee National Forest in Idaho and Wyoming. Alternatives developed in detail are identified as 1, 2, 3, 3M, 4, 5 and 6. Alternative 3-M is the Forest Service's Selected Alternative.

This FEIS has been prepared following public review periods for the DEIS and Proposed Revised Land and Resource Management Plan, during which approximately 12,000 comments were received from 2,300 individuals or organizations.

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SUMMARY OF THE FINAL ENVIRONMENTAL IMPACT STATEMENT FOR THE TARGHEE MANAGEMENT PLAN

INTRODUCTION

The purpose of the summary of the Final Environmental Impact Statement (FEIS) for the Revised Forest Plan (Revision) is to provide the reader with a quick overview of the planning process, the issues, and the alternatives, including the Selected, that will affect the management of the Targhee National Forest (Forest) for the next ten years and beyond

The FEIS considers and evaluates an array of alternatives, identifying the Selected. This summary does not cover the Revision. The Revision carries out the actions of the Selected Alternative and provides key decisions for the long-term management of the Forest. Readers wanting more in-depth information on the FEIS and Revision may write or call the Targhee National Forest Supervisor's Office at P O Box 208, St Anthony, Idaho 83445, (208) 624-3151

LOCATION AND SETTING FOR THE FOREST

The Forest is an administrative unit of the Department of Agriculture, Forest Service, encompassing approximately 1.8 million acres. Established by President Theodore Roosevelt in 1908, the Forest is named in honor of a Bannock Indian warrior. The Supervisor's Office is located in St. Anthony, Idaho with District offices located in Dubois, Island Park, Ashton, Idaho Falls, and Driggs, Idaho. The Forest is bordered by six other National Forests.

The Forest lies almost entirely within the Greater Yellowstone Ecosystem, an area of 12 million acres and the largest remaining block of relatively undisturbed plant and animal habitat in the contiguous United States.

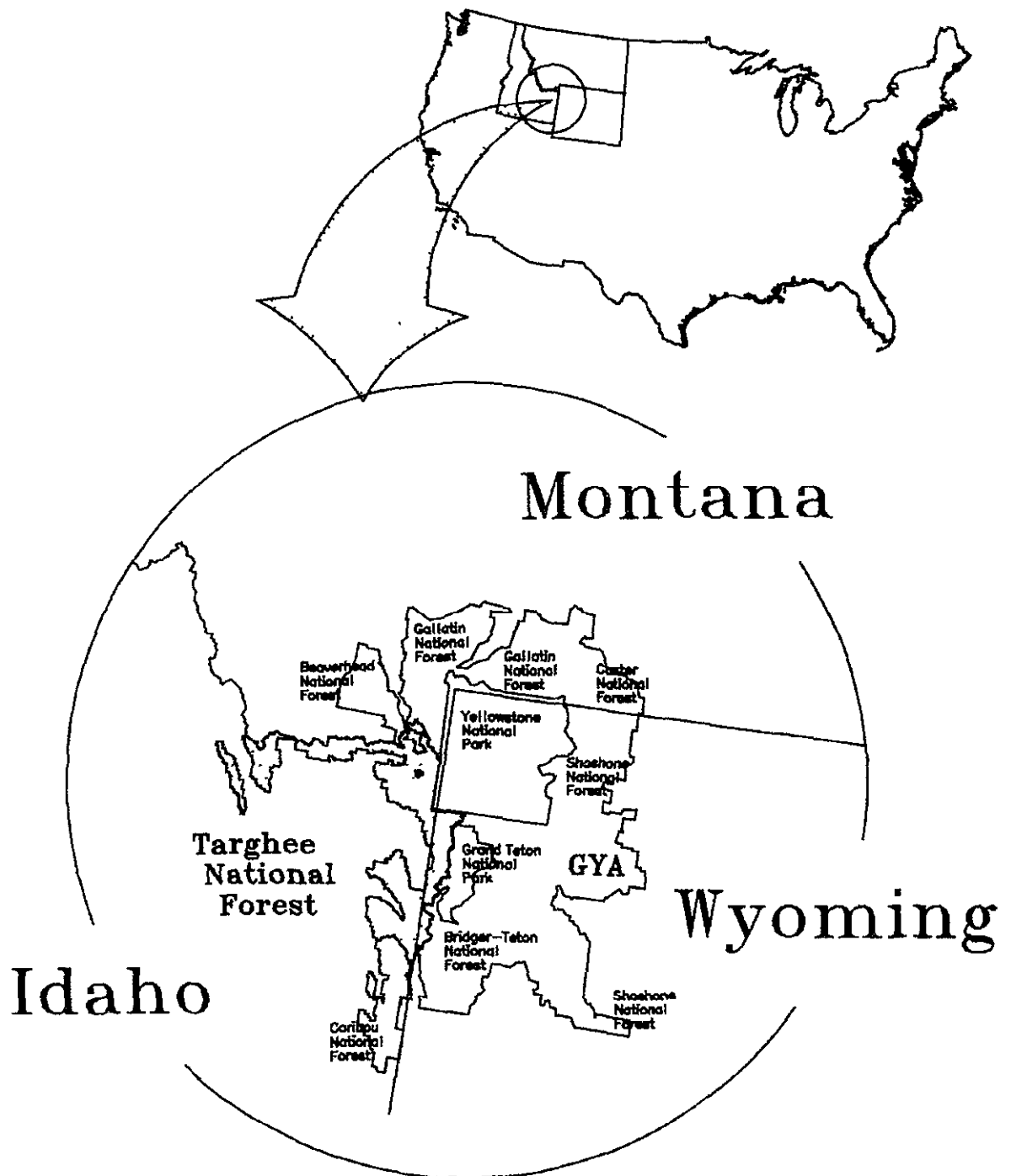
On a larger scale, the Forest lies along the Continental Divide, at the uppermost reaches of the Columbia River Basin, an ecosystem of 40 million acres extending from western Washington to the southeastern Idaho border and encompassing parts of Oregon, Montana, Wyoming, Nevada and Utah. The Forest includes all or portions of several distinct mountain ranges, including the Lemhi, Beaverhead, Bitterroot, Centennial, Henry's Lake, Teton, Big Hole, Caribou, and Snake River Ranges. Elevations range from near 5,000 feet on the Snake River to over 12,000 feet on the Forest's most western reaches. The Forest contains the Island Park Caldera and several reservoirs. Topography ranges from rolling foothills to rugged, glaciated mountain peaks.

Although most of the land is dry and semi-arid, 190 stream headwaters situated on the Forest provide varied vegetation to support a multitude of uses. The area has cold, moist winters and hot dry summers. Average annual precipitation, most of which falls as snow, increases with elevation. As little as ten inches of precipitation falls in lower valleys and as much as forty inches occurs at the highest elevations. Wide temperature extremes exist, with summer temperatures at lower elevations exceeding 100 degrees Fahrenheit and winter temperatures at higher elevations falling to less than 40 degrees below zero Fahrenheit.

NEED FOR CHANGE

The original Targhee Forest Plan, approved in 1985, emphasized an extensive salvage and reforestation program of dead lodgepole killed by a massive mountain pine beetle epidemic over the previous 30 years.

Figure S-1. Vicinity Map of Targhee National Forest on a National Scale



This rate of salvage caused, in effect, a departure from a sustained yield of timber harvest and could not be continued beyond the first decade (1985 - 1995) in an environmentally sound manner. Monitoring of activities during this time showed it was increasingly difficult to meet the standards and guidelines in the 1985 Plan. New information on resource needs and various management practices became evident during this time, and by 1990 it was apparent that a full revision was needed. More specific needs for change are as follows:

- The salvage program has ended. Use of the many roads built during salvage operations by increasing numbers of people is causing unwanted effects to wildlife, riparian areas, and soil productivity.
- The need to review and incorporate new knowledge and techniques continues, especially in wildlife habitat management. For example, recent studies indicate motorized road and trail densities play a crucial role in availability of suitable habitat for elk and grizzly bears. Standards for management activities near nesting and foraging habitat for goshawks and other raptors are needed to protect these crucial areas. Results of studies analyzing fish habitat in the Upper Columbia River Basin are pointing out new ways to manage fisheries. Some of these findings have widespread implications that the revision process was intended to address.
- Although much of the lodgepole pine component on the Forest has been salvaged, there is still a need to use timber harvest as a tool to reach ecosystem objectives, supply a variety of timber products for local use, deter other epidemics like the mountain pine beetle outbreak, and manage the potential for a devastating wildfire, like the Yellowstone Wildfires of 1988.

DESIRED FUTURE CONDITION FOR THE YEAR 2007 AND BEYOND

Based on public, other resource management agencies, and Forest Service employee participation between 1991-1994, a set of goal statements emerged that collectively represent what ideal conditions would be for the Targhee National Forest. These statements, called "Desired Future Conditions for the Year 2007 and Beyond" are the foundation for the goals, objectives, standards and guidelines developed in the Revised Forest Plan. They have changed from the desired future conditions (DFC) described in the 1985 Plan, reflecting changes in conditions and values of the local communities and knowledge gained over the decade. These titles of the DFCs also show how the analysis and documents are organized, and are described as follows:

Ecosystem Processes and Patterns DFC:

A mosaic of age classes and types of vegetation are sustained through time and exist across the landscape. Natural disturbances such as insects, disease and fires continue their natural roles in the ecosystem. The Forest functions as an integral part of the Greater Yellowstone Ecosystem as well as adjacent systems, sustaining habitat and conditions necessary for free movement of wildlife.

Biological and Physical DFC:

Riparian zones (aquatic influence zones) are healthy and productive. Aquatic systems are allowed to function naturally while protecting flows for downstream consumptive uses. Riparian area integrity contributes to productive fisheries and excellent water quality. Native plant and animal species are favored over undesirable non-native species and sustained populations of all native and desirable species thrive. Habitat conditions contribute toward the recovery of threatened, endangered and sensitive species.

Forest Use and Occupation DFC:

Growing and diverse recreational, cultural, visual, historical, and prehistoric management, interpretive, and spiritual needs are accommodated based on the capability of the ecosystem to sustain these uses. Recreation use is managed to minimize conflicts between incompatible uses and provide high levels of satisfaction. Year-round human access is managed to provide both motorized and nonmotorized opportunities. A system of trails and support facilities exist which are compatible with resource capabilities. Roadless characteristics are preserved in the proposed wilderness areas and in existing wildernesses.

Production of Commodity Resources DFC:

Commodity production, such as timber, firewood, mining, livestock forage, or outfitting and guide services are conducted at sustainable levels and maintain the capability of the land to produce an even flow and variety of goods and services for present and future generations. Timber harvest, prescribed fires and livestock grazing are tools used to achieve desired ecological vegetation conditions. Forest products are provided to sustain social and economic values and needs of the local communities within limits which maintain ecosystem health.

KEY ISSUES

Although there were over 70 issues and concerns identified by the public and Forest employees, seven key issues were the ultimate driving force for developing the alternatives and for the recommended direction of the Revised Forest Plan. The key issues address areas of controversy.

Key Issue 1: Sustainability, Fire and Natural Disturbances

An ecosystem is a large, complex, integrated system of living and nonliving components that interact and change continually. Healthy ecosystems are those that retain all of their parts and functions for future generations even though vegetation patterns, human uses or other conditions may change. Understanding ecological processes (fire and other natural disturbances) and how these processes shaped vegetation patterns over time in a landscape are important steps toward implementing Ecosystem Management (EM).

EM is a new philosophy of management for the Forest Service, and different interpretations and approaches are possible in working toward implementation. The Forest is the first in the Greater Yellowstone Area (GYA) to revise its Forest Plan and incorporate EM principles in the revision. Many activities and projects are being considered for the application and implementation of EM, new information and conclusions lag behind the need to meet the timeline for the revision of the Forest Plan.

Key Issue 2: Riparian

Riparian areas lie adjacent to water and are composed of vegetation communities dependent upon or tolerant to the presence of free or unbound water near the ground surface. Riparian areas are associated with lakes, reservoirs, potholes, springs, bogs, wet meadows, and ephemeral, intermittent or perennial streams. Although riparian areas constitute less than five percent of the total land base, they are the most productive areas in terms of plant and animal species diversity and consumptive use.

Riparian areas are essential breeding, rearing and feeding grounds for many species of wildlife and affect fish habitat. They serve people as important sources for water and flood control and for recreational

purposes such as camping, fishing, floating and aesthetics. A healthy riparian area indicates that most, if not all, of the associated water and soil components are also healthy. Because of the myriad of competing uses for these highly valuable pieces of land, the variability between the alternatives was considered significant.

Key Issue 3: Security for Elk

The Forest provides habitat for a number of species (a potential of 85 mammals, 300 birds, 17 reptiles and amphibians based on range maps). For most species there were no significant differences in the management of their habitat between alternatives. Rather, standards and guidelines were developed to maintain a variety of habitat conditions across the forest.

The best data and analysis existed for elk security, which had the highest wildlife variance among the alternatives. Elk are also wide-ranging animals, so their habitat encompasses virtually the entire Forest. Security for elk was chosen as a key issue relating to future hunting conditions and opportunities and cooperative relations with Fish and Game Departments. Observations and studies by the Idaho Department of Fish and Game (IDFG), University of Idaho, and Forest Service scientists have determined that as motorized road and trail densities increase, elk security declines. Portions of the Forest have high densities of trails and roads open to motorized use due to the extensive road building associated with the salvage of dead lodgepole. Salvage activity is largely completed and new knowledge about impacts of road densities upon wildlife is available. The Revision examines the range of management alternatives related to security for elk.

Key Issue 4: Grizzly Bear Management

Portions of the Forest are within the Yellowstone Grizzly Bear Ecosystem which has been divided into Bear Management Units (BMUs). Portions of the Forest are within three BMUs and feature grizzly bear recovery. As with all Threatened, Endangered and Sensitive (TES) species, all alternatives must meet the Endangered Species Act (ESA). The importance of managing motorized access is one of the most influential parameters affecting grizzly bear habitat security.

New information accumulated over the last 10 years provides better insight and direction regarding effective management of roads, timber and human activities in grizzly bear habitat. The one variation between alternatives that makes the BMU issue significant is the density of open motorized roads and trails in BMUs. Which roads will be closed in BMUs, how many miles and in what manner?

Key Issue 5: Access

The Forest currently has 1,985 miles of open road and 773 miles of open trail. "Open" means road and trail miles without restrictions on motorized use. There are currently road and trail miles with restrictions on motorized use as follows: 806 miles of restricted system road (73 miles with seasonal restrictions and 733 miles with yearlong restrictions) and 628 miles of restricted trail.

Recreational motorized use has increased over the last decade. The 1985 Plan allows cross-country motorized travel across much of the Forest and has no established road density standards. Access to the Forest during non snow months is a significant variable among the alternatives. Comments in the early planning stages were supportive of more or fewer road and trail closures depending on a variety of factors. Those supporting road and trail closures want more protection and fewer impacts upon wildlife, TES species, soils and water and fisheries, less visual, garbage and noise pollution, reduced maintenance and law enforcement costs, and more opportunity for escape and solitude. Those supporting continued or

more road and trail access want access for hunting, fishing, berry-picking, camping, hiking and other recreational pursuits, and increased opportunities for sight-seeing and challenging cross-country travel for off-highway vehicles. Motorized access is considered a key element for enjoyment and use of the Forest by persons with disabilities and the elderly.

Key Issue 6: Management of Roadless Areas

The Forest has 16 areas which qualify as roadless, totaling 841,000 acres. The Wyoming portion of the Palisades Roadless Area was designated by Congress as a Wilderness Study Area in the Wyoming Wilderness Bill of 1984. Portions of three roadless areas in Idaho were recommended as wilderness in the 1985 Forest Plan, but no legislative action has been taken to resolve the roadless area question in Idaho. During the last planning period, parts of some roadless areas were roaded as part of the salvage program. As motorized recreation demands increase, pressure also increases to maintain the roadless character of the remaining roadless areas. The significant difference between alternatives in the management of roadless areas is in the amounts of acres recommended for wilderness. Those arguing for more acres of Congressionally designated wilderness want the assurance of preservation of biological diversity, protection from resource uses and national recognition of wilderness character. Those opposed to more acres designated wilderness want roadless areas to be left as roadless or to be developed to allow motorized access for recreation, oil and gas, timber and other industries requiring access.

KEY ISSUE 7: Timber Harvest

Previously, large scale salvage of dead and dying timber was conducted as a temporary departure from sustained yield management. Since the goals of harvest of dead timber have largely been met, the Forest is returning to sustained yield management.

Two local mills, once dependable bidders for salvage and other wood harvest, are now closed but local demand remains high. The ESA, Grizzly Bear Recovery Plan and Guidelines, EM principles, increased knowledge about the impacts of motorized use of roads and trails upon the Forest's wildlife resources, and other factors have resulted in a greatly reduced availability of scheduled timber harvest, called the allowable sale quantity (ASQ). The issue of timber harvest does not include firewood, since the amount of firewood quantity does not vary between the alternatives. Some people desiring a greater harvest of timber from the Forest often cite the effects upon the local economy. Others have expressed a concern over the reduction in payments to local governments (25 percent of Forest receipts go to county treasuries) associated with the reduced harvest levels. They also want to maximize harvest of the remaining dead or mature wood. Some argue that small harvests in the fire dependent lodgepole are contrary to historically based EM principles. Those supporting a greater reduction in timber harvest are concerned about motorized trail and road uses that impact wildlife, reductions in the amount and distribution of late successional forest, fisheries, riparian areas, soil and water, aesthetics and other resources.

THE ALTERNATIVES

Before creating alternatives, the Forest put together an "Analysis of the Management Situation (AMS)," which looked at current conditions and direction of the Forest. Alternatives were developed by using the AMS data that identified problem areas that needed changing. All alternatives comply with applicable laws and regulations.

The alternatives reflected a range of options that responded to the issues, the DFCs and the need for change. The interdisciplinary team (IDT) evaluated the significant physical, biological, economic and social effects of each alternative that was considered in detail.

The Forest analyzed in detail seven alternatives, the Leadership Team (LST) recommended Alternative 3M to the Regional Forester and the public for review in the DEIS. Based on input received from the public, the Tribes, other government agencies and Forest Service personnel, Alternative 3M was revised. As shown in the FEIS, Alternative 3M is the Selected Alternative.

The Alternative Continuum

The numbering scheme for alternatives ranges from 1-6, with Alternative 3M being the Selected and Alternative 1 being the No Action, i.e. continue the Current Forest Plan Alternative. As the numbers increase from Alternative 2 through 6, they move generally toward

- *Greater protection of wildlife habitat
- *Greater protection of riparian areas
- *More protection for BMUs
- *More security for elk
- *More nonmotorized, dispersed recreation opportunities
- *More recommended wilderness
- *Less cross-country motorized use
- *Fewer open roads and trails
- *Reduced livestock grazing and timber harvest
- *Less lasting visual impacts from management activities

Alternative 1 (Continue the 1985 Forest Plan, No Action)

The purpose of Alternative 1 is to continue management of the Forest under the 1985 Forest Plan, updated since finalized with amendments, new direction, particularly the recent litigation for the grizzly bear, and, changes for new listings of sensitive wildlife species over the last ten years. Timber harvest occurs at the highest levels possible within the management constraints required for TES wildlife species like the grizzly bear and goshawk. Vehicle access is reduced from current levels due to the implementation of the Interagency Grizzly Bear Guidelines and better road management across the Forest. Cross-country, motorized access in summer and winter would continue close to current levels. Riparian, wildlife and recreation values are emphasized in specific areas of the Forest.

Alternative 2

The purpose of Alternative 2 is to resolve the needs for change by emphasizing cross-country and winter motorized access and timber production, while adding more restrictions to summer, cross-country access. Timber harvest occurs at the highest levels of any of the alternatives within the management constraints required for maintaining TES species habitat. Riparian, wildlife and heritage resource values are emphasized in specific areas of the Forest.

Alternative 3

The purpose of Alternative 3 is to resolve the needs for change by emphasizing management of wildlife habitat and sustaining timber harvest levels within wildlife constraints. Grizzly bear recovery affects motorized use allowed in each BMU. Cross-country, summer, motorized vehicle use is restricted to specific areas.

Alternative 3-Modified (3M), Selected Alternative

The purpose of Alternative 3M is to resolve the needs for change by emphasizing wildlife habitat management and providing a comprehensive habitat management strategy for the grizzly bear. Motorized access, timber harvest levels and livestock grazing are all reduced from levels allowed in the 1985 Forest Plan. Riparian areas with cutthroat trout are further protected. Cross-country, summer, motorized vehicle use is restricted to specific areas.

Alternative 4

Alternative 4 emphasizes watershed and wildlife habitat improvement and a reduction in timber harvest. Riparian areas receive increased emphasis. Motorized access is restricted to designated routes and summer motorized access is less than in previous alternatives.

Alternative 5

The purpose of Alternative 5 is to meet the needs for change by reducing the focus on human management and human disturbance of wildlife and riparian habitat. Motorized access is restricted to designated routes and more roads are closed in BMUs.

Alternative 6

The purpose of Alternative 6 is to meet the needs for change by de-emphasizing human management and human disturbance of wildlife and riparian habitat to the lowest level of all the alternatives. Timber harvest is not scheduled.

CHANGES BETWEEN DRAFT AND FINAL

This FEIS reflects many changes made since the Draft Environmental Impact Statement (DEIS) was issued. These changes were based on input received from the public and from Forest Service employees.

The great bulk of the changes that were made apply to Alternative 3M. As originally developed, Alternatives 2-6 could be viewed as lying along a continuum on which scheduled timber harvest gradually decreased, reliance on human management activity decreased, livestock grazing decreased and so on. With the changes that have been incorporated into Alternative 3M there now are exceptions to that continuum generalization. We considered the possibility of applying the changes made to Alternative 3M to other alternatives to maintain a certain logical consistency within the continuum. We ultimately rejected that idea because

- The continuum was a useful device for outlining how alternatives compared with one another—but it is not essential. All the information for the different alternatives is still presented.
- The recommendations adopted in Alternative 3M were still within the range of ideas previously identified in the other alternatives.
- Making a great many changes in other alternatives might make it harder for those familiar with the previous work to follow the final documents.

Most of the changes between the draft and final EIS were minor. The a summary of the changes of possible interest to a wide range of readers follows.

- Standards and Guidelines for Old Growth have been added
- Proper Functioning Condition (PFC) is now used instead of Patch Size Constraints as the primary measure of EM
- Direction has been added to both use more prescribed fire and to develop fire plans
- Objectives, standards and guidelines have been added to address the needs of cutthroat trout.
- New direction has been added to address bighorn sheep habitat needs
- The Game Retrieval provision has been eliminated from the Selected Alternative
- The direction to phase out the Rainey Creek feed ground has been eliminated
- Potential ground-disturbing acreages have increased
- Constraints used in formulating the scheduled timber harvest (Allowable Sale Quantity, ASQ) were reapplied so as to meet as fully as possible all constraint requirements on non-ASQ lands. This effectively increased the amount of timber that could be harvested ASQ's for all the alternatives increased accordingly
- Non-Interchangeable Component (NIC) volumes have been more explicitly identified
- The amount of harvest that can be conducted for EM purposes (outside the Forest's ASQ and fuelwood programs) has been capped at 20 MMBF per decade in all alternatives
- Numerous updates of information, inclusions of additional sources and clarifications have been incorporated
- Many changes have been made in the status of different roads and trails in the Selected Alternative
The net effect of these actions is an increase in motorized vehicle designated routes
- Protection for the Ute Ladies' Tresses (a threatened plant) has been added to all alternatives
- Cross-country snowmachine use in designated winter range areas has been prohibited in all alternatives
- Snowmachine date restrictions on large parts of the Forest have been removed or greatly reduced in Alternative 3M
- Planned additional snowmachine trail mileage has decreased to 93 in Alternative 3M.
- The contents and the priorities for Monitoring & Evaluation (M&E) were re-examined and modified
- Numerous changes were made to Forestwide Standards and Guidelines and individual prescriptions in response to public and employee input affecting things like goshawk management, grizzly bear management and range utilization
- Dates for application of the Snow Season travel map have been changed
- Many changes were made in terms of how different areas on the Forest would be managed in the Selected Alternative, including
 - Some 33,000 acres of the Diamond Peak area is now a recommended wilderness
 - Six acres of the recently-authorized Sheep Mountain RNA have been identified on the Forest
 - Approximately 13,000 acres have been added to the southern edge of the Italian Peaks recommended wilderness
 - The southern boundary of the Mt Jefferson Roadless Area has been adjusted to more accurately reflect the roadless area
 - A portion of the Forest near Heart Mountain has been moved into range management
 - A winter range prescription area in the Italian Peaks Recommended Wilderness has been re-assigned to the recommended wilderness prescription
 - A winter range prescription area north of Spencer has been changed to range management
 - The Davis Lakes area now has scheduled timber harvest
 - An area one quarter mile either side of Upper Mesa Falls on the Henry's Fork has been changed to eligible scenic river rather than eligible wild river
 - Approximately 1,500 acres of roadless area in Ruby Creek now has scheduled timber harvest
 - The area adjacent to the road to Grand Targhee is now non-ASQ Visual Quality Maintenance
 - The large intermingled public/private land area east of the Big Holes now has scheduled timber harvest
 - An area along the Pine Creek-Rainey Creek front has been changed to a winter range prescription
 - An area close to the Palisades Summer Home area is now a winter range prescription
 - An area in the northwest corner of the Caribou subsection is now range management
 - McCoy Creek has been deleted as an eligible wild, scenic, or recreational river
 - The Smokey Hollow area has been removed from scheduled timber harvest

Figure S-2. Forest Structure and Composition

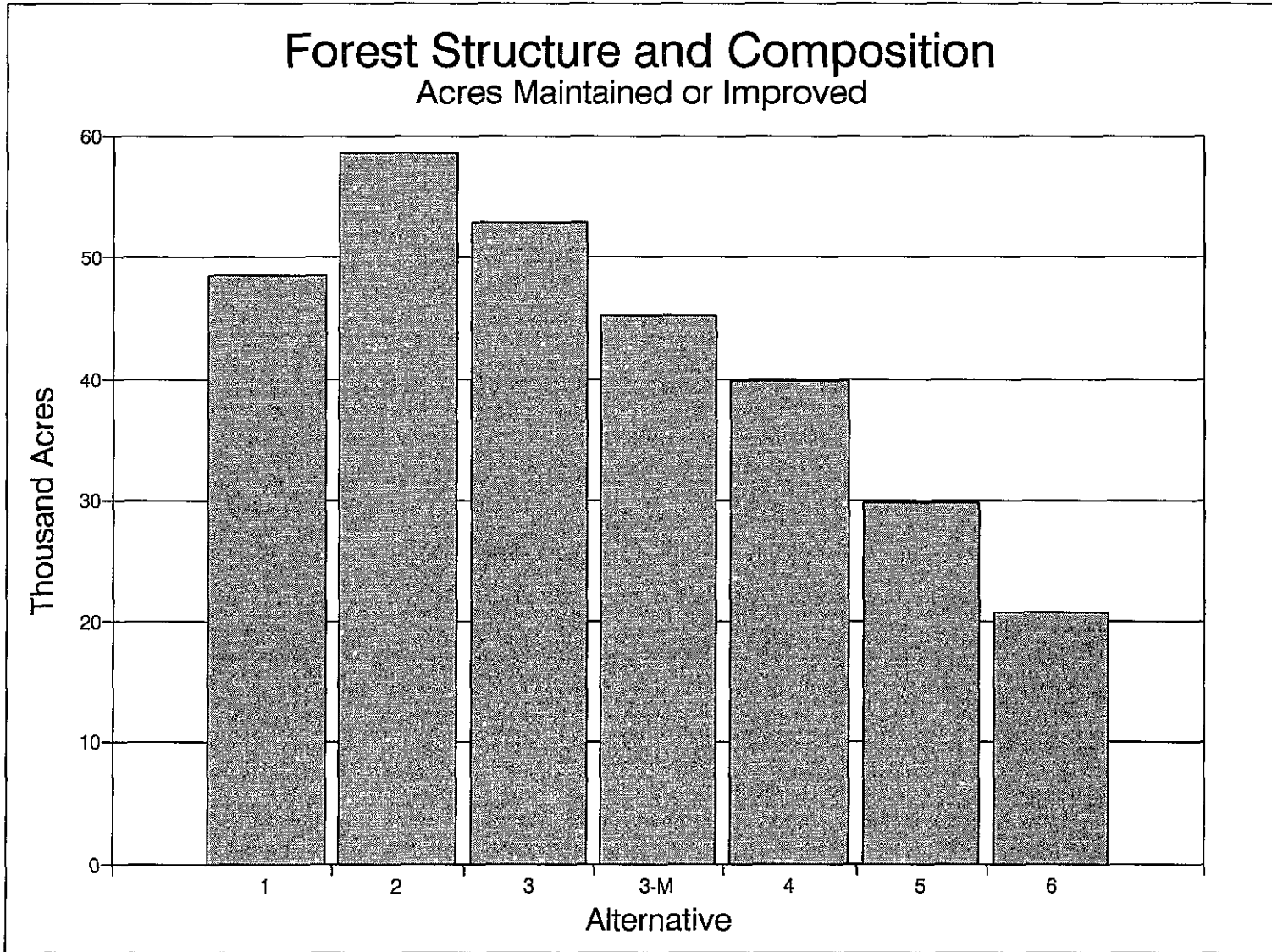


Figure S-3. Riparian Vegetation

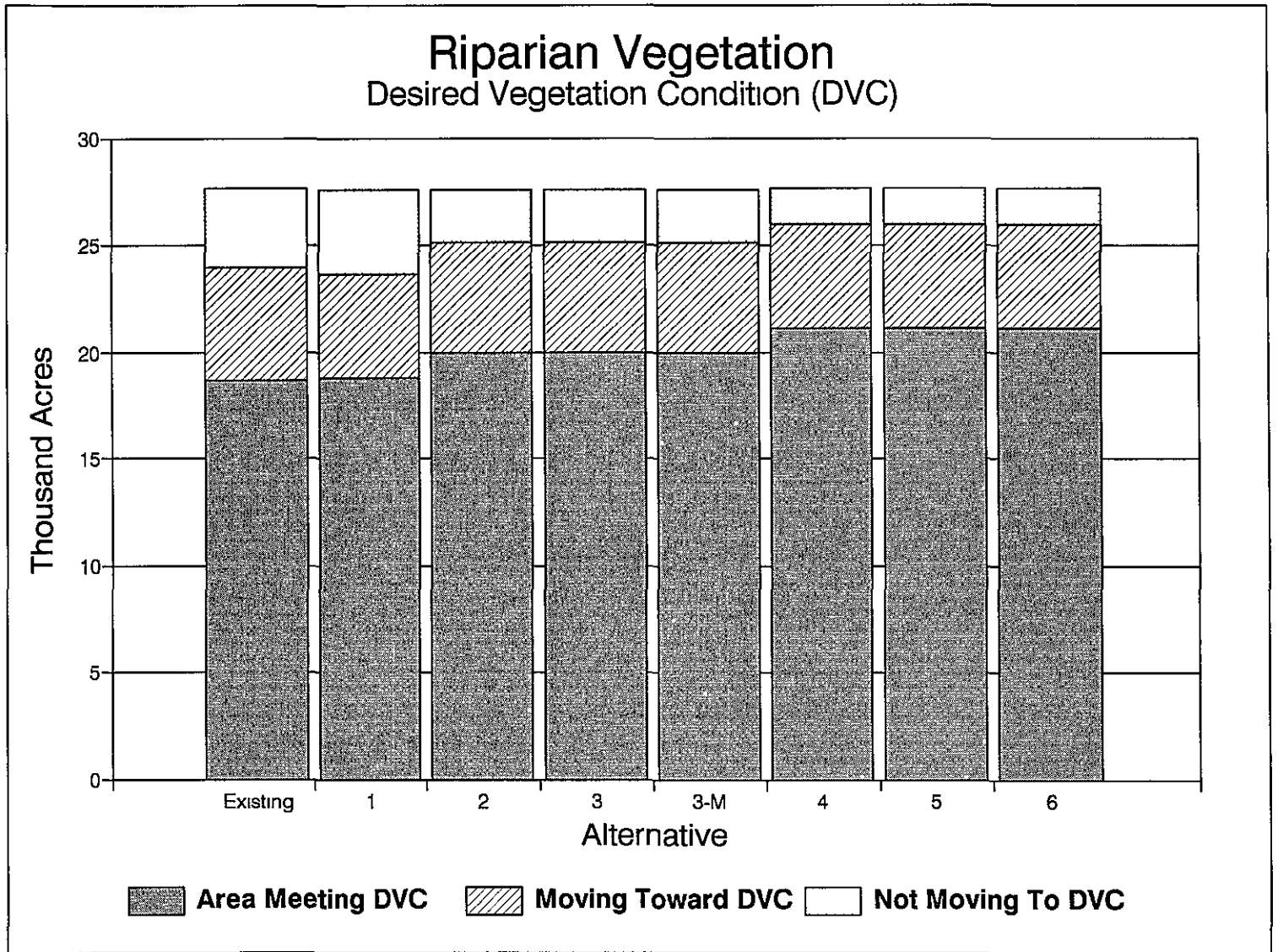


Figure S-4 Elk Vulnerability

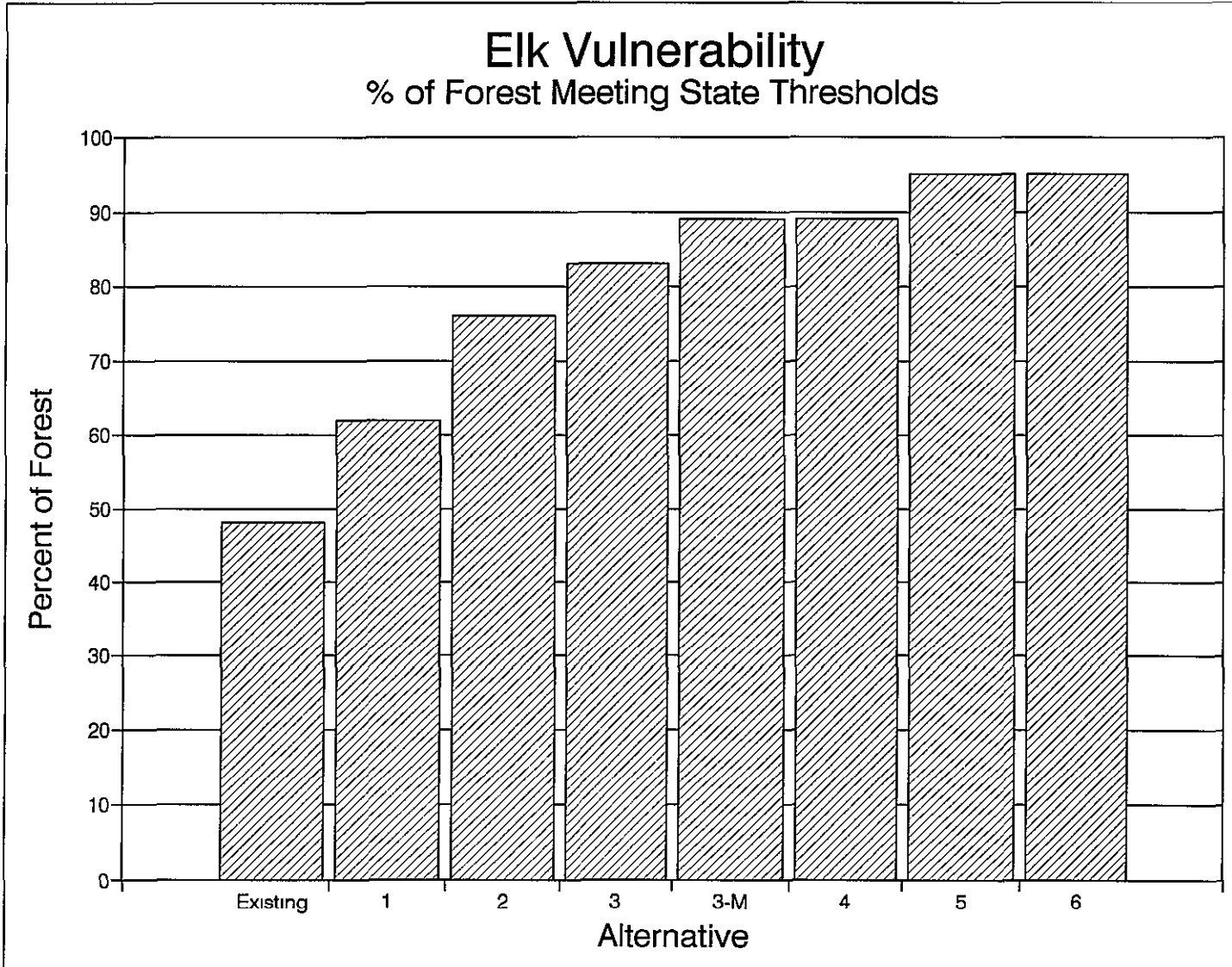


Figure S-5. Bear Management Units

Bear Management Units (BMU's) Open Road/Motorized Trail Route Density

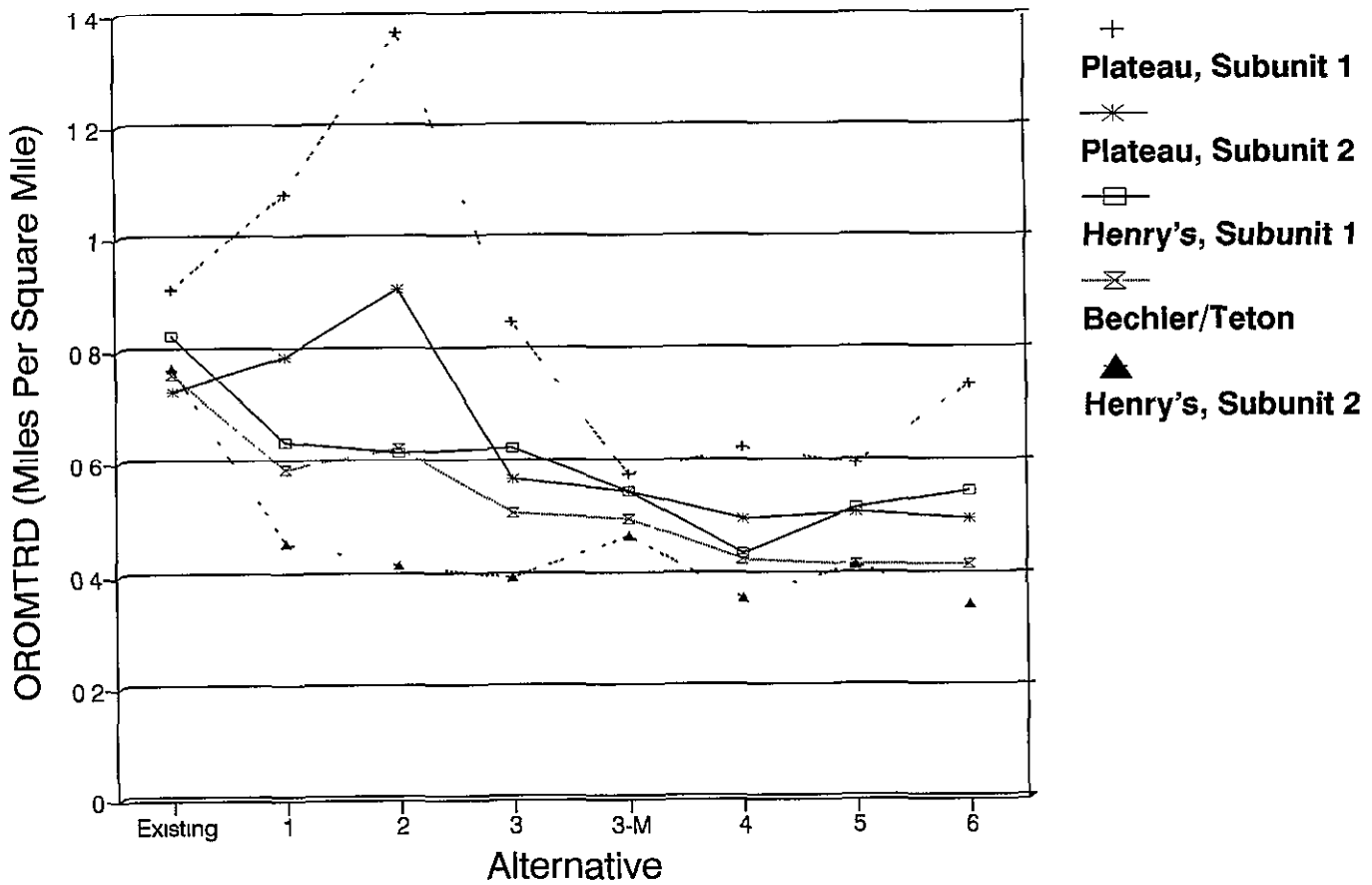


Figure S-6 Open Roads and Motorized Trails.

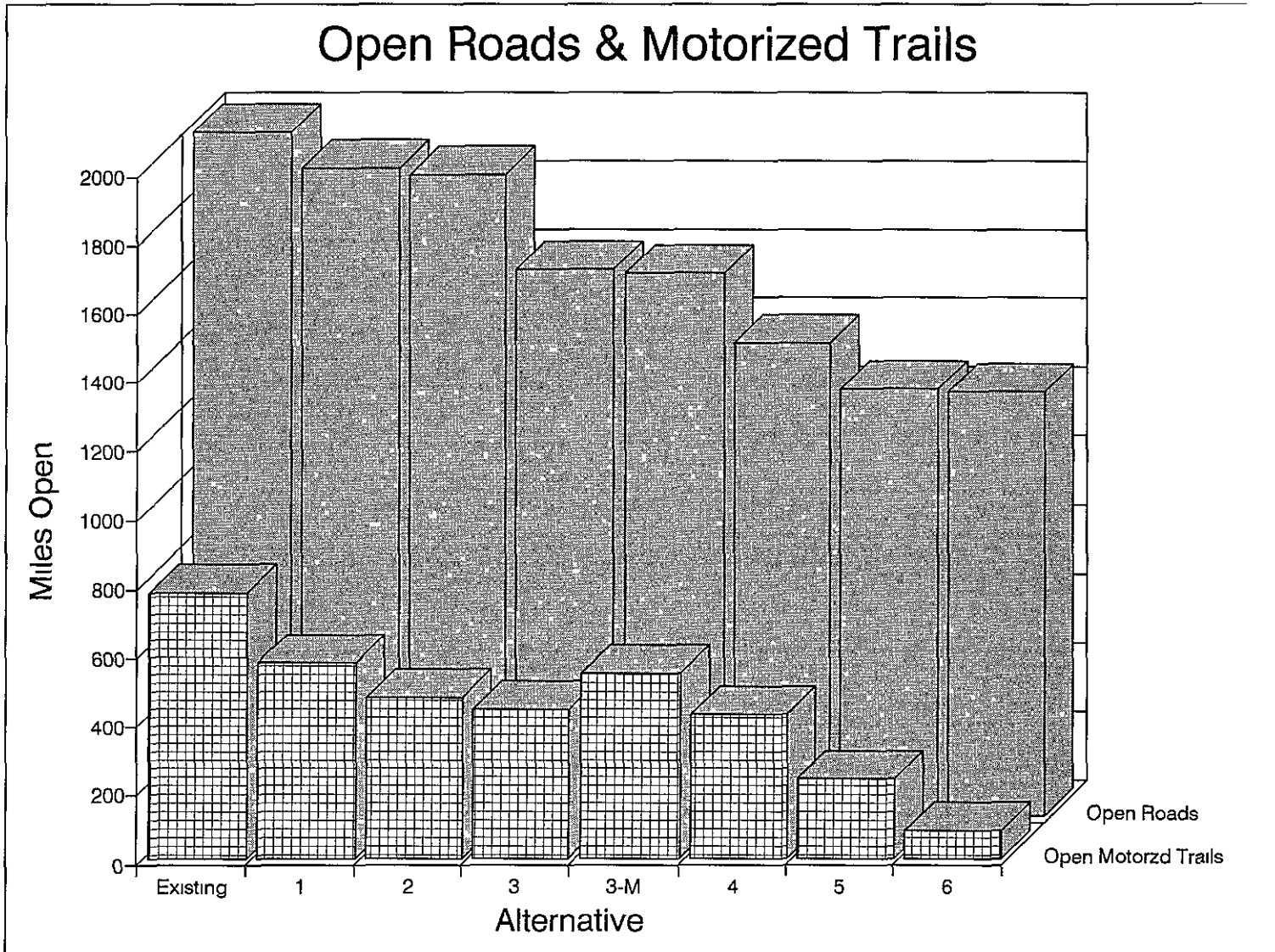


Figure S-7 Recommended Wilderness

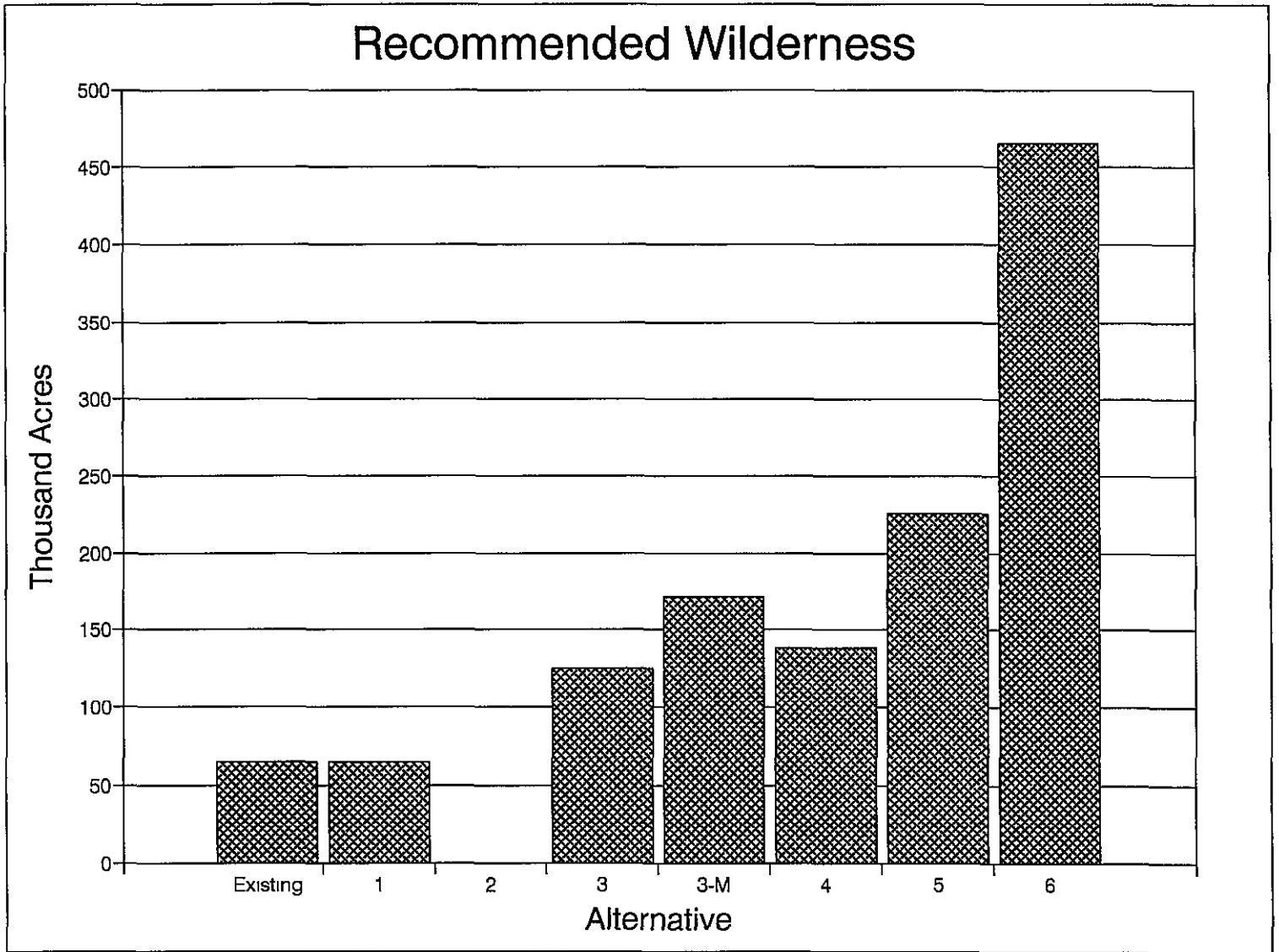
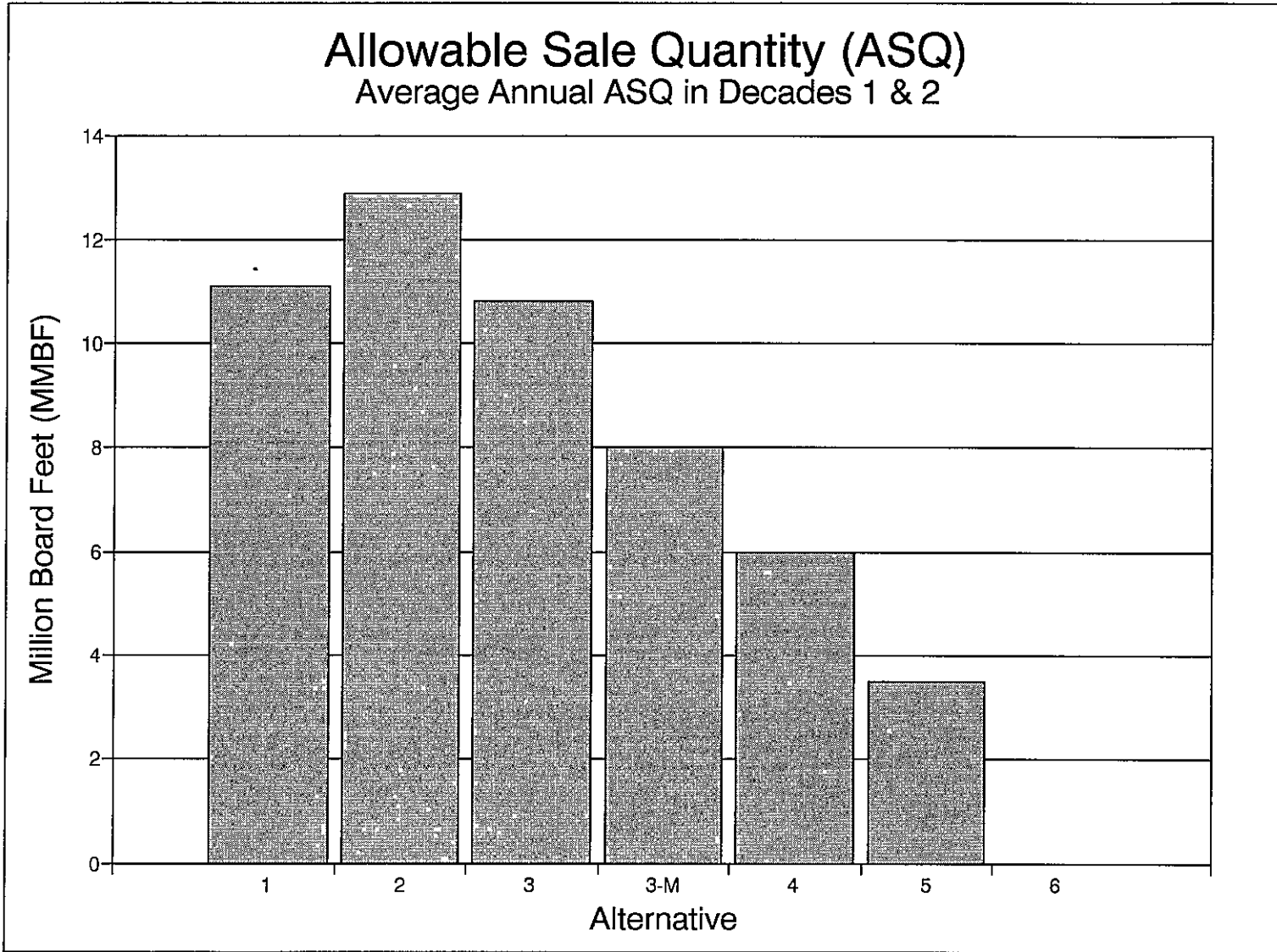
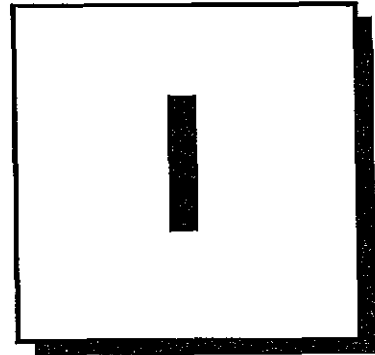


Figure S-8. Allowable Sale Quantity



Chapter



Purpose and Need for a Forest Plan Revision



CHAPTER I

PURPOSE AND NEED FOR A FOREST PLAN REVISION

READER'S GUIDE - In this chapter you will find:

- General Information about the Targhee National Forest
- Legal Background for Preparing Forest Plan Revisions
- Decisions Made in an EIS
- Decisions Made in a Forest Plan Revision
- Summary of the 1985 Targhee National Forest Management Plan
- Reasons for Revising the Forest Plan (Need for Change)
- Public's Role in Scoping and Issues
- How the Key Forest Issues Were Selected
- Issue Components Used to Organize EIS and Plan
- Key Issues That Drove the Alternatives
- What is an Issue Indicator
- Summary of Key Issues and Key Indicators
- Issue Indicators That Are Not Key
- Desired Future Condition for the Year 2007

GENERAL INFORMATION: LOCATION AND SETTING FOR THE TARGHEE NATIONAL FOREST

The Targhee National Forest (hereafter usually referred to as "the Forest") is an administrative unit of the U.S. Department of Agriculture, Forest Service, encompassing approximately 1.8 million acres. Established by President Theodore Roosevelt in 1908, the Forest is named in honor of a Bannock Indian warrior. The Shoshone-Bannock Tribe has ancestral Treaty Rights to uses of the Forest. The Forest Supervisor's Office is located in St. Anthony, Idaho, with District offices located in Dubois, Island Park, Ashton, Idaho Falls and Driggs, Idaho. The Forest is bordered by six other National Forests (N.F.). Part of the Caribou N.F. is administered by the Forest and part of the Forest is administered by the Bridger-Teton N.F.

The majority of the Forest lies in eastern Idaho and the remainder in western Wyoming (Figure I-1). Situated next to Yellowstone National Park (the Park) and Grand Teton National Park (GTNP), the Forest is home to a diverse number of wildlife and fish, including TES species, wilderness, scenic panoramas and intensively managed forest lands.

The Forest lies almost entirely within "the Greater Yellowstone Area (GYA)" or "the Greater Yellowstone Ecosystem (GYE)," an area of 12 million acres which is the largest remaining block of relatively undisturbed plant and animal habitat in the contiguous United States. The area continues to gain prominence for its ecological integrity.

On a larger scale, the Forest lies entirely within the Upper Columbia River Basin (UCRB), an ecosystem of 40 million acres extending from western Washington to the southeastern Idaho border and encompassing parts of Montana, Wyoming, Nevada and Utah. The Forest includes all or portions of several distinct mountain ranges, including the Lemhi, Beaverhead, Bitterroot, Centennial, Henry's Lake, Teton, Big Hole, Caribou and Snake River Ranges. Elevations range from near 5,000 feet on the Snake River to over 12,000 feet on the Forest's most western reaches. The Forest contains the Island Park Caldera and several reservoirs. Topography ranges from rolling foothills to rugged, glaciated mountain peaks.

Vicinity Map of Targhee National Forest
on a National Scale

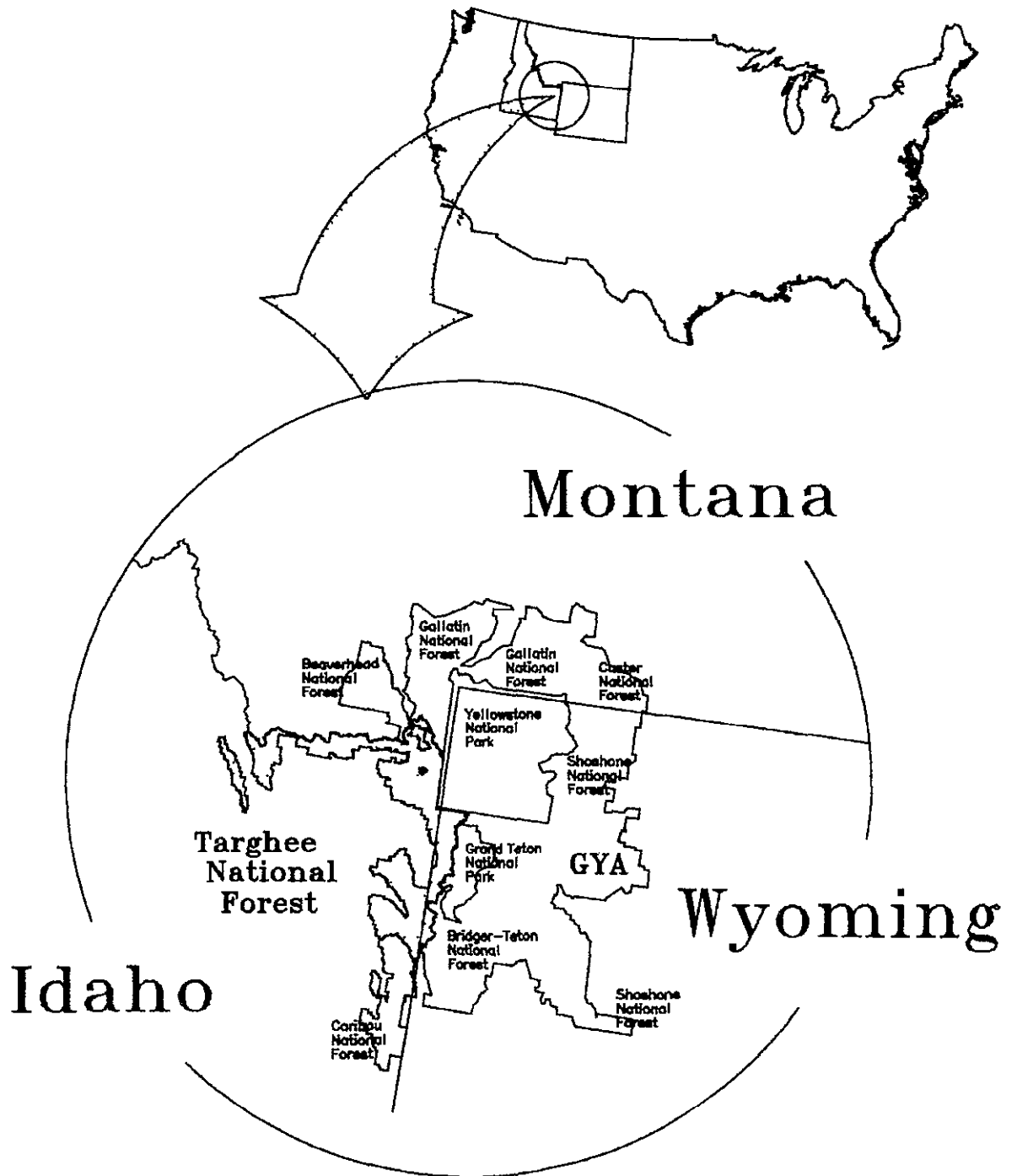


Figure I-1

Although most of the land is dry and semiarid, 190 stream headwaters situated on the Forest provide varied vegetation to support a multitude of uses. The area has cold, moist winters and hot, dry summers. Average annual precipitation, most of which falls as snow, increases with elevation. As little as 10 inches of precipitation falls in lower valleys and as much as 40 inches occurs at the highest elevations. Wide temperature extremes exist with summer temperatures at lower elevations sometimes exceeding 100 degrees Fahrenheit and winter temperatures at higher elevations falling to 40 degrees Fahrenheit below zero and lower.

LEGAL BACKGROUND FOR PREPARING FOREST PLAN REVISIONS

The National Forest Management Act (NFMA) of 1976 requires the Forest Service to develop 10 year integrated land management plans for units of the National Forest System within the framework of a public involvement process. NFMA directs the Forest Service to review and/or update forest plans every 10 to 15 years or more frequently when resource and management conditions have changed significantly. The plans must include management guidelines, an assessment of suitability of the lands, and consistency with the two other laws relating to the management of National Forests...The Multiple Use-Sustained Yield Act of 1960, and the Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974. A Management Plan for the Forest was finalized in 1985. This is the first revision of that plan.

DECISIONS MADE IN AN EIS

An Environmental Impact Statement (EIS) is a document that proposes two or more alternatives to a proposed action of significance for public review and input. One alternative is always a 'No Action' Alternative, another is the proposed action or preferred alternative. In this FEIS, the No Action is Alternative 1. Other alternatives are also considered and evaluated, according to the guidelines in the NFMA.

The FEIS explains the need for change, the proposed action, the issues and concerns, the alternatives considered during the decision making process, the consequences of implementing the alternatives and the Selected Alternative.

The proposed action and Selected Alternative in this FEIS is 3-Modified (3M). More discussion about 3M can be found in Chapter II.

DECISIONS MADE IN A FOREST PLAN REVISION

The Forest Plan Revision carries out the actions of the Selected Alternative. It provides key decisions for the long-term management of the Forest. These decisions include:

- Forestwide multiple-use goals and objectives, including a description of the DFC for the Forest
- Forestwide standards and guidelines
- Management direction and prescriptions
- Land suitable for resource use and production
- Monitoring and evaluation requirements
- Recommendations to Congress for Wilderness and Wild/Scenic and Recreational River Designations

SUMMARY OF THE 1985 TARGHEE NATIONAL FOREST MANAGEMENT PLAN

The 1985 Forest Plan was started in 1980, but was not finalized until 1985 due to national requirements by Congress in 1982 for reevaluations of roadless areas in forest plans

The forest vegetation is approximately 37 percent lodgepole pine and 17 percent lodgepole/Douglas-fir mix (see Figure III-3), a fire-dependent, short-lived tree species with a mature "old-growth" lifespan of 100-160 years. It regenerates rapidly after most disturbances, allowing it to dominate forest composition. As forest succession advances, lodgepole pine tends to be gradually replaced by more shade-adapted tree species in the absence of further disturbances. Beginning in the 1950s and continuing to the early 1980s, an extensive mountain pine beetle infestation attacked 90 percent of the lodgepole pine forest. The natural beetle infestation was not outside the natural range of variation for such forests, nor were the subsequent large fires in the late 1980s. Mountain pine beetle epidemics and large fire events are characteristic of lodgepole pine forests. Hence these forests are subject to rapid changes in forest structures and vegetation patterns.

The 1985 Forest Plan emphasized the harvest of dead and dying lodgepole and artificial regeneration where applicable. The plan also predicted an abrupt decline from the high level of lodgepole supply within the next decade.

REASONS FOR REVISING THE FOREST PLAN (Need for Change)

The original Targhee Forest Plan, approved in 1985, emphasized an extensive salvage and reforestation program of dead lodgepole killed by a massive mountain pine beetle epidemic over the previous 30 years. This rate of salvage caused, in effect, a departure from a sustained yield of timber harvest and could not be continued beyond the first decade (1985 - 1995) in an environmentally sound manner. Monitoring of activities during this time showed it was increasingly difficult to meet the standards and guidelines in the 1985 Plan. New information on resource needs and various management practices became evident during this time, and by 1990 it was apparent that a full revision was needed. More specific needs for change are as follows:

- The salvage program has ended. Use of the many roads built during salvage operations by increasing numbers of people is causing unwanted effects to wildlife, riparian areas, and soil productivity.
- The need to review and incorporate new knowledge and techniques continues, especially in wildlife habitat management. For example, recent studies indicate motorized road and trail densities play a crucial role in availability of suitable habitat for elk and grizzly bears. Standards for management activities near nesting and foraging habitat for goshawks and other raptors are needed to protect these crucial areas. Results of studies analyzing fish habitat in the Upper Columbia River Basin are pointing out new ways to manage fisheries. Some of these findings have widespread implications that the revision process was intended to address.
- Although much of the lodgepole pine component on the Forest has been salvaged, there is still a need to use timber harvest as a tool to reach ecosystem objectives, supply a variety of timber products for local use, deter other epidemics like the mountain pine beetle outbreak, and manage the potential for a devastating wildfire, like the Yellowstone Wildfires of 1988.

PUBLIC'S ROLE IN SCOPING AND ISSUES

The public and Forest employees played an important role in determining the context of management for the Forest over the next 10-15 years. Public involvement has taken place at every stage of the revision process. Process Paper A describes the public involvement that occurred.

HOW THE KEY FOREST ISSUES WERE SELECTED

The following outlines the Forest's approach to defining the key issues:

- A list of issues and concerns from the public was compiled, resulting in an issue paper released in November 1992, listing over 70 issues and concerns.
- A compatible list of "Issue Questions" was simultaneously developed. These needed to be addressed in the EIS alternatives and in the Revision, this list was also released in November 1992 and was tied to the issues and concerns.
- Issues and concerns were then categorized into "Issue Components" or "Issue Areas," a planning approach to help with the development and structure of the EIS and Plan.
- The "Issue Indicators," the units of measurement tied to the issues and concerns, were chosen.
- The alternatives were reviewed to determine which issue indicators have the greatest variables and which issue indicators remain relatively constant or the same.
- The "Key Issues" were identified as those issues and concerns having the greatest and most significant variation among the alternatives.

ISSUE COMPONENTS USED TO ORGANIZE EIS AND PLAN

"Issue Components" are an organizational planning approach used to group similar issues and concerns. Key issues, alternatives, the rest of the EIS and the Revision are consistently divided into the following issue components, in this order:

- Ecological Processes and Patterns
- Physical Elements
- Biological Elements
- Forest Use and Occupation
- Production of Commodity Resources

KEY ISSUES THAT DROVE THE ALTERNATIVES

Although there were over 70 issues and concerns identified by the public and Forest employees, seven key issues were the ultimate driving force for alternative development and determining factors for alternative comparison in the Forest Plan Revision. The key issues had the most significance as variables between the alternatives.

WHAT IS AN ISSUE INDICATOR?

Each key issue received an "Issue Indicator," a unit of measurement that shows how the issue is addressed in each alternative. The LST, consisting of the Forest Supervisor, his primary staff and the District Rangers studied the issues and selected one major indicator for each issue that best reflected the variability for that issue between the alternatives.

SUMMARY OF KEY ISSUES AND KEY INDICATORS

Key Issue 1 Sustainability, Fire and Natural Disturbances

(Ecological Processes and Patterns Component)

Key Indicators Health of forest structure and composition, and prescribed fire

Key Issue 2 Riparian

(Biological/Physical Component)

Key Indicator Acres not meeting the DVC DVC = riparian vegetation such as deep rooted grasses, shrubs and trees that maintain streambank stability

Key Issue 3 Security for Elk

(Biological Component)

Key Indicator Percent of Forest meeting Elk Vulnerability (EV) thresholds measured by the number of miles of open roads and open motorized trails

Key Issue 4 Grizzly Bear Management

(Biological Component)

Key Indicator Open Road & Open Motorized Trail Route Density (OROMTRD), measured in miles per square mile for BMUs

Key Issue 5 Access

(Forest Use & Occupation Component)

Key Indicator Number of miles of roads/trails open to summer motorized use

Key Issue 6 Management of Roadless Areas

(Forest Use & Occupation Component)

Key Indicator Number of Acres recommended for wilderness

Key Issue 7 Timber Harvest

(Production of Commodity Resources Component)

Key Indicator ASQ

KEY ISSUE 1: Sustainability, Fire and Natural Disturbances (Issue Component: Ecological Processes and Patterns)

Issue Discussion: An ecosystem is a large, complex, integrated system of living and nonliving components that interact and change continually. Healthy ecosystems are those that retain all of their parts and functions for future generations even though vegetation patterns, human uses or other conditions may change. Understanding ecological processes (fire and other natural disturbances) and how these processes shaped vegetation patterns over time in a landscape are important steps toward implementing EM.

EM is a new philosophy of management for the Forest Service, and different interpretations and approaches are possible in working toward implementation. The Forest is the first in the GYA to revise its Forest Plan and incorporate EM principles in the revision. Many activities and projects are being studied toward the application and implementation of EM. Their new information and conclusions will be used to adaptively manage the Forest and modify direction in the Revised Plan, where needed.

The most pressing and debated question is, "How do we achieve sustainability incorporating fire and natural disturbances, to achieve healthy ecosystems?" This remains a very complex issue and we are just beginning to understand and experiment with some approaches to implementing EM. However, more information and research is emerging that provides a good foundation from which to begin. We are using adaptive management to monitor and test assumptions and strategies. And we will make course corrections as we conduct projects and evaluate results.

Sustainability, Fire and Natural Disturbances Key Issue Indicators: The primary indicator for this issue is health of forest structure and composition. This indicator is measured as the total acres where EM based activities will result in maintenance or improvement of forest structure and composition.

The secondary indicator is prescribed fire as measured by the number of acres where prescribed fire may be used to maintain or improve ecological sustainability.

The PFC (sustainability) of forested ecosystems can be assessed through an evaluation of four criteria, structure, composition, disturbance regime and pattern. Forest structure relates to the relative proportions of grasses, forbs, shrubs and trees, the relative ages of trees, the tree densities, etc. Forest composition relates to the relative proportions of tree species. The disturbance regimes affecting forested ecosystems are associated with fire (natural and prescribed), wind, insects, pathogens or flood and human induced disturbances, such as logging and grazing.

All four criteria are directly or indirectly affected by timber harvest and fire management practices. EM mandates that silvicultural activities, including timber harvest and prescribed fire, will contribute to maintaining or improving ecosystem sustainability.

KEY ISSUE 2: Riparian (Issue Component: Biological/Physical Elements)

Issue Discussion: Riparian areas lie adjacent to water and are composed of vegetation communities dependent upon or tolerant to the presence of free or unbound water near the ground surface. Riparian areas are associated with lakes, reservoirs, potholes, springs, bogs, wet meadows, and ephemeral, intermittent or perennial streams. Although riparian areas constitute less than five percent of the total land base, they are the most productive areas in terms of plant and animal species diversity and consumptive use.

Riparian areas are essential breeding, rearing and feeding grounds for many species of wildlife and affect fish habitat. They serve people as important sources for water and flood control and for recreational purposes such as camping, fishing, floating and aesthetics. A healthy riparian area indicates that most, if not all, of the associated water and soil components are also healthy. Because of the myriad of competing uses for these highly valuable pieces of land, the variability between the alternatives was considered significant.

Riparian Key Issue Indicator: The key indicator showing the differences between the alternatives for riparian areas is DVC. The riparian area's health is indicated by the amounts and types of vegetation along the banks, with highest preference to deep-rooted grasses, shrubs and trees that maintain

streambank stability and that have a high rate of recovery Riparian areas meeting DVC currently meet the Forest Plan Revision objectives to maintain or enhance riparian vegetation, aquatic habitat and water quality

KEY ISSUE 3: Security for Elk (Issue Component: Biological Element)

Issue Discussion: The Forest provides habitat for a number of species (a potential of 85 mammals, 300 birds, 17 reptiles and amphibians based on range maps) For most species there were no significant differences in the management of their habitat between alternatives Rather, standards and guidelines were developed to maintain a variety of habitat conditions across the forest The best data and analysis existed for elk security, which had the highest wildlife variance amongst the alternatives Elk are also wide-ranging animals, so their habitat encompasses virtually the entire Forest Security for elk was chosen as a key issue relating to future hunting conditions and opportunities and cooperative relations with Fish and Game Departments Observations and studies by the IDFG, University of Idaho and Forest Service scientists have determined that as motorized road and trail densities increase, elk security declines Portions of the Forest have high densities of trails and roads open to motorized use due to the extensive road building associated with the salvage of dead lodgepole Salvage activity is largely completed and new knowledge about impacts of road densities upon wildlife is available The Revision examines the range of management alternatives related to security for elk

Security for Elk Key Issue Indicator The best indicator for showing the differences between alternatives for elk security is, “the percentage of the Forest meeting State Fish and Game vulnerability thresholds for elk” The primary factors the Forest Service controls related to EV analysis, are the density of open motorized roads and trails and the amount of area open to cross-country, off-highway vehicle travel

EV is defined as a measure of elk susceptibility to being killed during the hunting season EV models help managers predict elk mortality rates As cross-country off-highway vehicle travel and motorized road and trail densities (measured in miles per square mile on a watershed basis) increase, the security for elk decreases and the mortality rate increases

KEY ISSUE 4: Grizzly Bear Management (Issue Component: Biological Element)

Issue Discussion: Portions of the Forest are within the Yellowstone Grizzly Bear Ecosystem which has been divided into BMUs Portions of the Forest are within three BMUs and feature grizzly bear recovery As with all TES species, all alternatives must meet the ESA The importance of managing motorized access is one of the most influential parameters affecting grizzly bear habitat security

New information accumulated over the last 10 years provides better insight and direction regarding effective management of roads, timber and human activities in grizzly bear habitat The one variation between alternatives that makes the BMU issue significant is the density of open motorized roads and trails in BMUs Which roads will be closed in BMUs, how many miles and in what manner?

Grizzly Bear Key Issue Indicator. The key issue indicator for BMUs is OROMTRD Studies show that the importance of managing access is one of the most influential components affecting habitat security for grizzly bears By managing motorized access, the Forest can minimize human interaction and potential grizzly bear mortality, minimize displacement from important habitats, and minimize habituation to humans

KEY ISSUE 5: Access (Issue Component: Forest Use and Occupation)

Issue Discussion: The Forest currently has 1,985 miles of open road and 773 miles of open trail "Open" means road and trail miles without restrictions on motorized use There are currently road and trail miles with restrictions on motorized use as follows 806 miles of restricted road (73 miles with seasonal restrictions and 733 miles with yearlong restrictions), 628 miles of restricted trail

Recreational motorized use has increased over the last decade The 1985 Plan allows cross-country motorized travel across much of the Forest and has no established road density standards Access to the Forest during non snow months is a significant variable among the alternatives Comments in the early planning stages were supportive of more or fewer road and trail closures depending on a variety of factors Those supporting road and trail closures want more protection and fewer impacts upon wildlife, TES species, soils and water, and fisheries, less visual, garbage and noise pollution, reduced maintenance and law enforcement costs, and more opportunity for escape and solitude Those supporting continued or more road and trail access want access for hunting, fishing, berry-picking, camping, hiking and other recreational pursuits, and increased opportunities for sight-seeing and challenging cross-country travel for off-highway vehicles Motorized access is considered a key element for enjoyment and use of the Forest by persons with disabilities and the elderly For more information on public comments, refer to Appendix A

Access Key Issue Indicator: The indicator that best shows differences between alternatives is the Number of Miles of Road/Trails Open to Summer Motorized Use The greater the number of miles of roads and trails open to motorized use, the greater the increased recreational benefits and hunting/fishing access to users of motorized vehicles including persons with disabilities

KEY ISSUE 6: Management of Roadless Areas (Issue Component: Forest Use and Occupation)

Issue Discussion: The Forest has 16 areas which qualify as roadless, totaling 841,000 acres The Wyoming portion of the Palisades Roadless Area was designated by Congress as a Wilderness Study Area in the Wyoming Wilderness Bill of 1984 Portions of three roadless areas in Idaho were recommended as wilderness in the 1985 Forest Plan, but no legislative action has been taken to resolve the roadless area question in Idaho During the last planning period, parts of some roadless areas were roaded as part of the salvage program As motorized recreation demands increase, pressure also increases to maintain the roadless character of the remaining roadless areas The significant difference between alternatives in the management of roadless areas is in the amounts of acres recommended for wilderness Those arguing for more acres of Congressionally designated wilderness want the assurance of preservation of biological diversity, protection from resource uses and national recognition of wilderness character Those opposed to more acres designated wilderness want roadless areas to be left as roadless or to be developed to allow motorized access for recreation, oil and gas, timber and other industries requiring access

Management of Roadless Areas Key Issue Indicator: The indicator best showing differences between alternatives related to the management of roadless areas is the number of acres recommended for wilderness Once a roadless area is designated as wilderness by Congress, it is managed in perpetuity for nonmotorized, scientific and dispersed recreational purposes Roadless areas not recommended as wilderness may be managed as roadless areas or for some other use during each planning cycle

KEY ISSUE 7: Timber Harvest (Issue Component: Production of Commodity Resources)

Issue Discussion Previously, large scale salvage of dead and dying timber was conducted as a temporary departure from long term sustained yield (LTSY) management. Since the goals of harvest of dead timber have largely been met, the Forest will return to management within LTSY for the future.

Two local mills, once dependable bidders for salvage and other wood harvest, are now closed but local demand remains high. The ESA, Grizzly Bear Recovery Plan and Guidelines, EM principles, availability of dead lodgepole, increased knowledge about the impacts of motorized use of roads and trails upon the Forest's wildlife resources and other factors have resulted in a greatly reduced availability of scheduled timber harvest, i.e. the ASQ. The issue of timber harvest does not include firewood, since the amount of firewood quantity does not vary between the alternatives. Some people desiring a greater harvest of timber from the Forest often cite the effects upon the local economy. Others have expressed a concern over the reduction in payments to local governments (25 percent of Forest receipts go to county treasuries) associated with the reduced harvest levels. They also want to maximize harvest of the remaining dead or mature wood. Some argue that small harvests in the fire dependent lodgepole are contrary to historically based EM principles. Those supporting a greater reduction in timber harvest are concerned about motorized trail and road uses that impact wildlife, reductions in the amount and distribution of late successional forest, fisheries, riparian areas, soils and water, aesthetics and other resources.

Timber Harvest Key Indicator: The key indicator for timber harvest that portrays the differences between alternatives is the ASQ. ASQ does not include firewood and is defined as the quantity of timber that may be sold from the area of suitable land for a time period specified in a Forest Plan. This quantity is usually expressed on an annual basis as an "average" ASQ.

ISSUE INDICATORS THAT ARE NOT KEY

When the Forest designed the alternatives around the issues, a number of issue indicators were created. Specialists analyzed the consequences for all of the different alternatives. It soon became clear that most of the consequence indicators were either the same in all alternatives or had minor variations, making them less significant than the key issue indicators.

Although most of Chapters I and II focus on the key issues and indicators, the remaining issues and indicators are addressed in Chapters III and IV and the standards and guidelines in the Forest Plan Revision. For example, firewood availability is an issue. Although not a key issue, firewood is addressed in the Revision and the effects and consequences remains the same in all the alternatives.

Confusion may exist over the lack of inclusion of significant resources such as water and soils as key issues. Why aren't these considered key issues? All the alternatives comply with state and federal quality standards, there was only a slight range of variability and the condition of soil and water is interconnected with the condition of riparian areas. The key issue of Riparian Areas became the symbol and captured the essence of the significance of differences for soil and water resources. Table II-1 lists most of the issue components and indicators. Process Paper A refers to the complete list of issues published in the AMS document, November, 1992. The following summarizes those indicators:

- Wild and Scenic Rivers Recommendations
- Research Natural Areas
- Visual Quality
- Developed Recreation, nonmotorized

- Heritage Resources
- Cave Management
- Predator Control
- Noxious Weeds
- Outfitter and Guides
- Summer Homes & Other Special Use Permits
- Management of Existing Wilderness & Wilderness Study Areas
- Firewood
- Old Growth Standards and Guidelines
- Unscheduled Harvest
- Bald Eagle - Forestwide standards and guidelines same in all alternatives
- Peregrine Falcon - Forestwide standards and guidelines same in all alternatives
- Ute Ladies' Tresses - Forestwide standards and guidelines same in all alternatives
- Sensitive Species (these include three-toed woodpecker, flammulated owl, boreal owl, great gray owl, goshawk, trumpeter swan, spotted frog habitat, common loon, harlequin duck) - Forestwide standards and guidelines same in all alternatives
- Sensitive Species (these include wolverines, lynx, fisher) - small variation in habitat quality or quantity, generally in the realm of one to three percent change from existing conditions
- Sensitive Species (plants listed in current Forest Sensitive Species plant list) - Forestwide standards and guidelines same in all alternatives

DESIRED FUTURE CONDITION FOR THE YEAR 2007 and BEYOND

After issues are identified, one of the first steps in the revision process is to develop goals for the DFC of the Forest by the year 2007 and beyond

The Forest plays an integral part in the GYA as well as in adjacent systems, observing the broad visions and principles in the Greater Yellowstone Coordinating Committee (GYCC) Framework document (GYCC, 1991) Habitat and conditions necessary for free movement of wildlife are sustained

Based on public and employee comments between 1991-1994, a set of goal statements emerged that collectively represent a new general management direction for the Forest. The goal statements were tied to the key issues driving the plan, evolving into a new DFC for the Forest. More specific DFCs for particular portions of the Forest are outlined in the Forest Plan Revision

The DFC is described in terms of the five components, Ecological Processes and Patterns, Physical Elements, Biological Elements, Forest Use and Occupation and Production of Commodity Resources. The Biological and Physical are combined because of their interconnectivity. The DFC is broader than the seven key issues that are driving the alternatives and the decisions

Ecosystem Processes and Patterns DFC:

A mosaic of age classes and types of vegetation are sustained through time and exist across the landscape. Natural disturbances such as insects, disease and fires continue their natural roles in the ecosystem. The Forest functions as an integral part of the Greater Yellowstone Ecosystem as well as adjacent systems, sustaining habitat and conditions necessary for free movement of wildlife

Biological and Physical DFC:

Riparian zones (aquatic influence zones) are healthy and productive. Aquatic systems are allowed to function naturally while protecting flows for downstream consumptive uses. Riparian area integrity contributes to productive fisheries and excellent water quality. Native plant and animal species are favored over undesirable non-native species and sustained populations of all native and desirable species thrive. Habitat conditions contribute toward the recovery of threatened, endangered and sensitive species.

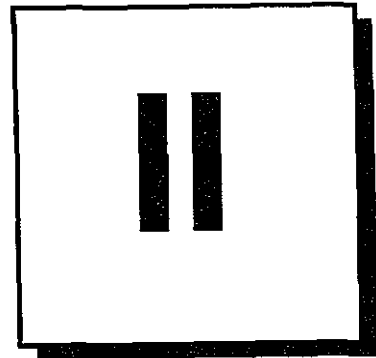
Forest Use and Occupation DFC:

Growing and diverse recreational, cultural, visual, historical, and prehistoric management, interpretive, and spiritual needs are accommodated based on the capability of the ecosystem to sustain these uses. Recreation use is managed to minimize conflicts between incompatible uses and provide high levels of satisfaction. Year-round human access is managed to provide both motorized and nonmotorized opportunities. A system of trails and support facilities exist which are compatible with resource capabilities. Roadless characteristics are preserved in the proposed wilderness areas and in existing wildernesses.

Production of Commodity Resources DFC:

Commodity production, such as timber, firewood, mining, livestock forage, or outfitting and guide services are conducted at sustainable levels and maintain the capability of the land to produce an even flow and variety of goods and services for present and future generations. Timber harvest, prescribed fires and livestock grazing are tools used to achieve desired ecological vegetation conditions. Forest products are provided to sustain social and economic values and needs of the local communities within limits which maintain ecosystem health.

Chapter



Alternatives Including the Proposed Programmatic Action (Preferred Alternative)



CHAPTER II

ALTERNATIVES INCLUDING THE PROPOSED PROGRAMMATIC ACTION (SELECTED ALTERNATIVE)

READER'S GUIDE - In this chapter you will find:

How the Alternatives Were Formulated

The Alternative Continuum and Descriptions of the Seven Alternatives

Alternatives Considered but Eliminated from Detailed Study

Comparison of the Environmental Effects Depicted by Issue Indicators (Tables)

HOW THE ALTERNATIVES WERE FORMULATED

In Chapter I, we discussed the issues, issue indicators, reasons for the need for change and the DFCs. This chapter will explain how alternatives were formulated and how each alternative addressed the issues.

Forestwide standards and guidelines specify management requirements that apply throughout the Forest. Management prescriptions say how different portions of the Forest will be managed differently from one another.

Forest lands meet many different needs. Some of these needs are mutually exclusive, for example, a wilderness area is not set up to provide developed recreation sites for motorized users. It is more common that many uses coexist on the same land. A single piece of land may provide habitat for grizzly bear, security cover for elk, grazing for livestock, timber for harvesting and so on. This multiplicity of uses is allowed in the prescriptions. Land that provides crucial winter range for elk may address that need whether the land is placed in a winter range prescription, in a recommended wilderness prescription or a range management prescription.

For purposes of managing the Forest though, people need to have ready access to the management direction that applies to any particular piece of land. That would not be possible if they had to look up separate management prescriptions for grizzly bear habitat, elk security cover, livestock grazing, timber harvesting and then face the question of which to apply.

The Forest has adopted a convention that any single piece of land has only one prescription applied to it in any given alternative. This simplifies management, but it also means that people cannot just look at a given prescription acreage total and assume that it contains all the acreage on the Forest that could possibly fit there. For instance, there is more elk and deer winter range on the Forest than is allocated to that prescription.

For the most part, when there was a question as to which management prescription should be applied, that prescription was assigned which best described the area's intended future management by the LST. As an example, when an eligible wild scenic river was identified in an area recommended for wilderness, the river corridor was assigned an eligible wild river prescription, the surrounding recommended wilderness was assigned a recommended wilderness prescription.

Alternatives can be formulated simply by specifying a different mix of management prescriptions for a given area of the Forest. For instance, a given portion of the Forest could be designated for a timber management, grizzly bear habitat or recommended wilderness prescription.

The alternatives reflected a range of options open to management that responded to the issues, the DFC and the need for change. The IDT evaluated the significant physical, biological, economic and social effects of each alternative that was considered in detail. The evaluation included aggregate effects of social and economic impacts, outputs of goods and services and overall protection and enhancement of environmental resources.

Benchmarks were developed during the formation of the initial Forest Plans. Early indications were that additional benchmark work would not be needed for Forest Plan Revisions because the benchmark work had already been completed during the development of the initial Forest Plans.

Consequences for nonkey issues are not included in Chapter II discussions, since many of them are addressed the same or with slight variation in every alternative. As an example, local communities are noticeably interested in firewood availability. Regardless of the alternative, a constant 3.8 million board feet will be available each year in some remaining dead lodgepole and aspen areas. Although discussed in Chapters III and IV, firewood was not a key issue and did not drive the selection of the selected alternative. Therefore firewood is not discussed in the alternative summaries of Chapter II.

THE ALTERNATIVE CONTINUUM AND ALTERNATIVE DESCRIPTIONS

The numbering scheme for alternatives ranges from 1-6, with Alternative 3M being the Selected and Alternative 1 being the No-Action, or continue the 1985 Forest Plan Alternative. The continuum is not perfect, however, it helps to describe the changes which occur. As the numbers increase from Alternatives 2 to 6, they move generally toward

- *Greater protection of wildlife habitat
- *Greater protection of riparian areas
- *More protection for BMUs
- *More security for elk
- *More nonmotorized, dispersed recreation opportunities
- *More recommended wilderness
- *Less cross-country motorized use
- *Fewer open roads and trails
- *Reduced livestock grazing and timber harvest
- *Less lasting visual impacts from management activities

There are several exceptions to the general trends described above. The position of Alternative 3M on the continuum, for instance, could easily vary if one were to focus on certain factors. The continuum is presented only as an aid in understanding how the alternatives generally compare to one another. It is not correct to assume that these various factors or considerations are at odds with one another. Better performance in one category does not necessarily mean worse performance in another. For instance, moving acres between a recommended wilderness and nonmotorized prescriptions in a given alternative might have no other effect than a change in acres recommended for wilderness, because management under these prescriptions is otherwise quite similar.

All alternatives meet baseline State and Federal Standards, Grizzly Bear Recovery Plan Goals for Greater Yellowstone Ecosystem, ESA, Wilderness Act, Wild and Scenic Rivers Act, National Historical Act, NFMA, Native Americans Act, etc. All the alternatives respond to and incorporate the tentative resource objectives set forth in the Recommended 1990 RPA Program.

ALTERNATIVE 1 = Continue the 1985 Forest Plan (No Action)

The purpose of Alternative 1 is to continue management of the Forest under the 1985 Forest Plan, updated since finalized with amendments, new direction, particularly the recent litigation for the grizzly bear, and changes for new listings of sensitive wildlife species over the last 10 years. Timber harvest occurs at the highest levels possible within the management constraints required for TES wildlife species like the grizzly bear and goshawk. Vehicle access is slightly reduced from current levels due to the implementation of the Interagency Grizzly Bear Guidelines and better road management across the Forest. Cross-country, motorized access in summer and winter would continue close to current levels. Riparian, wildlife and recreation values are emphasized in specific areas of the Forest.

How the Key Issues and Indicators are addressed in Alternative 1

1. Sustainability, Fire and Natural Disturbances. Key Indicators: Health of forest structure and composition and prescribed fire

In Alternative 1, forest structure and composition would be maintained or improved on 48,530 acres. Prescribed fire could be used to maintain or improve ecosystem sustainability on 1,630,000 acres.

2. Riparian. Key Indicator: Acres not meeting DVC

Approximately 342,000 aquatic influence zone (AIZ) acres would be managed to maintain or enhance riparian vegetation, aquatic habitat and water quality. At the end of the first decade, about 4,000 acres would not meet the DVC. Fisheries habitat quality would continue at a moderate level. Livestock grazing would occur near current levels. There would be a slight increase in cattle Animals Unit Months (AUMs). Current levels of sheep grazing would be maintained, in spite of officially closing nine currently vacant sheep allotments and one vacant sheep permit. A mosaic of different species and size classes of vegetation would be provided. Timber harvest would be allowed within limits and would contribute to the ASQ.

3. Security for Elk. Key Indicator: Percent of Forest meeting state EV thresholds, measured by miles of open motorized roads and trails

In Alternative 1, 62 percent of the Forest (1,136,500 acres) would meet the state EV thresholds. The greatest factors under control of the Forest Service that influence elk security are the miles of open motorized roads and trails. Alternative 1 would reduce the number of open roads by 103 miles (5 percent). There would be a reduction of open trails by 201 miles (26 percent). The 62 percent of the Forest meeting state EV thresholds is a 14 percentage point increase over the existing level of 48 percent, indicating the potential for a slightly lower proportion of bulls to be harvested during the general hunting season.

4. Grizzly Bear Management (within the BMUs). Key Indicator: OROMTRD in miles per square mile

Compared to the existing condition, OROMTRD is reduced 23 percent in Henry's Lake BMU Subunit 1, 40 percent in Henry's Lake BMU Subunit 2, and 22 percent in Bechler/Teton BMU. OROMTRD is increased 19 percent in Plateau BMU Subunit 1 and 8 percent in Plateau BMU Subunit 2. Off-highway vehicle (OHV) use would continue at current levels of use. Alternative 1 has no restrictions on cross-country snowmachine use, except on a small portion of the Plateau BMU. Timber harvest could occur with constraints and would contribute to the ASQ.

5. Access. Key Indicator Number of miles of roads and trails open to summer motorized use.

Alternative 1 would reduce the number of open roads by 103 miles (5 percent) There would be a reduction in open trails by 201 miles (26 percent) Acres available for summer OHV would also be the highest of the alternatives, allowing OHV use on approximately 960,000 acres, about a 15 percent reduction over the current 1,126,000 acres open to OHV use.

6. Roadless Area Management. Key Indicator Number of acres recommended for wilderness

Alternative 1 would recommend to Congress 65,000 acres for wilderness designation These are the roadless areas recommended in the 1985 Forest Plan (Italian Peak, Lionhead and Winegar Hole), although no Congressional action has been taken This recommendation is about seven percent of the total acres which presently qualify as roadless.

7. Timber Harvest. Key Indicator ASQ

Alternative 1 would harvest timber at a sustainable level of a maximum 110.7 million board feet (MMBF) for the decade (approximately 11.07 MMBF per year) on an estimated 28,380 acres

ALTERNATIVE 2

The purpose of Alternative 2 is to resolve the needs for change by emphasizing cross-country, winter access and timber production, while adding more restrictions to summer, cross-country access Timber harvest occurs at the highest levels within the management constraints required for maintaining TES species habitat Vehicle access is slightly reduced to meet requirements of the Interagency Grizzly Bear Guidelines Riparian, wildlife and heritage resource values are emphasized in specific areas of the Forest

How the Key Issues and Indicators are addressed in Alternative 2

1. Sustainability, Fire and Natural Disturbances. Key Indicators Health of forest structure and composition and prescribed fire

In Alternative 2, forest structure and composition would be maintained or improved on 58,580 acres Prescribed fire could be used to maintain or improve ecosystem sustainability on 1,750,000 acres

2. Riparian. Key Indicator Acres not meeting DVC

Approximately 325,000 AIZ acres would be managed to restore and maintain the health of AIZs in ways that also produce desired resource values, products, protection and enhancement of these areas At the end of the first decade, about 2,500 acres would not meet the DVC Cattle and sheep grazing are both slightly reduced from existing levels Fisheries habitat quality would remain at a moderate level

3. Security for Elk. Key Indicator Percent of Forest meeting state EV thresholds, measured by miles of open motorized roads and trails

In Alternative 2, 76 percent of the Forest (1,393,000 acres) would meet the state EV thresholds The greatest factors under control of the Forest Service that influence elk security are the miles of open

motorized roads and trails. Alternative 2 would reduce the number of open roads by 122 miles (6 percent). There would be a reduction in open trails by 303 miles (39 percent). The 76 percent of the Forest meeting state EV thresholds is a 28 percentage point increase over the existing level of 48 percent, probably resulting in a potential for a lower proportion of bulls to be harvested during the general hunting season.

4. Grizzly Bear Management (within the BMUs). Key Indicator: OROMTRD in miles per square mile

Compared to the existing condition, OROMTRD is reduced 25 percent in Henry's Lake BMU Subunit 1, 45 percent in Henry's Lake BMU Subunit 2, and 17 percent in Bechler/Teton BMU. OROMTRD is increased 51 percent in Plateau BMU Subunit 1 and 25 percent in Plateau BMU Subunit 2. Acres of summer cross-country, motorized access is significantly reduced from Alternative 1. Timber harvest that might occur to achieve grizzly bear habitat objectives would contribute to the ASQ.

5. Access. Key Indicator: Number of miles of roads and trails open to summer motorized use

Alternative 2 would reduce the number of open roads by 122 miles (6 percent). There would be a reduction in open trails by 303 miles (39 percent). Acres available for OHV would also be reduced over recent levels. Alternative 2 would allow OHV use on approximately 761,000 acres, about a 32 percent reduction from the current 1,126,000 acres open to OHV use. Winter OHV access would be increased, with an additional 206 miles of groomed trails for snowmobiles, for a total of 666 miles.

6. Roadless Area Management. Key Indicator: Number of acres recommended for wilderness

Alternative 2 would not recommend to Congress any areas for wilderness designation.

7. Timber Harvest. Key Indicator: ASQ

Alternative 2 would harvest timber at a sustainable level of a maximum 129.0 MMBF for the decade (approximately 12.9 MMBF per year) on an estimated 33,080 acres.

ALTERNATIVE 3

The purpose of Alternative 3 is to resolve the needs for change by emphasizing management of wildlife habitat and sustaining timber harvest levels within wildlife constraints. Grizzly bear recovery is enhanced with a reduction in motorized use allowed in each BMU. The number of riparian areas meeting the DVC are slightly reduced. Cross-country, summer, motorized vehicle use is restricted to specific areas.

How the Key Issues and Indicators are addressed in Alternative 3

1. Sustainability, Fire and Natural Disturbances. Key Indicators: Health of forest structure and composition and prescribed fire

In Alternative 3, forest structure and composition would be maintained or improved on 52,930 acres. Prescribed fire could be used to maintain or improve ecosystem sustainability on 1,750,000 acres.

2. Riparian. Key Indicator Acres not meeting DVC

Alternative 3 would promote the health and function of riparian, wetland and aquatic ecosystems on approximately 448,000 AIZ acres. At the end of the first decade, about 2,500 acres would not meet the DVC. Fisheries habitat quality would be moderately high. Cattle and sheep grazing would occur at reduced levels compared to existing levels. Timber harvest could occur in riparian areas to attain the DVCs, but is not scheduled and would not contribute to the ASQ.

3. Security for Elk. Key Indicator Percent of Forest meeting state EV thresholds, measured by miles of open motorized roads and trails

In Alternative 3, about 83 percent of the Forest (1,521,500 acres) would meet the state EV thresholds. The greatest factors under the control of the Forest Service and influencing this are the miles of open motorized roads and trails. Alternative 3 would reduce the number of open roads by 396 miles (20 percent). There would be a reduction in open trails by 338 miles (44 percent). The 83 percent of the Forest meeting state EV thresholds is a 35 percentage point increase over the existing level of 48 percent, thereby improving elk security and allowing a higher potential for a lower proportion of bulls to be harvested during the general hunting season.

4. Grizzly Bear Management (within the BMUs). Key Indicator OROMTRD in miles per square mile

Compared to the existing condition, OROMTRD is reduced 24 percent in Henry's Lake BMU Subunit 1, 48 percent in Henry's Lake BMU Subunit 2, 7 percent in Plateau BMU Subunit 1, 22 percent in Plateau BMU Subunit 2, and 33 percent in Bechler/Teton BMU. Almost no summer cross-country, motorized travel would be permitted in the BMUs. Snowmachine use is allowed on designated routes throughout the snow season. In 96 percent of the Henry's Lake BMU - Subunit 2, 20 percent of the Plateau BMU, and 3 percent Bechler/Teton BMU, cross-country snowmachine use is allowed only from December 15 to April 1. Some timber harvest could occur to improve bear habitat.

5. Access. Key Indicator Number of miles of roads and trails open to motorized use

Alternative 3 would reduce the number of open roads by 396 miles (20 percent). There would be a reduction in open trails by 338 miles (44 percent). Acres available for summer OHV use would also be reduced over current levels. Alternative 3 would allow OHV use on approximately 368,000 acres, about a 67 percent reduction from the current 1,126,000 acres open to OHV use. Besides providing wildlife security, summer OHV reductions would prevent other resource damages from OHV use.

6. Roadless Area Management. Key Indicator Number of acres recommended for wilderness

Alternative 3 would recommend to Congress 125,000 acres for wilderness designation. The 125,000 acres would include the 65,000 acres recommended by the 1985 Plan in the Italian Peak, Lionhead and Winegar Hole roadless areas, plus additional roadless acres in each of these areas and the Palisades. These acres represent 15 percent of the total acres which presently qualify as roadless on the Forest.

7 Timber Harvest. Key Indicator ASQ

Alternative 3 would harvest timber at a sustainable level of a maximum 108.3 MMBF for the decade (approximately 10.83 MMBF per year) on an estimated 27,780 acres.

ALTERNATIVE 3M = Alternative 3 Modified (Also the Proposed Programmatic Action and Selected Alternative)

The purpose of Alternative 3M is to resolve the needs for change by emphasizing wildlife habitat management and providing a comprehensive habitat management strategy for the grizzly bear. Motorized access, timber harvest levels and livestock grazing are all reduced from levels allowed in the 1985 Forest Plan. Riparian areas with cutthroat trout are further protected with increased vegetation. Cross-country, summer, motorized vehicle use is restricted to specific areas.

Alternative 3M has been selected as the RPA Alternative because it represents the Forest's best attempt to simultaneously implement multiple-use management, ensure resource sustainability, emphasize the quality of resource outputs and to provide for the economic well-being of rural communities.

How the Key Issues and Indicators are addressed in Alternative 3M

1. Sustainability, Fire and Natural Disturbances. Key Indicators: Health of forest structure and composition and prescribed fire

In Alternative 3M, forest structure and composition would be maintained or improved on 45,170 acres. Prescribed fire could be used to maintain or improve ecosystem sustainability on 1,750,000 acres.

2. Riparian. Key Indicator: Acres not meeting DVC

Approximately 512,000 AIZ acres would be managed to promote the health and function of riparian, wetland and aquatic ecosystems under Alternative 3M. At the end of the first decade, about 2,500 acres would not meet the DVC. Fisheries habitat quality would be moderately high, compared to the current moderate quality rating. There would be a moderately rapid rate of recovery of degraded habitats. Livestock grazing is reduced to the same levels described in Alternative 3, in addition, a program is initiated to phase out sheep grazing on an opportunity basis on portions of the Island Park and Teton Basin Ranger Districts. Timber harvest could occur in riparian areas to attain the DVCs, but is not scheduled and would not contribute to the ASQ.

3. Security for Elk. Key Indicator: Percent of Forest meeting state EV thresholds, measured by miles of open motorized roads and trails

About 89 percent of the Forest (1,631,500 acres) would meet the state EV thresholds. The greatest factors under the control of the Forest Service and influencing this are the miles of open motorized roads and trails. Alternative 3M would reduce the number of open roads by 408 miles (21 percent). There would be a reduction in open trails by 233 miles (30 percent). The 89 percent of the Forest meeting state EV thresholds is a 41 percentage point increase over the existing level of 48 percent, thereby greatly improving elk security. This means the potential would be for a lower proportion of bulls to be harvested during the general hunting season.

4. Grizzly Bear Management (within the BMUs). Key Indicator: OROMTRD in miles per square mile

Compared to the existing condition, OROMTRD is reduced 34 percent in Henry's Lake BMU Subunit 1, 39 percent in Henry's Lake BMU Subunit 2, 36 percent in Plateau BMU Subunit 1, 25 percent in Plateau BMU Subunit 2, and 34 percent in Bechler/Teton BMU. Additional access restrictions to improve habitat secu-

ity would be no summer cross-country motorized vehicle use in any of the BMUs, except a small portion in the Bechler BMU. No timber harvest would be scheduled in the designated core or secure areas. Snowmachine use is allowed on designated routes throughout the snow season. Cross-country snowmachine use is allowed from Thanksgiving Day until June 1.

5. Access. Key Indicator: Number of miles of roads and trails open to motorized use

Alternative 3M would reduce the number of open roads by 408 miles (21 percent). There would be a reduction in open trails by 233 miles (30 percent). The increase in road closures and restrictions would provide increased wildlife security, especially for elk and grizzly bears, and would provide additional protection from other resource damage. Acres available for summer OHV use would be reduced allowing OHV use on approximately 121,000 acres, an 89 percent reduction from the current 1,126,000 acres open to OHV use.

6. Roadless Area Management. Key Indicator: Number of acres recommended for wilderness.

Alternative 3M would recommend to Congress 171,000 acres for wilderness designation. The 171,000 acres would include the 65,000 acres recommended by the 1985 Plan in Italian Peak, Lionhead and Winegar Hole roadless areas, plus additional roadless acres in each of these areas and the Palisades. Over 33,000 acres of the Diamond Peak Roadless area was added. Another 12,000 acres was added to the Italian Peaks area due to re-digitizing the southern boundary. This recommended 171,000 acres is 20 percent of the total acres which presently qualify as roadless on the Forest.

7 Timber Harvest Key Indicator: ASQ

Alternative 3M would harvest timber at a sustainable level of a maximum 80.0 MMBF for the decade (approximately 8.0 MMBF per year) on an estimated 20,520 acres.

ALTERNATIVE 4

Alternative 4 emphasizes watershed and wildlife habitat improvement and a reduction in timber harvest. Riparian areas receive increased emphasis. Motorized access is restricted to designated routes and more roads are closed in some BMUs than in previous alternatives.

How the Key Issues and Indicators are addressed in Alternative 4

1. Sustainability, Fire and Natural Disturbances. Key Indicators: Health of forest structure and composition and prescribed fire

In Alternative 4, forest structure and composition would be maintained or improved on 39,770 acres. Prescribed fire could be used to maintain or improve ecosystem sustainability on 1,750,000 acres.

2. Riparian. Key Indicator: Acres not meeting DVC

Approximately 533,000 AIZ acres would be managed to promote the health and function of riparian, wetland and aquatic ecosystems. At the end of the first decade, about 1,700 acres would not meet the

DVC Fisheries habitat quality would be high, compared to the current moderate quality rating. Degraded habitats would recover rapidly. Sheep grazing is reduced compared to existing levels, and the program to phase out sheep grazing on an opportunity basis also occurs under this alternative. Cattle grazing levels would be reduced considerably (12 percent) from current levels. Timber harvest could occur in riparian areas to attain DVCs, but is not scheduled and would not contribute to ASQ.

3. Security for Elk. Key Indicator: Percent of Forest meeting state EV thresholds, measured by miles of open motorized roads and trails.

About 89 percent of the Forest (1,631,500 acres) would meet the state EV thresholds. The greatest factors under the control of the Forest Service and influencing this are the miles of open motorized roads and trails. Alternative 4 would reduce the number of open roads by 613 miles (31 percent). There would be a reduction in open trails by 352 miles (46 percent). The 89 percent of the Forest meeting state EV thresholds is a 41 percentage point increase over the existing level of 48 percent, thereby greatly improving elk security. This means the potential would be for a lower proportion of bulls to be harvested during the general hunting season.

4. Grizzly Bear Management (within the BMUs). Key Indicator: OROMTRD in miles per square mile.

Compared to the existing condition, OROMTRD is reduced 47 percent in Henry's Lake BMU Subunit 1, 53 percent in Henry's Lake BMU Subunit 2, 31 percent in Plateau BMU Subunit 1, 32 percent in Plateau BMU Subunit 2, and 43 percent in Bechler/Teton BMU. Additional access restrictions to improve habitat security would be no cross-country motorized vehicle use in any of the BMUs, except a small portion of the Plateau and Bechler BMUs. Snowmachine use is allowed on designated routes throughout the snow season. Cross-country snowmachine use is allowed only from December 15 to April 1.

5. Access. Key Indicator: Number of miles of roads and trails open to motorized use.

Alternative 4 would reduce the number of open roads by 613 miles (31 percent). There would be a reduction in open trails by 352 miles (46 percent). Alternative 4 would allow OHV use on approximately 79,000 acres, over a 93 percent reduction from the current 1,126,000 acres currently open to OHV use.

6. Roadless Area Management. Key Indicator: Number of acres recommended for wilderness.

Alternative 4 would recommend to Congress 139,000 acres for wilderness designation. These acres more than double the 65,000 acres recommended by the 1985 Plan in Italian Peak, Lionhead and Winegar Hole roadless areas, plus additional roadless acres in each of these areas and the Palisades. This recommended 139,000 acres is 18 percent of the total acres which presently qualify as roadless on the Forest.

7. Timber Harvest. Key Indicator: ASQ.

Alternative 4 would harvest timber at a sustainable level of 60.33 MMBF for the decade (approximately 6.033 MMBF per year) on an estimated 15,470 acres.

ALTERNATIVE 5

The purpose of Alternative 5 is to meet the needs for change that reduce focus on human management and human disturbances of wildlife and riparian habitat. Motorized access is restricted to designated

routes and more roads are closed in BMUs

How the Key Issues and Indicators are addressed in Alternative 5

1. Sustainability, Fire and Natural Disturbances. Key Indicators Health of forest structure and composition and prescribed fire

In Alternative 5, forest structure and composition would be maintained or improved on 29,840 acres Prescribed fire could be used to maintain or improve ecosystem sustainability on 1,750,000 acres

2. Riparian. Key Indicator Acres not meeting DVC

Approximately 590,000 AIZ acres would be managed to promote the health and function of riparian, wetland and aquatic ecosystems under this alternative At the end of the first decade, about 1,700 acres would not meet the DVC Fisheries habitat quality would be high, compared to the current moderate quality rating Degraded habitats would recover rapidly Sheep grazing is reduced compared to existing levels, and the program to phase out sheep grazing on an opportunity basis also occurs under this alternative Cattle grazing levels would be reduced considerably (12 percent) from current levels

3. Security for Elk. Key Indicator Percent of Forest meeting state EV thresholds, measured by miles of open motorized roads and trails

In Alternative 5, about 95 percent of the Forest (1,741,500 acres) would meet the state EV thresholds The greatest factors under the control of the Forest Service and influencing this are the miles of open motorized roads and trails Alternative 5 would reduce the number of open roads by 748 miles (38 percent) There would be a reduction in open trails by 541 miles (70 percent) The 95 percent of the Forest meeting state EV thresholds is a 47 percentage point increase over the existing level of 48 percent, thereby greatly improving elk security This means the potential would be for a lower proportion of bulls to be harvested during the general hunting season

4. Grizzly Bear Management (within the BMUs). Key Indicator OROMTRD in miles per square mile

Compared to the existing condition, OROMTRD is reduced 37 percent in Henry's Lake BMU Subunit 1, 45 percent in Henry's Lake BMU Subunit 2, 34 percent in Plateau BMU Subunit 1, 30 percent in Plateau BMU Subunit 2, and 45 percent in Bechler/Teton BMU Additional access restrictions to improve habitat security would be no cross-country motorized vehicle use in any of the BMUs, a small portion of the Plateau and Bechler BMUs Snowmachine use is allowed on designated routes throughout the snow season Cross-country snowmachine use is allowed only from December 15 to April 1 Sheep grazing would end immediately in BMUs and cattle grazing would be considerably reduced

5. Access. Key Indicator Number of miles of roads and trails open to motorized use

Alternative 5 would reduce the number of open roads by 748 miles (38 percent) There would be a reduction in open trails by 541 miles (70 percent) Alternative 5 would allow OHV use on approximately 50,000 acres, a 96 percent reduction from the current 1,126,000 acres open to OHV use

6. Roadless Area Management. Key Indicator Number of acres recommended for wilderness

Alternative 5 would recommend to Congress 226,000 acres for wilderness designation. These acres are more than triple the 65,000 acres recommended by the 1985 Plan in Italian Peak, Lionhead and Winegar Hole roadless areas. Also included in the total recommended wilderness are additional roadless acres in the Palisades and Garns Mountain areas. This recommended 226,000 acres is 28 percent of the total acres which presently qualify as roadless on the Forest.

7. Timber Harvest. Key Indicator ASQ

Alternative 5 would harvest timber at a sustainable level of 35.1 MMBF for the decade (approximately 3.51 MMBF per year) on an estimated 9,000 acres.

ALTERNATIVE 6

The purpose of Alternative 6 is to meet the needs for change by de-emphasizing human management and human disturbance of wildlife and riparian habitat to the lowest level of all the alternatives. Timber harvest is not scheduled. All access is strongly restricted to designated routes and more roads are closed to reduce human disturbance than in any other alternative.

How the Key Issues and Key Indicators are addressed in Alternative 6

1. Sustainability, Fire and Natural Disturbances. Key Indicators Health of forest structure and composition and prescribed fire

In Alternative 6, forest structure and composition would be maintained or improved on 20,730 acres. Prescribed fire could be used to maintain or improve ecosystem sustainability on 1,750,000 acres.

2. Riparian. Key Indicator Acres not meeting DVC

Approximately 793,000 AIZ acres would be managed to promote the health and function of riparian, wetland and aquatic ecosystems under this alternative. At the end of the first decade, about 1,700 acres would not meet the DVC. Fisheries habitat quality would be high, compared to the current moderate quality rating. Degraded habitats would recover rapidly.

3. Security for Elk. Key Indicator Percent of Forest meeting state EV thresholds, measured by miles of open motorized roads and trails

About 95 percent of the Forest (1,741,500 acres) would meet the state EV thresholds. The greatest factors under the control of the Forest Service and influencing this are the miles of open motorized roads and trails. Alternative 6 would reduce the number of open roads by 757 miles (38 percent). There would be a reduction in open trails by 692 miles (90 percent). The 95 percent of the Forest meeting state EV thresholds is a 47 percentage point increase over the existing level of 48 percent, thereby greatly improving elk security. This means the potential would be for a lower proportion of bulls to be harvested during the general hunting season.

4. Grizzly Bear Management (within the BMUs). Key Indicator OROMTRD in miles per square mile

Compared to the existing condition, OROMTRD is reduced 34 percent in Henry's Lake BMU Subunit 1, 55 percent in Henry's Lake BMU Subunit 2, 19 percent in Plateau BMU Subunit 1, 32 percent in Plateau BMU Subunit 2, and 45 percent in Bechler/Teton BMU. Additional access restrictions to improve habitat security would be no cross-country motorized vehicle use in any of the BMUs, except in a small portion of the Plateau and Bechler BMUs. Snowmachine use is allowed on designated routes throughout the snow season. Cross-country snowmachine use is allowed only from December 15 to April 1. Sheep grazing would end immediately in BMUs and cattle grazing would be considerably reduced.

5. Access. Key Indicator Number of miles of roads and trails open to motorized use

Alternative 6 would reduce the number of open roads by 757 miles (38 percent). There would be a reduction in open trails by 692 miles (90 percent). Acres available for OHV use would also be reduced over current levels. Alternative 6 would allow OHV use on approximately 34,000 acres, a 97 percent reduction from the current 1,126,000 acres open to OHV use. This approach is consistent with the minimum maintenance level of management emphasized in this alternative.

6. Roadless Area Management. Key Indicator Number of acres recommended for wilderness

Alternative 6 would recommend to Congress 465,000 acres for Wilderness designation, more than seven times the 65,000 acres recommended by the 1985 Plan in Italian Peak, Lionhead and Winegar Hole roadless areas. Also included in the total recommended wilderness are additional roadless acres in the Palisades, Garns Mountain, Bear Creek and Poker Peak areas. This recommended 465,000 acres is 55 percent of the total acres which presently qualify as roadless on the Forest.

7. Timber Harvest. Key Indicator ASQ

Alternative 6 would not have a scheduled timber harvest. Harvest might occur on unscheduled lands, but would be very limited, given the minimum level of human disturbance emphasis of this alternative.

ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY

Several alternatives were considered but eliminated from detailed study. More information about these can be found in Appendix A - Response to Public Comments. These alternatives were not fully developed because they closely resembled alternatives that were considered in detail, they did not meet the needs for change, they were missing practical implementation components, or they were inappropriate for other reasons described below.

Maximum Commodity Production and Motorized Access

This alternative called for more Forest land devoted to scheduled timber production than Alternative 1. It provided more designated open motorized routes, allowed less cross-country OHV access, recommended no wilderness designation, proposed elimination of the Palisades Wilderness Study Area, and recommended that eligibility determinations under the Wild and Scenic Rivers Act not be made.

Some portions of this proposal were incorporated into Alternative 2. Suggestions that could not be implemented without Congressional action (like those regarding the Palisades Wilderness Study Area and

eligibility under the Wild and Scenic Rivers Act) were not included in any alternative. Because large portions of this proposal became part of Alternative 2, further detailed analysis was not necessary.

Maximum Wilderness

During public involvement activities, it was proposed that all of the Forest's inventoried roadless areas be recommended for wilderness designation. After analysis, some inventoried roadless areas were not proposed for wilderness recommendation in our selected Alternative 3M, because they did not score high enough in our rating of wilderness characteristics. The Roadless Areas Process Paper (Q) was reanalyzed and updated in response to public comments on the DEIS. The updated portion of the process paper is included in Appendix B of this FEIS. A maximum wilderness alternative was not developed. Alternative 6 was developed in response to the desire for additional recommended wilderness.

Range of Variability

Many members of the public and several Forest Service employees advocated the development of an alternative that would move the Forest into its "range of variability (ROV)." This would involve learning what ecological conditions existed on the Forest historically and managing for those same conditions. This alternative was not developed because the current information on the ROV for the Forest is insufficient. Even with this information, ecological variability may be so broad as to provide inadequate direction for an alternative at this time. Finally, this type of alternative would not meet NFMA direction to formulate alternatives that incorporate social and economic conditions along with the ecological situation.

Citizens for a User Friendly Forest (CUFF) Alternative

This alternative was proposed by a citizens group as public comments to the DEIS. The elements of their proposal include the following:

- amend summer OHV map for Alt. 2
- remove date restriction on snowmobile use
- increase ASQ to 20 MMBF with >12 MMBF live and 30 to 50 percent lodgepole
- change 20 percent nonstocked standard to 45 percent
- change mature percent stand from 40 to 30 percent
- define hydrologic disturbance at less than 20 years
- allow sustained harvest in roadless areas and no noninterchangeable component (NIC)
- allow harvest in all BMUs, NIC in Situation 1 habitat
- if 20 MMBF isn't possible, look at departure
- add two areas in Caribou subsection to suitable timber base
- change large 6 1(b) in Caribou subsection to 6 1(a)
- delete forestwide guideline restricting OHV use on slopes of 25-40 percent
- drop Targhee and Robinson Creeks from Wild and Scenic River (W&SR) eligibility
- reduce number of live snag retention trees per acre from 25 to 10
- change 5 1 4(a) to allow cross-country travel from June 15 to prior to big game rifle

We have considered but dismissed this proposal from detailed study for the following reasons. A few of the key components (which appear to be within the DFC and Purpose and Need) of this proposed alternative are already depicted by Alternative 2 as updated for ASQ at > 20 MMBF. We believe this proposed alternative is not substantially different from the Maximum Commodity Production and Motorized Access alternative presented earlier. Also, we believe most of the remaining components of this alternative as recommended above are not advisable because they are not within the DFC and Purpose and Need.

outlined in the FEIS Detailed rationale for dismissal of each element of this proposal can be found in Appendix A, Response to Public Comments of this document

Greater Yellowstone Coalition Alternative

Several groups who commented on the DEIS recommended consideration of an alternative with a mix of the attributes of Alternatives 3M, 5 and 6 that would

- maintain the AUMs of 3M,
- maintain as much of the ASQ of 3M as possible on a sustainable basis,
- recommend substantially more wilderness than even 5 or 6,
- modify 3M grizzly bear prescription in the Bechler area to provide harvest mitigation,
- create a wildlife linkage corridor in the Centennial Mountains with no ASQ

This alternative was considered but dismissed from detailed study for the following reasons which are further documented in Appendix A These proposals would potentially be within the Purpose and Need and DFC, with the exception of the amount of recommended wilderness The overall Forest DFC did not call for recommending such high levels of inventoried roadless as wilderness Furthermore, a "Maximum Wilderness" alternative was presented previously in this EIS and dismissed because it did not respond to the DFC and because not all of the roadless areas rated high enough in the analysis

Original Forest Plan as Written

Alternative 1 reflects current management of the Forest and how it would continue in the future It differs from the original 1985 Plan in some respects Some people have asked for an alternative that comes closer to the letter of the existing Forest Plan The differences between Alternative 1 (which is modeled consistent with the intent of the 1985 Plan) and a strict reading of the 1985 Plan are summarized below They could have been used to shape a separate alternative

- The 1985 Plan called for the harvesting of timber from suitable lands at rates that could not be sustained Because most of this material has already been logged or is no longer merchantable, and because some of it could not be logged because of other resource protection needs, the non-sustainable harvest schedule was not used

- As a part of the Revision process, the Forest reassessed the eligibility of river segments for study as wild, scenic or recreational rivers. That eligibility determination was made, and the Forest has moved to protect the outstandingly remarkable values of the eligible segments in all the alternatives Some people have asked that an alternative be developed which does not include that protection We did not do so because Forest Service policy is to protect the outstandingly remarkable values once eligibility is established

- The provisions of the ESA have not changed since the Forest Plan was put into effect in 1985 However, the understanding of the habitat needs of those species has changed substantially Meeting the needs of these species, in particular the grizzly bear, has substantially changed management on a large portion of the Forest We did not use the previously acceptable approaches for providing grizzly bear habitat because they are not generally accepted in today's scientific community and would not be successfully consulted upon with the United States Department of Interior Fish and Wildlife Service (USFWS)

- The Forest Service has greatly expanded its own list of sensitive species In response to that expanded list, the Forest has had to change management practices to increase habitat protection We have contin-

ued this level of protection because it is designed to prevent these species from being listed as threatened or endangered

COMPARISON OF ALTERNATIVES

A summary of the environmental impacts and effects (called Indicators) for each alternative and the acres of each prescription area are provided in Table II-1 and Table II-2. Due to the complexity of the consequences displayed in these tables, cumulative impacts are not presented here. For a detailed discussion of the effects, consult Chapter IV, "Environmental Consequences."

Acronyms and Abbreviations Used in Table II-1.	
AIZ	Aquatic Influence Zone
ASQ	Allowable Sale Quantity
BMU	Bear Management Unit
Sub	Subunit of a Bear Management Unit
C/H	Cattle/Horse
CEM	Cumulative Effects Model
DVC	Desired Vegetative Condition
FSRAMIS	Forest Service Range Analysis Management Information System
HE	Habitat Effectiveness
HE/HV Index	Percent of Annual Habitat Value
HGL	Hydric Greenline
HV	Habitat Value
FFF	Forest Fire Fighting
LE	Law Enforcement
M Acres	Thousand Acres
M AUM's	Thousand Animal Unit Months
M\$	Thousand Dollars
MM\$	Million Dollars
MMBF	Million Board Feet
Max Mod.	Maximum Modification
Mod	Modification
OHV	Off-Highway Vehicle
P R	Partial Retention
Reten	Retention
S/G	Sheep/Goat
VQO	Visual Quality Objective

**TABLE II-1
COMPARISON OF ENVIRONMENTAL EFFECTS**

The following pages contain a summary of the environmental effects of the alternatives. This summary is drawn from information in Chapter III and IV of the FEIS. Unless otherwise indicated, the information presented for the alternatives is reflective of conditions in the first decade of Revision implementation. Please see these chapters for additional information.

The key issue indicators are displayed first for the components outlined in Chapter 1. Due to the complexity of the issues, there are other indicators that need to be evaluated to adequately address the environmental effects, and those are listed below the key indicators.

ECOLOGICAL PROCESSES AND PATTERNS

	Exist Level	Alt 1	Alt 2	Alt 3	Alt 3-M	Alt 4	Alt 5	Alt 6
Key Indicator - Sustainability								
- M Acres where forest structure and composition maintained or improved 1/	NA	48 5	58 6	52 9	45 2	39 8	29 8	20 7

1/ Estimated acres of silvicultural treatments for the first decade. In addition to forest structure and composition, there are other ecosystem criteria we analyzed that contribute to ecologically sustainable ecosystems.

All alternatives were evaluated on the ability to use prescribed fire to manipulate ecosystems. Aquatic connectivity was determined to be a good indicator of ecosystem pattern.

Other Ecosystem Management Indicators

- M Acres where prescribed fire is allowed	1,610	1,630	1,750	1,750	1,750	1,750	1,750	1,750
- M Acres aquatic zones where connectivity is maintained	342	342	325	448	512	533	590	793

PHYSICAL

Most forest management activities impact the soil resource to some extent. These activities (recreation, timber harvesting, road building, grazing) were evaluated to determine what environmental effect they will have on the soil resource.

The only issue indicators used to evaluate physical elements are related to minerals and the ability to locate, or enter areas on the Forest.

Other Physical Component Indicators

- M Acres open to locatable and mineral entry	1,722	1,384	1,415	1,326	1,295	1,348	1,200	965
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BIOLOGICAL								
	Exist Level	Alt 1	Alt 2	Alt 3	Alt 3-M	Alt 4	Alt 5	Alt 6
Key Indicator - Riparian Health Issue								
- Riparian M Acres meeting DVC 1/	18 7	18 8	20 0	20 0	20 0	21 1	21 1	21 1
- moving toward DVC 1/	5 3	4 9	5 2	5 2	5 2	4 9	4 9	4 9
-not meeting DVC 1/	3 7	4	2 5	2 5	2 5	1 7	1 7	1 7
<p>Many biological elements can be evaluated in determining what effect proposed management activities can have. Water and associated riparian areas can be impacted by activities. The other indicators used to assess impacts are related to roading, timber, and grazing activities.</p> <p>1/ Only includes riparian acres open to grazing (about 79% of the Forest). Does not include acres closed to grazing prior to 1995. Source - FSRAMIS Database.</p>								
Other Riparian and Water Indicators								
- # stream crossings 1/	2,957	2,690	2,410	2162	2,211	1,586	1,433	1,224
- M Acres roaded in AIZ 1/	1 1	1 0	0 9	0 8	0 8	0 6	0 6	0 5
- M Acres impacted by recreation sites in AIZ 1/	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
- M Acres of timber harvest in headwater areas	21 6	6 8	8 0	6 7	5 0	4 0	2 5	0
- M Acres of timber harvest prescriptions in AIZ 1/	10 0	28 3	45 9	29 3	0	0	0	0
- Ml cutthroat streams w/min 6" stubble at the HGL	97	97	79	97	83	379	379	379
- Ml fish-bearing streams w/min 4" stubble at the HGL	323	323	323	2,863	2,863	2,863	2,863	2,863
1/ AIZ widths vary between some alternatives								
Key Indicators - Elk Security Issue								
- Elk Vulnerability (EV) % of Forest mtg state thresholds	48	62	76	83	89	89	95	95
Elk security, habitat, effectiveness and winter range were evaluated because these are important biological elements that contribute to huntable populations and State Fish and Game goals or thresholds								

	Existing	1	2	3	3-M	4	5	6
Other Wildlife and Vegetation Indicators								
- Elk habitat effectiveness weighted average	0 57	0 60	0 61	0 63	0 64	0 66	0 69	0 70
- % of winter range acres meeting DVC	78	81	82	82	82	84	84	84
Forested ecosystems and wildlife species associated with these ecosystems were examined as part of the Biological component of ecosystems. Specifically, the percent of the Forested ecosystem that is in a mature age class and percent of aspen in mature age class								
- Percent of Forested acres in Mature Age Class	79	76	76	76	77	77	78	78
- Percent of aspen in Mature Age Class	92 30	92 30	92 30	92 30	92 30	92 30	92 30	92 30
- Upland M Acres - meeting DVC 1/	1028 40	1065 80	1083 30	1083 30	1083 30	1105 90	1105 90	1105 90
- moving toward DVC 1/	176 10	162 20	160 60	160 60	160 60	156 10	156 10	156 10
-not meeting DVC 1/	153 00	129 50	113 60	113 60	113 60	95 50	95 50	95 50
1/ Only includes upland acres open to grazing (about 79% of the Forest) Does not include acres closed to grazing prior to 1995 Source - FSRAMIS Database								

	Existing	Alt 1	Alt 2	Alt 3	Alt 3-M	Alt 4	Alt 5	Alt 6
Key Indicator - Grizzly Bear Management Issue (within the BMUs)								
- OROMTRD 1/ (mi/sq mi) - Henry's BMU, Sub 1	0 83	0 64	0 62	0 63	0 55	0 44	0 52	0 55
- Henry's BMU, Sub 2	0 77	0 46	0 42	0 40	0 47	0 36	0 42	0 35
- Plateau BMU, Sub 1	0 91	1 08	1 37	0 85	0 58	0 63	0 60	0 74
- Plateau BMU, Sub 2	0 73	0 79	0 91	0 57	0 55	0 50	0 51	0 50
- Bechler/Teton BMU	0 76	0 59	0 63	0 51	0 50	0 43	0 42	0 42

Many indicators can be used to evaluate effects management activities have on grizzly bears. In addition to open motorized roads and trails, total access, the percent of the BMU that is in a core area, and an overall habitat effectiveness/value are used.

Other Grizzly Bear Management Indicators (within the BMUs)								
TMARD 2/ (mi /sq mi) - Henry's BMU, Sub 1	1 24	1 00	0 86	0 99	0 74	0 60	0 64	0 64
- Henry's BMU, Sub 2	0 85	0 59	0 60	0 60	0 54	0 53	0 55	0 51
- Plateau BMU, Sub 1	1 77	1 79	1 47	1 51	0 99	0 95	0 90	1 11
- Plateau BMU, Sub 2	1 87	1 85	1 72	1 00	0 74	0 66	0 70	0 66
- Bechler/Teton BMU	1 26	1 12	0 92	0 68	0 67	0 54	0 55	0 52
- % BMU in Designated Core Area								
-Henry's, Sub 1	23	30	35	38	38	38	38	38
- Henry's, Sub 2	38	38	9	38	38	41	41	41
- Plateau, Sub 1	0	0	0	0	20	19	22	20
- Plateau, Sub 2	0	0	0	0	17	18	18	18
- Bechler/Teton	34	34	31	33	42	33	38	38
- Grizzly CEM 3/ (Annual HE/HV index)								
-Henry's, Sub 1	62 (-)	62 (-)	64 (-)	67 (-)	68 (-)	69 (-)	69 (-)	70 (-)
- Henry's, Sub 2	64 (61)	64 (61)	67 (63)	68 (64)	67 (63)	70 (65)	68 (64)	70 (65)
- Plateau, Sub 1	47 (71)	47 (71)	53 (74)	57 (76)	58 (77)	63 (79)	65 (80)	61 (78)
- Plateau, Sub 2	45 (90)	46 (90)	48 (90)	60 (92)	57 (91)	62 (92)	63 (92)	63 (92)
- Bechler/Teton	67 (76)	67 (76)	68 (76)	72 (79)	72 (79)	74 (80)	75 (81)	75 (81)

1/ OROMTRD = Open Road and Open Motorized Trail Route Density

2/ TMARD = Total Motorized Access Route Density

3/ The cumulative effects model ratings are the daily per acre averages for Habitat Effectiveness divided by the daily per acre average for Habitat Value. A rating of 100 percent would mean no human activity during the spring, summer, fall period. The first rating is for the Targhee portion of the BMU/Subunit. The rating in parenthesis is for the entire BMU/Subunit. For Henry's Lake Subunit 1, the CEM model does not include the 35,170 acres on Henry's Lake Flat, therefore no ratings are shown in parenthesis for the entire BMU/Subunit.

FOREST USE AND OCCUPATION								
	Existing	Alt 1	Alt 2	Alt 3	Alt 3-M	Alt 4	Alt 5	Alt 6
Key Indicators - Access Issues								
Miles of open roads	1,985	1,882	1,863	1,589	1,577	1,372	1,237	1,228
Miles of open trails	773	572	470	435	540	421	232	81
Other indicators within the Forest Use and Occupation Issue Component were used to evaluate the seven alternatives. Winter access, along with dispersed camping are examples used to complement the access issue.								
Other Access Indicators								
- Mi road construction 4/	NA	25 46	29 67	24 92	18 43	13 88	8 07	0 00
- Mi of road reconstruction 5/	NA	16 60	19 95	16 25	11 66	9 05	5 27	0 00
- Mi of seasonally restricted roads	73	209	131	115	25	108	63	80
- Mi of yearlong restricted roads	733	454	242	320	336	198	201	177
- Mi of reclaimed roads	NA	246	555	767	853	1,113	1,290	1,306
- Mi restricted trails	628	752	854	889	817	903	1,092	1,242
- Mi nonfunctional trails	NA	77	77	77	44	77	77	78
- Mi groomed trail for snowmachines	450	456	666	658	554	615	477	355
- M Acres (and percent of forest) open to winter x-country OHV	1,511 (84%)	1,511 (84%)	1,590 (88%)	1,532 (85%)	1,334 (74%)	1,513 (84%)	1,392 (77%)	1,107 (61%)
- M Acres (and percent of forest) open to summer x-country OHV	1,126 (62%)	960 (53%)	761 (42%)	368 (20%)	121 (7%)	79 (4%)	50 (3%)	34 (2%)
Key Indicator - Roadless Management Issue								
- M Acres recommend wilderness	65	65	0	125	171	139	226	465
4/ Road construction per decade does not include temporary roads. Estimate is based on 0.23 miles of road construction per MMBF of scheduled timber harvest.								
5/ Road reconstruction per decade. Does not include temporary roads. Estimate is based on 0.15 miles of road reconstruction per MMBF of scheduled timber harvest.								

Other Wilderness and Recreation Indicators								
	Existing	1	2	3	3-M	4	5	6
- M Acres roadless 3/ - end of decade 1	841	829	816	822	830	829	835	841
- end of decade 2	841	817	791	802	818	818	829	841
- M Acres roadless closed to summer OHV	243	243	203	275	273	289	378	614
- M Acres Preservation VQO	NA	258	193	327	317	349	419	657
- M Acres Reten - P R VQO	NA	705	617	578	742	909	946	764
- M Acres Reten - Mod VQO	NA	524	481	560	718	439	339	328
- M Acres P R - Max Mod VQO	NA	288	482	313	11	49	15	15
- M Acres allocated to dispersed camping	NA	13	29	28	28	28	15	15
- # of jobs 5/	2,186	2,305	2,312	2,299	2,283	2,268	2,243	2,222
- employee compensation MM\$ 6/	414	437	438	436	432	430	425	421
- 25% Fund Payments govt M\$/yr 4/	272	316	349	309	257	217	168	101
- Pay-in-lieu of Taxes M\$/yr	933	1,664	1,643	1,662	1,690	1,710	1,735	1,768
- Annual Forest budget (excluding LE&FFF - MM\$/yr) 7/	128	123	126	127	135	123	122	103
- Annual Forest budget includes LE&FFF - MM\$/yr	14	136	139	141	149	138	138	114
<p>3/ M acres roadless includes wilderness study area and recommended wilderness, protected by prescriptions. This shows how much roadless area would remain</p> <p>4/ Nominal dollars. Existing is the average of the period 1992-1996. Figures shown are for the counties in the Area of Primary Forest Economic Influence (APFEI)</p> <p>5/ Source: IMPLAN model. Full and part-time employment, seasonal and yearlong. Figures shown for the alternatives are representative of decade 1.</p> <p>6/ Source: IMPLAN model. 1992 dollar terms. Comprises wages, salaries and the value of benefits and any contributions to Social Security and pension funds by the employer and employee.</p> <p>7/ 1996 dollar terms. Existing level reflects the period 1991-1993.</p>								

PRODUCTION OF COMMODITY RESOURCES								
	Existing	Alt 1	Alt 2	Alt 3	Alt 3-M	Alt 4	Alt 5	Alt 6
Key Indicator - Timber Harvest Issue								
- ASQ volume (MMBF per year)	59 50 1/	11 07	12 90	10 83	8 00	6 03	3 51	0 00
Other Production Indicators								
- Potential harvest acres		28,380	33,080	27,780	20,520	15,470	9,000	0
- Firewood and products volume (MMBF per year)	5 40	3 80	3 80	3 80	3 80	3 80	3 80	3 80
- M Ac by harvest type Clearcut/Other (per year)		72/2 11	84/1 63	70/2 08	52/1 53	39/1 15	23/ 67	0/0
- Unscheduled timber harvest projects (MMBF per year)		2 00	2 00	2 00	2 00	2 00	2 00	2 00
- M AUMs Permitted	149	143	139	138	*138	*130	**121	**121
- M Ac C/H-S/G allotment -open	1,466	1,371	1,371	1,371	*1,371	*1,371	**1,245	**1,245
-closed	401	496	496	496	*496	*496	**622	**622
<p>* Phase-out of sheep allotments/AUMs in bighorn sheep and grizzly bear habitat is expected to be completed within 30 years. No reduction associated with the phase-out is anticipated over the coming decade.</p> <p>** These figures reflect the immediate close of sheep allotments/AUMs in bighorn sheep and grizzly bear habitat.</p> <p>1/ Potential yield (1990-2010) from 1985 Forest Plan, not ASQ.</p>								

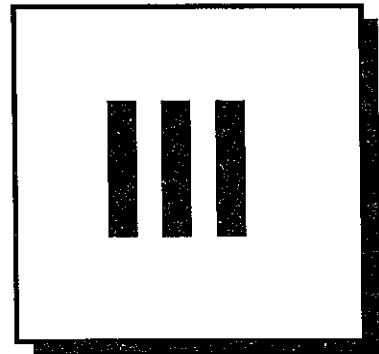
Table II-2 Prescription (Rx) Area Acres by Alternative (figures may not total due to rounding)

Rx	Name	1	2	3	3M	4	5	6
1 1 1	Wilderness Trails	40,198	-	-	-	-	-	-
1 1 2	Wilderness Primitive	10,565	-	-	-	-	-	-
1 1 3	Wilderness, Low Use	32,198	-	-	-	-	-	-
1 1 4	Wilderness Moderate Use	24,703	-	-	-	-	-	-
1 1 5	Wilderness, High Use	26,743	-	-	-	-	-	-
1 1 6	Wilderness Opportunity Class I	-	82,859	82,859	102,346	102,301	115,397	115,398
1 1 7	Wilderness, Opportunity Class II	-	38,624	38,625	19,566	19,565	19,042	19,140
1 1 8	Wilderness Opportunity Class III	-	12,954	12,954	12,572	12,572	-	-
1 2	Wilderness Study, Snowmachine	23,564	23,564	23,541	49,225	49,225	49,225	49,225
1 2(a)	Wilderness Study, No Snowmachine	25,708	25,708	25,708	-	-	-	-
1 3	Wilderness, Recommended	62,968	-	123,692	154,137	137,154	224,081	463,647
2 1 1	Special Management Areas	403	403	12,690	13,627	12,690	12,690	12,690
2 1 2	Visual Quality Maintenance	-	7,826	7,837	10,001	9,666	7,265	18,546
2 2	Research Natural Areas	11,653	11,653	11,653	11,653	11,653	11,653	11,653
2 3	Eligible Wild River	21,689	21,689	21,689	21,689	21,689	21,689	21,689
2 4	Eligible Scenic River	545	16,476	15,202	15,133	15,203	15,255	15,255
2 5	Eligible Recreation River	-	8,795	8,795	8,833	8,795	8,795	8,795
2 6 1(a)	Grizzly Bear Habitat	-	-	18,036	17,052	81,351	152,208	255,123
2 6 1(b)	Grizzly Bear Habitat	-	-	-	-	30,721	31,185	61,944
2 6 2	Grizzly Bear Plateau Core	-	-	-	30,815	-	30,815	-
2 6 3	Grizzly Bear Plateau Security	-	-	-	-	-	57,154	-
2 6 4	Grizzly Bear Plateau Non-Security	-	-	-	-	-	49,186	-
2 6 5	Grizzly Bear Bechler BMU	-	-	-	19,975	-	-	-
2 7(a)	Elk Deer Winter Range	20,499	17,928	61,691	82,257	59,032	83,151	70,933
2 7(b)	Elk Deer Winter Range	-	4,710	4,710	37,586	21,385	48,873	79,930
2 7(c)	Elk Deer Winter Range	69,425	36,496	-	-	-	-	-
2 8 1	Aquatic Influence Zone	-	-	-	-	164,947	151,047	115,369
2 8 2	Aquatic Influence Zone	-	-	105,143	-	-	-	-
2 8 3	Aquatic Influence Zone	-	-	-	163,969	-	-	-
2 9 1	S Fork Snake Scenic River	933	933	933	933	933	933	933
2 9 2	S Fork Snake Recreation River	3,812	3,812	3,812	3,812	3,812	3,812	3,812
3 1 1(a)	Nonmotorized	87,759	142,603	97,042	46,070	66,892	69,222	81,593
3 1 1(c)	Nonmotorized	-	-	-	-	-	22,971	22,969
3 1 1(d)	Nonmotorized	48,233	-	-	-	-	-	13,669
3 1 2	Nonmotorized	-	-	-	26,756	26,319	-	-
3 2(a)	Semi-Primitive Motorized	287	3,843	3,843	-	13,169	13,579	13,579
3 2(b)	Semi-Primitive Motorized	-	8,200	22,925	18,341	20,399	-	-
3 2(c)	Semi-Primitive Motorized	73,744	17,977	26,942	9,309	16,166	146,207	56,226
3 2(d)	Semi-Primitive Motorized	-	2,145	5,894	5,118	97,271	-	-
3 2(f)	Semi-Primitive Motorized	125,533	196,423	61,722	-	-	-	-
3 2(g)	Semi-Primitive Motorized	11,854	49,611	121,342	49,822	48,811	95,050	229,074

Continued, Table II-2 Prescription (Rx) Area Acres by Alternative								
3 2(h)	Semi-Primitive Motorized	77,134	-	-	-	-	-	-
3 2(i)	Semi-Primitive Motorized	-	-	-	59,621	-	-	-
3 2(j)	Semi-Primitive Motorized	-	-	-	27,128	-	-	-
4 1	Developed Recreation Sites	892	892	892	892	892	892	892
4 2	Special Use Permit Rec Sites	3,931	4,009	4,009	3,956	4,009	3,825	3,743
4 3	Dispersed Camping Mgmt	1,289	2,647	2,542	3,255	2,540	1,351	1,355
5 1(a)	Timber Management	235,770	100,423	-	-	-	-	-
5 1(b)	Timber Management	15,351	116,391	1,706	-	-	-	-
5 1(c)	Timber Management	-	530	83,745	82,459	-	-	-
5 1 3(a)	Timber Management No Clearcut	-	35,453	41,735	34,354	-	-	-
5 1 3(b)	Timber Management No Clearcut	-	10,159	-	13,924	-	-	-
5 1 4(a)	Timber Management Big Game	25,798	173,558	91,931	6,606	-	-	-
5 1 4(b)	Timber Management Big Game	4,379	14,792	50,467	126,437	33,639	-	-
5 1 4(c)	Timber Management Big Game	-	-	24,526	23,354	-	-	-
5 1 4(d)	Timber Management Big Game	-	-	-	2,898	-	-	-
5 1 5	Timber Management Heritage Res	-	11,438	-	-	-	-	-
5 2 1	Visual Quality Improvement	-	10,734	7,236	7,017	7,265	652	-
5 2 2	Visual Quality Maintenance	14,468	12,854	16,225	14,264	12,688	11,032	-
5 3 2(a)	Grizzly Bear Habitat Sit 1	86,745	63,441	-	-	-	-	-
5 3 2(b)	Grizzly Bear Habitat Sit 1	-	32,440	65,862	-	-	-	-
5 3 3(a)	Grizzly Bear Habitat Sit 2	186,663	9,315	-	-	-	-	-
5 3 3(b)	Grizzly Bear Habitat Sit 2	30,138	14,305	61,298	-	-	-	-
5 3 3(c)	Grizzly Bear Habitat Sit 2	12,641	-	-	-	-	-	-
5 3 3(d)	Grizzly Bear Habitat Sit 2	-	69,011	114,685	-	-	-	-
5 3 4	Grizzly Bear Habitat Sit 2	-	-	38,600	-	174,286	-	-
5 3 5	Grizzly Bear Habitat Outside Core	-	-	-	216,480	-	-	-
5 4(a)	Elk Deer Summer Range	8,844	1,957	132	13,300	3,504	176,894	-
5 4(b)	Elk Deer Summer Range	15,464	14,785	14,789	14,289	13,729	13,694	-
5 4(c)	Elk Deer Summer Range	12,213	39,183	52,105	46,177	255,356	69,238	-
5 4(d)	Elk Deer Summer Range	13,961	1,104	-	-	-	-	-
5 4(e)	Elk Deer Summer Range	25,039	-	-	-	22,908	-	-
5 7	Eligible Scenic River	12,696	-	-	-	-	-	-
5 8	Eligible Recreation River	7,305	-	-	-	-	-	-
5 9 1	Alt 1 Aquatic Influence Zone	67,244	-	-	-	-	-	-
5 9 2	Alt 2 Aquatic Influence Zone	-	116,350	-	-	-	-	-
6 1(a)	Range Management	202,701	96,969	96,970	-	-	-	-
6 1(b)	Range Management	1,496	96,434	95,584	157,385	171,222	32,186	17,484
7 1(a)	Intermingled Public/Private Lands	-	-	-	-	24,807	24,731	19,761
7 1(b)	Intermingled Public/Private Lands	-	-	-	-	6,097	9,575	-
8 1	Concentrated Development Areas	4,544	4,577	4,544	4,639	4,544	4,526	4,527
8 2	Proposed Con Dev Areas	-	32	159	-	-	-	-
TOTAL	Targhee Administration*	1,810,000	1,810,000	1,810,000	1,810,000	1,810,000	1,810,000	1,810,000

* Includes 21,000 acres of water not included in the prescriptions. Almost all of these acres are in the Paisades and Island Park Reservoirs.

Chapter



Affected Environment



CHAPTER III AFFECTED ENVIRONMENT

READER'S GUIDE - In this chapter you will find:

A description of the following components of the Forest and Key Issues

- Introduction to Ecosystem Management
 - Principles
 - Proper Functioning Condition
- Ecological Processes and Patterns
 - Ecological Processes and Disturbances
 - Ecological Patterns*
- Physical Elements of the Environment
- Biological Elements of the Environment
 - Aquatic and Riparian Ecosystems
 - Terrestrial Ecosystems
- Forest Use and Occupation
 - Access Management
 - Wilderness and Recreation Resource
 - Economic and Social Environment
- Production of Commodity Resources
 - Timber
 - Livestock Grazing

This chapter describes the existing environment that will be affected by implementation of any of the alternatives. It describes the existing physical, biological and social environment of the Forest and the surrounding area. Information contained in this section appears in the same order as the components outlined in Chapter 1.

INTRODUCTION TO ECOSYSTEM MANAGEMENT

PRINCIPLES

In recent years the Forest Service has embraced the concept of EM. This is an approach to natural resource management that strives to ensure healthy, productive, sustainable ecosystems by blending the needs of people and environmental values in a given area such as the Forest. An ecosystem is a complex system of living and nonliving components that interact and change continually. Healthy ecosystems are those that are in PFC. Ecosystems that are in PFC display resilience to disturbance to the structure, composition and process of their biological and physical components. They retain all of their parts and functions for future generations even though vegetation patterns, human uses or other conditions may change. Understanding ecological processes (fire and other natural disturbances) and how these processes shaped vegetation patterns over time in a landscape are important steps towards implementing EM.

Adaptive Management

An additional principle of EM is the quest for and application of new knowledge regarding ecosystems. Our understanding of ecosystems and the effects of various management activities is subject to change as new information becomes available. In order to accommodate and react to such change, the Forest Service has adopted an adaptive management approach. In adaptive management, monitoring and evalu-

ation are used to assess the effects of management decisions and identify new information. Resource management may then be changed to reflect new understandings.

Scale

Another important EM principle is that different issues, components or effects may require description at different geographic and time scales. For example, economic issues are described at the county level, but fisheries are discussed by hydrologic unit. For economic and social issues political boundaries are more meaningful, while ecological units are used for resource discussions. In this document, we have addressed issues at many different scales and levels of specificity, depending on which is most relevant to the decisions being made.

Subsections

Many resources are described in this chapter using the ecological units known as subsections. These units exhibit unique patterns in soils, landform, topography and potential natural vegetation, among other characteristics. The Forest encompasses part or all of seven subsections (Figure III-1)

- Lemhi/Medicine Lodge
- Centennial Mountains
- Island Park
- Madison-Pitchstone Plateaus
- Teton Range
- Big Hole Mountains
- Caribou Range Mountains

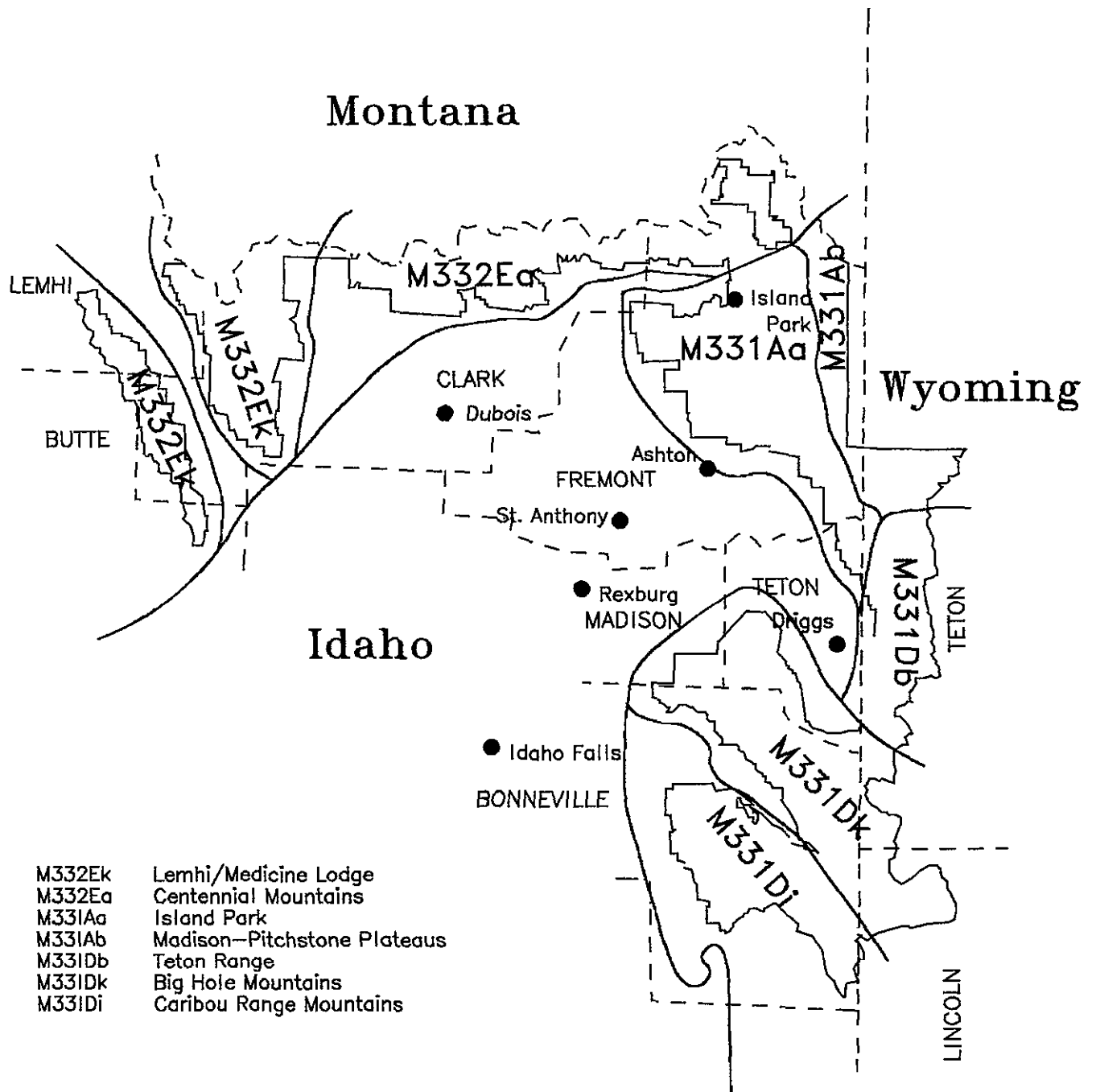
To get a better understanding of each of the seven subsections that are discussed in this chapter, a brief description of each follows. Additional information on the subsections is available throughout this document, and in process papers or planning records.

Lemhi/Medicine Lodge - This subsection includes the Lemhi and the Medicine Lodge/Beaverhead Mountains. A variety of vegetation exists with dominant communities of mostly Douglas-fir and limber pine. Sagebrush/bunchgrass and mountain mahogany communities are common on the lower elevation and strong southerly exposures. Limber pine communities and alpine meadows exist at the high elevations. This subsection is rich in mining history with old mining sites and remnants of town sites. Located in the Birch Creek Valley are four preserved brick adobe charcoal kilns. Sixteen were originally built to furnish charcoal to the Nicholia Mine. This area also has a National Scenic Trail, two recommended wilderness (Italian and Diamond Peaks) and most big game species. This section of the Forest is entirely on the Dubois Ranger District.

Centennial Mountains - This subsection covers the Centennial Mountains between the east fork of Irving Creek and Reas Pass to the east. The Centennials, which form part of the Continental Divide, are a scenic mountain range with high mountain meadows scattered through spruce/fir and Douglas-fir forests. At lower elevations sagebrush/grasslands grade into Douglas-fir and lodgepole pine forests. Lionhead, in the northeast portion of the subsection, is a recommended wilderness. The major travel corridors are Highways 20 and 87, and a portion of Interstate 15. The Yale-Kilgore road is a secondary travel route connecting Island Park to Kilgore and Dubois. In the northeast portion of the subsection is Henry's Lake, a world renowned fishery. The western part is the Red Conglomerate range, home to at least one endemic sensitive plant species. This section of the Forest falls within the Dubois and Island Park Ranger Districts.

Island Park - This subsection includes the west half of Island Park, Ashton and the northwest portion of Teton Basin Ranger Districts. The landscape of this subsection features a large caldera. Highway 20 is the only major highway that travels through this subsection and Highway 47, a state Scenic Byway also

Subsection Overlay on the Targhee National Forest and the Surrounding Area



- M332Ek Lemhi/Medicine Lodge
- M332Ea Centennial Mountains
- M331Aa Island Park
- M331Ab Madison—Pitchstone Plateaus
- M331Db Teton Range
- M331Dk Big Hole Mountains
- M331Di Caribou Range Mountains

- Subsection Lines
- - - Forest Boundary
- - - State Lines
- - - County Lines



Not To Scale

Figure III-1

occurs in this subsection. Among the many scenic attractions are Upper and Lower Mesa Falls, the last major undisturbed falls on the Upper Columbia River system. The Mesa Falls Scenic Byway, established in 1989, provides motorists with a breathtaking view of the Teton Mountain Range and accesses the two falls. The Island Park subsection offers excellent trout fishing at Island Park Reservoir and along the Henry's Fork, Buffalo River, Warm River, Fall River and Bitch Creek. The Island Park subsection is also known for its snowmachine trails, cross-country ski trails and summer home concentrations. Large scale timber harvest activity is evident due to the mountain pine beetle epidemics in 1960s and 1970s. Harriman State Park lies in the heart of the Harriman Wildlife Refuge, with 16,000 acres of forest, meadows, lakes and streams.

Madison-Pitchstone Plateaus - The largest portion of this subsection is actually in the Park. The section on the Forest falls within the Island Park and Ashton Districts next to the Park. The Jedediah Smith and Winegar Hole Wildernesses lie within this subsection, as does the recommended Idaho wilderness portion of Winegar Hole. The Ashton-Flagg Ranch and Fish Creek roads are the major access routes in this area. Grassy Lake is a 320-acre lake created when a dam was built by the Bureau of Reclamation in 1937-1939. Grassy Lake as well as other lakes and streams in the area are popular fishing areas and are accessed by the Flagg Ranch road. Several organized youth camps exist throughout this subsection. The Cave Falls road is the only motorized access to the southwest portion of the Park.

Teton Range - This area encompasses the west slope of the Teton Mountains. The Teton Range is a spectacular line of high peaks rising abruptly along the west side of Jackson Hole. The vegetation is a diverse mix of forested and nonforested plant communities. The Jedediah Smith Wilderness traverses the upper portions of the west slopes of the Teton Mountains. The Grand Targhee Ski Resort is a major tourist attraction within the subsection. Two organized youth camps are present. This area is known for its many backcountry trails which are accessible by horse or foot. This section of the Forest falls within the Ashton and Teton Basin Ranger Districts.

Big Hole Mountains - This subsection takes in all Forest lands between Highway 33 in Idaho and Highway 22 in Wyoming on the north and the South Fork of the Snake River to the south. Several major highways provide access. Idaho Highways 26, 31 and 33, and Highway 22 in Wyoming. Highway 31 is a State Scenic Byway over Pine Creek Pass. Vegetation consists of mountain brush, grass/forb openings, aspen and forests of Douglas-fir and lodgepole pine. The area has a variety of recreational opportunities including Kelly Canyon Ski Resort and backcountry hiking. Palisades Reservoir and the South Fork of the Snake River are used by water sports enthusiasts. This section of the Forest falls within the Teton Basin and Palisades Ranger Districts.

Caribou Range Mountains - This subsection is the portion of the Caribou N.F. administered by the Forest. It lies south of the South Fork of the Snake River. Steep mountain slopes and canyons dominate the landscape. The Palisades Reservoir is shared by this subsection and the Big Hole Mountains Subsection. Vegetation in this subsection forms a patchwork of tall sage/grass openings, aspen and mixed Douglas-fir/lodgepole pine forests. Recreation use is very similar to the Big Hole Mountains Subsection with high trail and backcountry use as well as hunting, fishing and water sports both on the reservoir and the Snake River. This area has several summer home divisions and two organizational camps. This section of the Forest falls entirely in the Palisades Ranger District.

PROPER FUNCTIONING CONDITION (PFC)

Ecosystems at any temporal or spatial scale are in a PFC when they are dynamic and resilient to disturbances to structure, composition and processes of their biological or physical components. Ecosystems can be assessed as to the sustainability of their biological and physical components and the risks associated with ecosystems which are degraded beyond the point of resiliency and sustainability. These assessments evaluate the structure, composition, disturbance regime and patterns of ecosystems. When combined with assessments of social and economic conditions, they can provide a basis for making decisions on how to best maintain and restore ecosystem sustainability in ways that achieve social and

economic expectations. The USDA Forest Service, Intermountain Region developed a methodology of assessing ecosystems used on the Forest and is described in the draft document titled, Proper Functioning Condition Process - 1996 (Process Paper W). This document incorporates methodologies from Riparian Area Management, Process for Assessing Proper Functioning Condition (Bureau of Land Management, TR 1737-9, 1993, 52 pgs.)

Range of Variability (ROV)

One component of PFC is the historical ROV which refers to the range of conditions under which ecosystems evolved and function through time. By understanding how ecosystems have functioned in the past and successfully maintained themselves, we gain insight into characteristics of healthy ecosystems. The ROV provides information about conditions under which plant and animal species evolved. Sustaining healthy plant and aquatic systems is an important part of ensuring that all ecosystem components, from wildlife and fish to microbes and fungi, are maintained.

ROV is not a desired condition nor a target state for ecosystems. It encompasses the entire historic set of the many conditions that have existed on a given landscape during a given time period. Past conditions can provide reference points, like benchmarks, which can be used to predict successional development or the response of ecosystem elements, such as wildlife or plant communities, to management intervention. Understanding ROV helps us understand how systems will respond to different management options or no management action at all.

Information about ROV prior to 1900 is limited, but we do have some knowledge of how the Forest has changed over recent history. The Forest is in the process of analyzing historical maps, photographs and literature to better understand the ROV, both natural and human-caused. As part of assessing PFC, ROV of ecosystems will be identified for disturbance regimes, patterns, composition and structure. Cooperative projects with the scientific community will continue to be used to promote understanding of historical vegetation patterns and watershed function.

ECOLOGICAL PROCESSES AND PATTERNS

ECOLOGICAL PROCESSES AND DISTURBANCES

Ecosystems constantly change across both time and space. Change is brought about by many different processes and disturbances that occur over varying time frames and spatial scales. For example, fire is a disturbance process that can burn thousands of acres of forestland within a matter of hours. On the other hand, it may take millions of years for a stream to carve a canyon through the process of erosion. Some disturbances are relatively predictable, while others happen in utterly unpredictable, random ways. Humans can have a great impact on some of these processes, as discussed below. Ecosystem processes and disturbances are never independent from one another. Any given process will change resource conditions, which then sets the stage for some other agent to act.

While there are innumerable processes occurring in an ecosystem, we have focused on only a few that are most likely to be affected by the alternative management schemes being analyzed in this FEIS. This section will only examine "natural" disturbances, not those associated with human activities such as grazing, timber harvest and roading.

Succession - Scale: Community Type

Succession is the process by which plant communities change through time if they are undisturbed. This process usually begins with pioneer species invading bare ground. These early seral plants change the environment by their presence to the point where other more shade-tolerant plants can take over the site. These plants then modify conditions further by their leaf litter and shade, making the site more hospitable.

to yet another set of plant species which replaces them. The gradual progression from early to late seral communities continues unless interrupted by a disturbance such as wind or fire.

Due to the control of fire on the Forest since the early 1900s, succession has become a dominant ecosystem process in the unharvested portions of the Forest. Late seral communities are prevalent in herbaceous/shrub ecosystems as well as in most forest types.

Herbaceous/Shrub Communities - The process of succession in these areas generally begins following fire and is characterized by open grassland interspersed with a few shrub species. Mountain big sagebrush and other shrubs begin to dominate after five to ten years. As they compete with the grasses for water, the grasses lose vigor and die out. Sagebrush provides shade for Douglas-fir seedlings, which may take over the site as a dominant community type until fire sets it back to grassland. In the absence of a Douglas-fir seed source, the area may become a sagebrush-dominated community.

Fire suppression on the Forest has allowed a significant acreage of the herbaceous and shrub communities to convert to Douglas-fir or dense sagebrush. This varies from historical conditions where mosaics of different-aged sagebrush/grassland stands existed, and where stands dominated by herbaceous species were more common. Some high mountain meadows are also being reduced in size by conifers encroaching in from the edges.

Forest Communities - Succession can vary a great deal depending on climate and soils in forested systems, but it generally begins with early seral species such as aspen and lodgepole pine, then progresses to shade-tolerant climax species. Aspen is a relatively short-lived tree which may give way to lodgepole pine or Douglas-fir communities after approximately 100 years. The mountain pine beetle commonly attacks lodgepole pine after 80 to 120 years, allowing more shade-tolerant species to take over. Douglas-fir will likely then dominate on warmer, drier sites, while subalpine fir and Engelmann spruce dominate in colder areas. Douglas-fir, subalpine fir or Engelmann spruce generally form long-lived climax communities until a disturbance occurs.

Much of the aspen acreage that was present historically on the Forest has been converted to Douglas-fir through the succession process. In addition, aspen stands are overwhelmingly in the mature or older age classes. These conditions have resulted from fire suppression. Succession at higher elevation sites has resulted in subalpine fir and Engelmann spruce becoming intermixed with whitebark pine. With continued absence of fire, the whitebark pine will likely give way to the spruce and fir.

Eighty percent of the forested land is in the mature age class (the mature age class includes old growth and late seral forests). This is primarily a result of fire suppression. Historically fire produced a greater variety of age classes over the landscape. Mature age classes include old growth and late seral forests and provide important wildlife habitat for some species. They are also more susceptible to stand-replacing fires and mortality from insects than most early-seral communities.

Old Growth and Late Seral Forests - Scale: Vegetation Type, Subsection and Forestwide

OLD GROWTH

Old Growth Characteristics - In 1993, the Intermountain Region completed a report on the characteristics of old growth forests in the Intermountain Region (USDA Forest Service 1993). Table III-1 summarizes the characteristics of old growth forests as described in the 1993 publication. These characteristics are the old growth definitions for the Revised Plan. More description about old growth characteristics can be obtained from the complete report.

Old Growth Inventory and Analysis - The Forest does not have a complete old growth inventory. However, an analysis of 412 permanent forest inventory plots was completed to assess what percent of the forested acres meet the old growth characteristics and to gain an idea of the potential distribution of old growth.

Tabel III-1 Summary of Characteristics of Old Growth Forests in the Intermountain Region (USDA Forest Service 1993)

SAF Cover Type	LIVE TREES *							DEAD TREES *					
	DBH	TPA	Age	6" DBH Classe	TREE DECADENCE TPA DBH		Canopy Layers	STANDING DBH Ht TPA			DOWN Dia #/Acre Length		
Spruce/fir warm/moist	24	25	220	2	evidence		2	12	15	2	12	1	8
Spruce/fir cold/dry	15	15	150	2	2	14	2	10	15	2	8	16	8
Spruce/fir alpine transition	12	10	150	2	evidence		2	NA	NA	Infrequent	NA	Infrequent	
Whitebark Pine	18	15	250	2	2	15	2	15	10	5	20	5	8
Douglas-fir high prod	24	15	200	2	evidence		2	20	20	1	12	?	0-16
Douglas-fir low prod	18	10	200	2	2	15	2	16	10	0-3	15	0-4	8
Aspen-mesic	12	20	100	2	2	NA	?	10	15	2	8	10	10
Aspen-dry	12	10	100	2	2	NA	?	10	15	2	8	10	10
Lodgepole	11	25	140	2	2	11	2	11	?	5	11	50	8
Limber Pine low timberline	16	10	250	1	evidence		2	NA	NA	few	16	rare	rare
Limber Pine montaine woodln	16	10	500	1	evidence		1	NA	NA	few	NA	rare	rare

* All figures are less than or equal to, unless shown as a range of numbers

DBH = diameter at breast height, in inches

TPA = trees per acre

Age = years

6" DBH Classes = number of recognizable size classes that differ by at least 6 inches in diameter

Tree Decadence = tree decadence, number of trees per acre of a minimum DBH showing signs of disease or injury of some kind

Canopy Layers = number of recognizable canopy layers

Ht = height in feet

Dia = diameter of downed logs in inches

#/Acre = number of downed logs per acre

Length = minimum length (in feet) of downed logs

Evidence = some evidence of tree decadence but no minimum requirement for tpa or dbh

NA = information is not available for this parameter, or this parameter is not applicable for this old growth type

? = the old growth definitions are not clear on what this parameter should be

For this analysis, data from the 412 permanent forest inventory plots contained information on the old growth characteristics for live trees and standing dead trees. Data on downed dead trees was not available. If some of the plots were deficient in downed dead trees, then our calculation pertaining to the quantity of old growth will be high.

The 412 permanent inventory plots were measured in 1990 and 1991. Since the plots were measured in 1990 and 1991, we added five years to all of the tree ages to account for time. We also added 1-inch to all of the diameter at breast height (dbh) measurements to allow for growth. Adding 1-inch dbh is probably optimistic for old trees, but we did not want to eliminate plots which were close to the minimum required dbh.

In this examination, we did not include any plot which had less than 50 live trees per acre that were 1-inch dbh or larger. This was done to eliminate those stands which have had some kind of first entry logging, such as a seed tree cut. Also, it would be very difficult for any plot to qualify as having two canopy layers or two dbh size classes with less than 50 live trees per acre.

Further details of this analysis are described in Process Paper D.

Table III-2 displays the 36 plots (8.7 percent of the total 412 plots) which meet all of the old growth characteristics that could be determined from the permanent forest inventory plots. These plots were located in the Lemhi Mountains, Medicine Lodge, Centennial Mountains, Madison-Pitchstone Plateaus, Teton Range and Big Hole Mountains Subsections (Figure III-2). No old growth plots were found in the Island Park and Caribou Range Mountains Subsections.

LATE SERAL FOREST

Late Seral Forest Characteristics - Late seral forests meet some of the old growth characteristics as defined in Table III-1, but do not meet all of the characteristics. Late seral forests provide some of the structural and functional attributes of old growth forests. We characterized late seral forests in three categories as follows:

- 1) Forests which meet the live tree characteristics for old growth, but do not meet the standing dead tree characteristics for old growth.
- 2) Forests which partially meet the live tree characteristics for old growth, in that there are one or more live trees per acre that meet the minimum dbh and age requirement for old growth, but the number of live trees per acre is less than the old growth characteristic requirements.
- 3) Forests which have live trees which meet the minimum dbh requirements for old growth, but no live trees meet the age requirements for old growth.

Late Seral Forest Inventory and Analysis - The Forest does not have a complete late seral forest inventory. However, an analysis of 412 permanent forest inventory plots was completed to assess what percent of the forested acres meet late seral forest characteristics and to gain an idea on the potential distribution of late seral forests.

Further details of this analysis are described in Process Paper D.

The number of permanent forest inventory plots meeting the three categories of late seral forest is as follows:

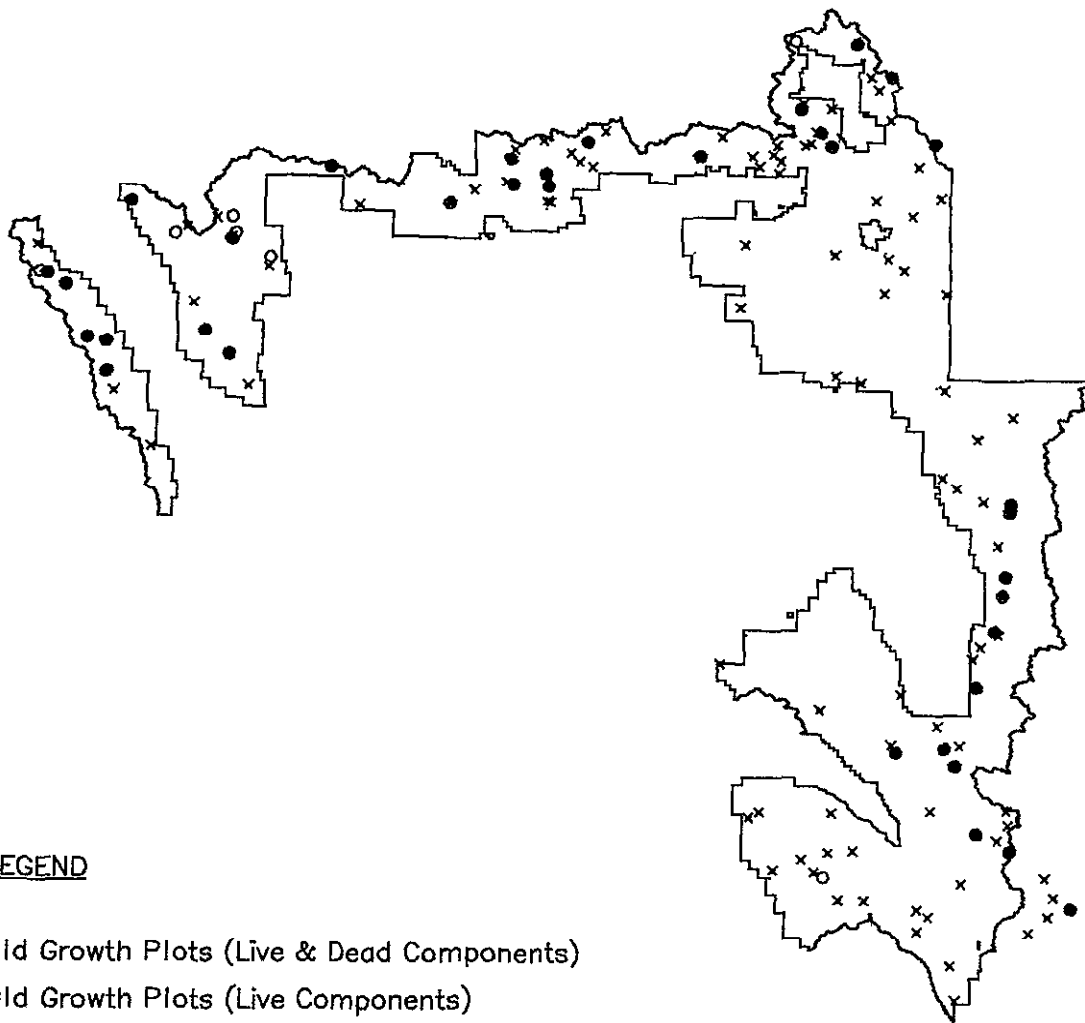
- 1) A total of seven plots (1.7 percent of the total 412 plots) meet the live tree characteristics for old growth, but do not have the required number of snags. These plots are located in the Lemhi Mountains, Medicine Lodge, Centennial Mountains and Caribou Range Mountains Subsections.
- 2) A total of 89 plots (21.6 percent of the total 412 plots) partially meet the live tree characteristics for old growth, in that there are one or more live trees per acre that meet minimum dbh and age requirements for old growth, but the number of live trees per acre is less than the old growth characteristic requirements. These plots are located in all subsections.
- 3) A total of 186 plots (45.1 percent of the total 412 plots) have live trees which meet the minimum dbh requirement for old growth, but no live trees meet the age requirements for old growth. These plots are located in all subsections.

In the previous section on Succession, it was stated that 79.6 percent of the forested acres are in the mature class. This analysis provides a further refinement of the mature age class as follows:

- 10.9 percent of the mature age class meets old growth characteristics for live trees and standing dead trees
- 2.1 percent of the mature age class meets live tree old growth characteristics
- 27.1 percent of the mature age class partially meets the live tree old growth characteristics
- 56.7 percent of the mature age classes have live trees that meet minimum dbh requirements, but do not meet the age requirements
- 3.2 percent of the mature age classes have mature trees with dbh smaller than old growth requirements

Subsection	Plot Number	SAF Cover Type
Lemhi Mountains	59	Douglas-fir, low productivity, also contains old growth limber pine trees
	60	Spruce/Fir - cold/dry, also contains old growth limber pine trees and Douglas-fir
	61	Spruce/Fir - cold/dry, also contains old growth limber pine trees and Douglas-fir
	62	Limber pine - lower timberline, also contains old growth spruce/fir trees
	64	Douglas-fir, low productivity
	359	Qualifies as both Douglas-fir - low productivity and Limber pine - lower timberline
Medicine Lodge	357	Douglas-fir - low productivity
	51	Douglas-fir - low productivity
	52	Spruce/Fir - cold/dry, also contains old growth limber pine trees and Douglas-fir
	46	Qualifies as both Spruce/Fir - cold/dry and Douglas-fir - low productivity
Centennials	39	Spruce/Fir - cold/dry, also contains old growth Douglas-fir trees
	34	Douglas-fir - low productivity
	26	Douglas-fir - low productivity
	28	Douglas-fir - low productivity
	16	Douglas-fir - low productivity
	18	Douglas-fir - low productivity, also contains old growth lodgepole pine and spruce/fir.
	12	Spruce/Fir - cold/dry
	88	Douglas-fir - low productivity
	79	Douglas-fir - low productivity
	221	Douglas-fir - low productivity
	69	Douglas-fir - low productivity
188	Spruce/Fir - cold/dry	
616	Qualifies as both Spruce/Fir - cold/dry and Douglas-fir - low productivity	
Madison Plateau	190	Spruce/Fir - cold/dry
Teton Range	343	Spruce/Fir - cold/dry, also contains old growth limber pine and Douglas-fir trees
	344	Spruce/Fir - cold/dry, also contains old growth lodgepole pine trees
	391	Aspen - mesic
	348	Spruce/Fir - cold/dry, also contains old growth Douglas-fir trees
	143	Spruce/Fir - cold/dry
	137	Spruce/Fir - cold/dry
Big Hole/Palisades	122	Spruce/Fir - cold/dry
	127	Spruce/Fir - cold/dry
	113	Spruce/Fir - cold/dry, also contains old growth Douglas-fir trees
	112	Lodgepole Pine, also contains some old growth Douglas-fir trees
	372	Spruce/Fir - cold/dry
	115	Douglas-fir - low productivity

Targhee National Forest Old Growth and Late Seral Forest Plots



LEGEND

- Old Growth Plots (Live & Dead Components)
- Old Growth Plots (Live Components)
- × Late Seral Plots (Partial Live Components)
- × Late Seral Plots (Minimum dbh Components)



Not To Scale

Figure III-2

Fire - Scale: Vegetation Community and Subsection

Historically fire has played a significant role in the GYA. Some plants have evolved with fire and have adapted to it in various ways. Fires occurred naturally at certain average time intervals, which varied by vegetation and climatic conditions. Fires were also set by humans on a fairly regular basis, particularly in the sagebrush/grass and aspen communities. These fires created mosaic patterns of different seral stages of vegetation across the landscape.

In the early 1900s public concern for protecting the forests from fire ushered in a period of aggressive fire suppression which has continued to the present. With these suppression strategies and the lack of a prescribed fire program, the fire intervals which occurred historically have been altered. Due to the absence of fire, much of the forest vegetation has reached the mature age class (see Table III-3) and herbaceous/shrub types are in the later stages of succession. The mosaic patterns in the landscape are not as prevalent as before. These conditions increase the potential for fires of higher intensity which may be detrimental to species that evolved with frequent, low intensity burns.

There are no approved fire management plans on the Forest. All previous fire management plans were suspended as a result of the 1988 Yellowstone fires.

Fire frequency intervals and behavior vary widely among the different vegetation communities, so each is described separately in the following discussion.

Douglas-fir Fire Regimes - It appears that Douglas-fir forests in this area historically had a fire interval of 20-50 years. These fires were generally low ground fires which tended to thin the stands, favoring large, older Douglas-fir trees with thick bark. Fire suppression has led to conditions on the Forest where most Douglas-fir stands have multiple stories and dense stocking (trees/acre). Trees of various heights provide a "ladder" for fire, allowing it to reach the tree crowns. Absence of frequent ground fires can cause dead fuels to build up over time. Fires which start under these conditions are much more severe than ground fires and tend to replace the Douglas-fir with earlier seral species such as aspen or lodgepole pine (Bradley et al. 1992).

Lodgepole pine Fire Regimes - In this area between the years 1200 and 1700, major fires occurred in the lodgepole pine component approximately every 100 years. Stand-replacement fires in lodgepole pine are closely tied to epidemics of the mountain pine beetle. Tree mortality caused by the beetle creates massive amounts of fuel. Fires which start under such conditions are likely to be severe. This cycle of beetles, fire and stand replacement is part of lodgepole pine's evolutionary history in the Rocky Mountains. We witnessed this cycle on the Forest beginning with beetle epidemics in the 1960s and ending with large fires such as the North Fork Fire in 1988. Conditions for these large fires still exist in much of the Forest's mature lodgepole pine.

Most lodgepole pine, with the exception of that on cool moist sites, historically experienced low intensity fires every 40-60 years. Fire suppression has interrupted this portion of the lodgepole fire cycle on the Forest. The effects of this are likely not too serious, since conditions created by the mountain pine beetle are similar to those created by light ground fires (stands are thinned and regeneration may fill in the understory) (Personal comm., Brown 1993, Bradley et al. 1992, USDI National Park Service 1993, Management of Lodgepole Pine Ecosystems 1973).

Aspen Fire Regimes - The average fire-free period historically was 40 years or longer for pure aspen stands. Fire in aspen has been reduced in size and frequency throughout the West due to fire control and the cessation of intentional burning. Fire suppression on the Forest has resulted in many aspen stands that are now mixed, or overtaken by, conifers such as Douglas-fir or lodgepole pine. If left undisturbed for long periods of time, conifers can change the soil characteristics so that aspen is less likely to survive (Cryer & Murray 1992). Mixed conifer/aspen stands are conducive to large stand-replacing fires. If such fires were allowed to occur, they would likely lead to pure aspen regeneration providing the fires were not

Table III-3 Existing Forested Conditions within Subsections

Subsection	Community Type	Total Forested Acres	Percent Nonstocked	Percent Seedling	Percent Sapling	Percent Pole	Percent Mature 1/	Percent Mature Prev Harv 2/
Lemhi/ Medicine Lodge	Aspen	335	00	00	00	00	1000	00
	Douglas-fir	93,450	00	06	00	00	994	00
	Lodgepole Pine	9,759	00	100.0	00	00	00	00
	Mixed LP/DF	343	00	00	00	00	1000	00
	All Forested Acres	103,887	00	9.9	00	00	901	00
Centennial Mountains	Aspen	8,781	84	22	07	42	845	00
	Douglas-fir	114,154	09	09	00	00	834	148
	Limber Pine	114	00	00	00	00	1000	00
	Lodgepole Pine	46,873	57	237	114	107	485	00
	Mixed LP/DF	30,376	08	16	02	00	974	00
	Other Mixed Conifer	21,626	12	42	10	06	930	00
	Spruce/Subalpine Fir	2,669	04	00	23	16	957	00
	Whitebark Pine	419	00	00	00	00	1000	00
All Forested Acres	225,012	22	61	26	25	792	75	
Island Park	Aspen	7,616	77	209	51	47	616	00
	Douglas-fir	27,143	14	01	03	00	968	14
	Lodgepole Pine	192,653	93	253	116	57	481	00
	Mixed LP/DF	42,370	05	45	31	02	915	01
	Other Mixed Conifer	6,224	03	148	53	12	785	00
	Spruce/Subalpine Fir	368	00	00	00	00	1000	00
	All Forested Acres	276,374	69	193	89	41	607	02
Madison- Pitchstone Plateaus	Aspen	4,697	86	203	53	08	650	00
	Douglas-fir	6,824	79	05	04	12	899	00
	Lodgepole Pine	145,260	96	186	109	61	548	00
	Mixed LP/DF	26,584	30	12	05	00	953	00
	Other Mixed Conifer	5,715	10	95	08	05	882	00
	Spruce/Subalpine Fir	1,035	00	01	00	29	969	00
All Forested Acres	190,115	83	152	85	48	633	00	
Teton Range	Aspen	9,330	00	00	54	14	931	00
	Douglas-fir	24,530	04	00	00	00	996	00
	Lodgepole Pine	19,180	11	01	00	100	888	00
	Mixed LP/DF	28,311	00	00	00	00	1000	00
	Other Mixed Conifer	8,622	00	14	00	14	972	00
	Spruce/Subalpine Fir	2,169	00	00	00	00	1000	00
	Whitebark Pine	40	00	00	00	00	1000	00
All Forested Acres	92,182	03	02	06	23	966	00	
Big Hole Mountains	Aspen	37,673	00	15	01	00	983	00
	Douglas-fir	33,103	14	00	00	02	970	14
	Lodgepole Pine	34,550	133	47	37	24	759	00
	Mixed LP/DF	107,086	04	00	01	00	993	02
	Other Mixed Conifer	13,142	31	39	01	01	928	00
	Spruce/Subalpine Fir	1,662	42	36	02	00	920	00
	All Forested Acres	227,216	26	12	06	04	948	03
Caribou Range Mountains	Aspen	37,765	01	02	00	13	984	00
	Douglas-fir	14,999	00	00	00	00	999	01
	Lodgepole Pine	4,655	52	30	00	00	917	00
	Mixed LP/DF	57,151	08	00	00	00	992	00
	Other Mixed Conifer	7,132	00	00	00	00	1000	00
	Spruce/Subalpine Fir	793	00	171	269	00	560	00
	All Forested Acres	122,495	06	03	02	04	985	00

1/ The mature category incorporates all older age classes, including old growth

2/ Includes acres of mature forest that have had harvest treatments such as commercial thinning or shelterwood seed tree cuts, but the harvest did not result in reclassifying the acres to a different age class

so severe as to destroy the aspen root systems. Moderate severity fires result in better aspen sprouting than either high or low severity fires (Bradley et al. 1992).

Subalpine Fir Fire Regimes - Subalpine fir forests generally occupy cool, moist habitats and are therefore common at higher elevations. Because of this, fire is relatively infrequent in this type, occurring every 50-350 years depending on aspect, elevation and other factors. Large fires generally occur only during drought conditions and periods of high winds. Ladder fuels are common in this type, so fires can spread easily between tree crowns and burn large acreages (Bradley et al. 1992).

Sagebrush/Grassland Fire Regimes - Historically, fires likely occurred every 10 to 25 years in the Forest's sagebrush communities (Clark and Starkey 1990, Houston 1973, Winward 1987). These fires created a mosaic of vegetation conditions across the landscape. In the absence of fire, these communities tend to progress toward stands of Douglas-fir or dense sagebrush. Dense sagebrush stands are less diverse than sagebrush/grasslands, and more susceptible to soil erosion because the herbaceous vegetation is lacking. Much of the sagebrush/grassland on the Forest and throughout the west is in advanced seral stages due to the absence of fire (Winward 1992).

Whitebark pine Fire Regimes - Fires are important to the survival and regeneration of whitebark pine. This species can survive surface fires which kill other tree species that compete with it. Since whitebark pine reproduces on fire-prepared sites, stand-replacing fires help perpetuate the species. Historically, fire occurred in whitebark pine communities every 30-300 years. Suppression of fires has favored subalpine fir and Engelmann spruce over whitebark pine. Other disturbance agents affecting whitebark pine are white pine blister rust and mountain pine beetle (Morgan et al. 1994), which are discussed in the insect and disease section.

Fire Risks

The Forest has experienced large fires in five of the past 20 years, three of those were within the last eight years. Two fires exceeded 5,000 acres. One was a prescribed natural fire that was allowed to burn until it exceeded the prescription parameters of the High Country Fire Plan. That fire was the Gallagher Peak Fire of 1979. The other was the North Fork Fire, one of the Greater Yellowstone Fires of 1988. Approximately 17,691 acres of the 507,580-acre North Fork Fire burned on the Forest. The size or scale of historic fires on the Forest is unknown at this time, but it is likely that the North Fork Fire emulated the size of fires that historically occurred in the lodgepole pine types.

Development of private lands adjacent to the Forest has made a significant increase in the wildland/urban interface. To deal with the threat of a wildland fire within or adjacent to these areas, Emergency Evacuation Plans are being developed such as the one for the North Fire Zone in Island Park. All wildland fires, including natural ignitions, receive the appropriate suppression response of contain, confine or control. The following briefly summarizes fuels and other conditions which contribute to fire hazard within the subsection.

Lemhi/Medicine Lodge and Centennial Mountains - These subsections are dominated by sagebrush/grasslands and Douglas-fir communities. The Centennial Mountain Subsection has had substantial timber management activities, which have reduced fuels on some areas. The wildland/urban interface in the Centennial Mountains has significantly increased due to the development of private lands within the Forest protection boundary. This increases the risk of a fire spreading between the Forest and private lands.

Island Park - The vegetation in this subsection is primarily lodgepole pine. This area has heavy recreation use during all seasons, which increases the potential of human-caused fires. Timber management activities has reduced much of the natural fuel loadings, but there are some lodgepole pine stands with heavy accumulations of dead material. These stands are generally isolated by the surrounding young stands.

from timber harvest activities. This subsection has seen an increase in the wildland/urban interface with the development of private land. Areas with high summer home densities also present fire risks in this subsection.

Madison-Pitchstone Plateaus - The dominant vegetation is lodgepole pine. Timber activities have been widespread, significantly reducing fuel loadings. There are still high concentrations of dead fuels in stands not treated, but these areas are generally adjacent to young stands created by clearcuts. This subsection includes the area burned by the North Fork Fire. The Winegar Hole Wilderness is located in the southern portion of this subsection. Natural and human-ignited fires in this wilderness have been suppressed.

Teton Range - A large portion of this subsection is grass forb vegetation, with forests of Douglas-fir, lodgepole pine and mixed conifers also being common. The Jedediah Smith Wilderness covers a major portion of the subsection. Since 1988 natural and human-caused fires have not been allowed to burn in the Wilderness.

Big Hole Mountains - The primary vegetation types are mixed conifer and mountain brush. Most of this subsection is roadless and primarily used for grazing and recreation. The recreation use can increase the potential of human-caused fires.

Caribou Range Mountains - Mixed conifers and sagebrush/grass communities dominate the subsection. Some timber management has occurred in the Engelmann spruce/subalpine fir type, and subsequent fuel treatments have reduced fuel loading and rate of fire spread for the short-term. Recreation use here can increase the potential for human-ignited fires.

Insects & Diseases - Scale: Forestwide and Subsection

Insects and diseases play important roles in ecosystems, even those often considered "destructive." Many of these organisms serve as food sources for a variety of wildlife species, ranging from birds to grizzly bears. In addition they are change agents, causing death, decay or damage to vegetation. This latter function is closely intertwined with the processes of succession and fire. The change from one species community to another on a site is often brought about by insects and diseases, particularly when fire is absent. For example, aspen is eventually killed by fungal diseases which may then allow Douglas-fir to dominate. Insects can change forest structure by killing all trees of a particular size or species. Insect-killed trees contribute to fuel conditions and thereby help determine the severity, size and patterns of fires in the landscape.

Most native insects and diseases are opportunistic, taking their toll on weakened or aged individuals. However, under some conditions these organisms may build up high populations that also overwhelm healthy, young vegetation. Trees and plants are usually adapted to insects and diseases, having evolved with them. The exception to this is when damaging agents are introduced from another continent and the plants have not had time to adapt genetically. This can often lead to disastrous consequences for a tree species, such as the American chestnut which fell victim to an introduced fungus. A concern about whitebark pine exists on the Forest and throughout its range. Whitebark pine is dying off at an alarming rate due to an introduced disease known as white pine blister rust. Although there is genetic resistance to this disease, the number of whitebark pine trees is expected to decrease significantly in the short term.

Native insects of importance on the Forest include the mountain pine beetle, Douglas-fir beetle, western balsam bark beetle and western spruce budworm. Mountain pine beetle populations have remained at low levels since 1983. Between 1981 and 1987 western spruce budworm was active in the Douglas-fir on the Forest. This insect stressed the trees to the extent that Douglas-fir beetles were able to kill many Douglas-fir between 1988 and 1992. Additional information on these insects may be found in the Analysis of the Management Situation for the Forest (USDA Forest Service, Targhee N.F. 1992). Stalactiform rust, gall rust and various root rots are common fungal diseases. Dwarf mistletoes (parasitic plants) are

present on lodgepole pine across the Forest and Douglas-fir in more isolated pockets. Important existing insect and disease conditions for each subsection are briefly covered in the Vegetation section of forest ecosystems.

ECOLOGICAL PATTERNS

The ecosystem processes and disturbances discussed above contribute to patterns of vegetation across the landscape. Other factors such as climate, topography and soils also help determine vegetation patterns. The patterns themselves are important to other components of the ecosystem such as wildlife species and humans. Vegetation patterns have a ROV which the Forest is seeking to more fully understand. We have chosen to analyze four measures of ecosystem patterns that we believe are most important on the Forest. A brief discussion of each follows.

Forest Structure and Composition - Scale: Subsection

Natural and human disturbances tend to break up large tracts of similar forest habitat into smaller blocks separated by openings, different vegetation types, or different age classes. Patch sizes varied historically based on topography, soils and scale of disturbances. Forestwide they are affected by all these factors, including human activities such as roading and clearcutting. Patch size is important since some wildlife species are adapted to using extensive forested areas.

Conditions on the Forest vary by subsection. The Caribou Range Mountains, Big Hole Mountains and Lemhi/Medicine Lodge Subsections have historically exhibited small patch sizes due to their physiographic conditions. This continues to be the case. Clearcutting over the past decade in the Island Park and Madison-Pitchstone Subsections has created smaller patch sizes than occurred historically. The Teton Range and Centennial Mountains Subsections are likely exhibiting larger patch sizes than they did historically due to fire suppression and the current predominance of forests in mature age classes.

Vegetation Types - Scale: Subsection

The distribution of forested community types and age classes by subsection is displayed in Table III-3. Studies to date show that the Forest's vegetation has changed in some significant ways over the past century. Preliminary analysis indicates that some vegetation conditions are different than what occurred historically on the Forest.

In some subsections aspen has declined by 80 percent, while in others aspen acreage has increased in the past two decades due to clearcutting (USDA Forest Service, Targhee N F 1994). Aspen decline is most serious in the Lemhi/Medicine Lodge, Centennial Mountains, Big Hole Mountains and Caribou Range Mountains Subsections.

The amount of whitebark pine has been reduced over the past 30 years as a result of mountain pine beetle, white pine blister rust and succession. The seeds of this tree are an important food source for grizzly bears, some birds and small mammals.

Shrublands and grasslands are less prevalent than in the past due to fire suppression. This indicates a habitat loss for species dependent on these communities and a habitat gain for species adapted to forested areas. The greatest changes have occurred in the Lemhi/Medicine Lodge, Centennial Mountains, Big Hole Mountains and Caribou Range Mountains Subsections.

Stand structures, particularly in the Douglas-fir forests, have changed as a result of fire suppression. Compared to past structures, these stands are now denser and more multi-storied. This has increased the likelihood of severe fires, increased the susceptibility to insects and diseases and altered the type of habitat provided by Douglas-fir forests. These conditions are found in all subsections.

The Forest has much more area in mature age classes than the historical record indicates. Of particular significance are the high percentages of mature or older mountain mahogany, mountain big sagebrush, aspen, cottonwood and Douglas-fir. Mosaics of different age classes were more common in the past.

Connectivity - Scale: Forestwide and Subsection

Connectivity between habitat areas involves the linkage of similar habitat patches such as water courses, natural openings or as most commonly studied, vegetation. The maintenance of connectivity is needed to ensure proper levels of nutrient cycling, hydrologic function and species survival. If the level of connectivity is maintained over time and space, then processes such as predation, dispersal and gene exchange continue even though habitat areas may be separated from each other. Species differ in their need for corridors between blocks of habitat, with some moving freely through the landscape while others tend not to cross openings between habitat areas. Specific habitat linkage requirements for various species have not been determined. However, species evolved to function within certain limits of connectivity shaped by natural disturbances. Maintenance of vegetation patterns with which plant and animal species evolved is an accepted measure of ecosystem health.

Connectivity is influenced by access routes and clearcuts, as well as by historic vegetation patterns. Connectivity in the Caribou Range Mountains, Big Hole Mountains and Lemhi/Medicine Lodge Subsections is likely similar to what existed historically based solely on the vegetation patterns. However, human access routes may have reduced the ability of species to move between habitat blocks. Clearcutting and roading over the past decade in the Island Park and Madison-Pitchstone Subsections have altered vegetation patterns and connectivity from what existed historically. Although leave strips have provided continuity of mature forest habitat, these links are much narrower and more randomly distributed across the landscape. Based on vegetation patterns alone, the Teton Range and Centennial Mountains Subsections are likely exhibiting similar or greater connectivity than historically due to fire suppression and the current predominance of forests in mature age classes. However, the presence of roads and trails in the subsections may have reduced some species' ability to move between habitat blocks.

Connectivity is important in aquatic, as well as forested ecosystems. Natural disturbance forms patterns of habitat patches, which in turn control aquatic ecosystem processes and functions (see "aquatic and riparian ecosystem" section). Natural and human-induced disturbances affect the connectivity of riparian areas and the linkages between aquatic and forested ecosystems. Where road crossings and concentrated human activity exist in aquatic ecosystems, it can be assumed that some level of connectivity has been lost compared to what existed historically.

Adjacent Land Use Patterns - Scale: Forestwide

Lands adjacent to the Forest are part of the ecosystem. Uses of these lands affect the Forest, and management of the Forest likewise affects adjacent ownerships. This all plays into the larger social and ecological context in which the Forest is managed. Lands next to the Forest represent many different owners and management strategies. Adjacent entities include private landowners, Harriman State Park, Idaho Department of Lands, the Park and GTNP, John D. Rockefeller Memorial Parkway and the U.S. Sheep Experiment Station. In addition, several N.F. and BLM Districts lie adjacent to the Forest.

Dominant land use patterns on adjacent private lands involve farming and ranching. These activities have occurred since the 1800s in this area. The past decade has brought a trend toward subdivision developments, particularly in Teton Valley, Island Park and Swan Valley. On lands administered by the Idaho Department of Lands, other N.F. and the BLM, management tends to be oriented toward use of resources, with timber harvest, livestock grazing and recreation being common activities. National Parks are governed by the principles of preservation and noninterference with natural processes, but have intensive recreation management in some areas.

An Adjacency Study (Process Paper P) shows how the Forest fits into the management of neighboring

lands For the most part there is a sense of continuity across the borders of the Forest into adjoining N F , BLM, and National Park Service lands Probably the single most visible discontinuity lies along the Park's western boundary where evidence of the Forest's intensive timber management can be seen in sharp contrast to the Park's unmanaged forest That apparent discontinuity will continue until the young regeneration grows and blends with older surrounding vegetation

There are other land management practices on the Forest which might appear to be incongruent to some people and understandable to others The Grand Targhee Ski Resort, an area of concentrated recreation development, shares much of its boundary with the congressionally-proclaimed Jedediah Smith Wilderness The ski resort and the wilderness uses remain in effect in all the alternatives Likewise, some people view the presence of a road alongside a wilderness as being incongruent Others accept the fact that roads, as an exclusionary feature in a wilderness, will frequently end up being used to define its boundaries

From a Forest point of view, management of adjacent lands seems to have more of an impact on Forest management than vice versa As the human population of the area of influence has grown so has their use of the Forest, particularly recreational use The Forest has had to respond to those changes by hardening recreation sites to prevent damage to the resource and developing reasonable restrictions on some uses

PHYSICAL ELEMENTS OF THE ENVIRONMENT

Soils and Geology - Scale: Subsection

Lemhi/Medicine Lodge - This subsection consists of fault block mountains, which exhibit a northwest-southeast trend The dominant rock types are limestone and sandstone The landscape is dissected by parallel drainage systems

Soils on these landscapes are greater than 60 inches to bedrock, having gravelly medium textured surface layers and extremely gravelly medium textured subsurface layers These soils have a low to moderate inherent fertility, are droughty, are high in carbonates and have a high erosion hazard

Principal ecological concerns affecting soil quality in the subsection are as follows the expansion of conifers into sagebrush/grass and riparian communities has changed some sites, the area's susceptibility to fires has increased the risk of losses in soil productivity associated with such events and canopy density of sagebrush communities and subsequent loss of understory vegetation has led to declining watershed conditions

The principal management activities affecting soil quality are roads, grazing concerns along incised drainages and OHV use Secondary management activities affecting soil quality include water developments and mining impacts which have not been reclaimed

Centennial Mountains - This subsection consists of a fault block mountain range, which exhibits an east-west trend along the Continental Divide The dominant rock types are rhyolite, sandstone and shale The landscape is dissected by dendritic and parallel drainage systems

Soils on these landscapes are greater than 60 inches to bedrock, having nongravelly to gravelly medium to medium-fine textured surface layers and gravelly to extremely stony medium to medium-fine subsurface layers These soils have a moderate to moderately high inherent fertility, are susceptible to compaction and puddling, have a moderate to high erosion hazard, exhibit plant competition concerns and demonstrate slumping hazards on mountain side-slopes and escarpments at higher elevations

Principal ecological concerns affecting soil quality include conifers expanding into aspen, sagebrush/grass, riparian and mountain meadow communities causing site changes, increased risk of losses in soil productivity associated with fire events, canopy density of sagebrush communities and subsequent loss of understory vegetation which is causing declining watershed conditions, and slumping potentials

Principal management activities that are concerns affecting soil quality include roads and OHV use, dispersed recreation impacts, grazing concerns along drainages and water developments. Secondary management activities that are affecting soil quality include mining impacts which have not been reclaimed, past timber/firewood harvest which have resulted in roads, compaction, organic matter removal or displacement and loss of woody residue

Island Park - The Island Park Caldera was formed by the collapse of a large rhyolite shield volcano. After the collapsing of the caldera, volcanic activity continued, resulting in basalt flows covering much of the caldera floor. The entire subsection has been overlain by wind blown silts (loess). The dominant rock types are rhyolite and basalt. The landscape is dissected by dendritic and parallel drainage systems on the caldera rim and associated tablelands. The caldera floor has very little dissection.

Soils on these landscapes are greater than 60 inches to bedrock, having nongravelly to gravelly medium textured surface layers and medium fine to extremely cobbly medium textured subsurface layers. These soils have a moderately low to moderate inherent fertility. Soils on the caldera floor have plant competition concerns on deeper soils, reforestation concerns on more shallow soils, and a moderate susceptibility to compaction. Soils on the caldera rim have a moderate susceptibility to compaction, moderate to high erosion hazard, low bearing strength and plant competition concerns.

A principal ecological concern affecting soil quality (limited to the caldera rim) is the expansion of conifers into aspen, sagebrush/grass, riparian and mountain meadow communities and resulting site changes and landscape patterns on structure and composition.

Principal management activities affecting soil quality (caldera rim) are roads, OHV use, and extensive past timber/firewood harvest which have resulted in roads, compaction, organic matter removal or displacement and loss of woody residue. Principal management activities (caldera floor) are the same as for the rim, plus dispersed recreation, which is especially heavy near summer home areas, and grazing along certain riparian areas and meadow complexes.

Madison-Pitchstone Plateaus - This subsection consists of a large consolidated ash flow that came out of the Park and overtopped the east rim of the Island Park Caldera. The landscape is dissected by dendritic and parallel drainage systems.

The soils in the northern part are greater than 60 inches to bedrock, having medium textured surface layers and stratified gravelly coarse textured to extremely gravelly coarse textured subsurface layers. The soils in the southern part are greater than 60 inches to bedrock, having gravelly medium textured surface layers and very gravelly to extremely cobbly medium textured subsurface layers. These soils have a moderately low inherent fertility, are droughty and have windthrow hazards. They are highly erodible if the subsoil is exposed, as it is in the northern part of this subsection due to the North Fork Fire.

A principal ecological concern affecting soil quality (southern portion) is the susceptibility to fires, increasing the risk of losses in soil productivity associated with such events, including areas on the 1988 North Fork Burn that have not recovered yet.

Principal management activities affecting soil quality include roads and OHV use, dispersed recreation, effects associated with timber harvest which have resulted in roads, compaction, organic matter removal or displacement and loss of woody residue.

Teton Range - North-south trending mountain range. The dominant rock types are granite, limestone, sandstone, dolomite, slate, gneiss and quartzite. The landscape is dissected by parallel drainage systems.

This subsection consists of two primary landscape settings. These include foothills on lower to mid elevations and mountain side-slopes at mid to high elevations. Soils on these landscapes are 40 to greater than 60 inches to bedrock, having nongravelly to very gravelly medium textured surface layers and gravelly to extremely stony medium textured subsurface layers. These soils have low to moderately low inherent fertility, low to moderate compaction hazard, moderate to high erosion hazard, reforestation concerns and low to high mass instability hazards.

Principal ecological concerns affecting soil quality in this subsection include conifer expansion into aspen, sagebrush/grass, riparian and mountain meadow communities causing site changes, and the area's susceptibility to fires with increased risk of losses in soil productivity associated with such events.

Principal management activities affecting soil quality include roads, grazing along drainages, OHV use and dispersed recreation. Secondary management activities affecting soil quality include the effects of timber harvest which have resulted in road construction, compaction, organic matter removal or displacement and loss of woody residue.

Big Hole Mountains - This subsection consists of a mountain range of multiple, parallel overthrusts (faults) and benches of mixed rocks and eolian material that have been modified by thrust faulting.

Soils on these landscapes are greater than 60 inches to bedrock, having gravelly medium textured surface layers and very gravelly moderately coarse to moderately fine textured subsurface layers. These soils have a moderate to high inherent fertility, moderate compaction and rutting hazard, moderate to high erosion hazard, moderate to high slumping and earthflow hazard, plant competition concerns and areas of low bearing strength.

Principal ecological concerns affecting soil quality include conifer expansion into aspen, sagebrush/grass, riparian and mountain meadow communities causing site changes, increased risk of losses in soil productivity associated with fire events, canopy density of sagebrush communities and subsequent declining watershed conditions and slumping/earth flows.

Principal management activities affecting soil quality are roads, OHV use, dispersed recreation and grazing along drainages. Secondary management activities affecting soil quality include erosion along sheep driveways, effects resulting from timber harvest and big game feeding areas along Rainey Creek.

Caribou Range Mountains - The Caribou Range Mountains Subsection is a southeast to northwest trending overthrust (multiple faults) mountain range. The northeast side of the range is moderate relief mountains on mixed sediments. The southwest side of the range is low relief foothills and basins on fine-textured marine sediments. The dominant rock types are a mix of sedimentary materials with a loess influence. The landscape is dissected by dendritic drainage systems.

Soils on these landscapes are greater than 60 inches to bedrock, having medium textured surface layers and moderately-coarse to fine textured subsurface layers. These soils have a moderate to high inherent fertility, moderate compaction and rutting hazard, moderate to high erosion hazard, moderate to high slumping and earthflow hazard, plant competition concerns and areas of low bearing strength.

Principal ecological concerns affecting soil quality include conifer expansion into aspen, sagebrush/grass, riparian and mountain meadow communities causing site changes, increased risk of losses in soil productivity associated with fire events, and canopy density of sagebrush communities and subsequent loss of understory vegetation resulting in a decline in watershed conditions and slumping/earthflows.

Principal management activities affecting soil quality include roads, OHV use, dispersed recreation and grazing along drainages. Secondary management activities affecting soil quality includes erosion along sheep driveways and effects from timber harvest.

Air Quality - Scale: Forestwide

(1) The United States Environmental Protection Agency (EPA), in conjunction with the states of Idaho and Wyoming, have established National Ambient Air Quality Standards for pollutants to protect the public health and welfare. These standards relate to PM₁₀ particles, which are particles with an aerodynamic diameter of 10 microns or less.

National Ambient Air Quality Standards require that PM₁₀ remain below 50 micrograms per cubic meter when averaged over a year. PM₁₀ must generally remain below 150 micrograms per cubic meter averaged over a 24-hour period, however, this standard can be exceeded up to one time per year.

(2) Class I airsheds have the highest air quality standards, and Class II have a moderate level of protection. The entire Forest, including the Jedediah Smith and Winegar Hole Wildernesses, is a Class II airshed. Yellowstone and GTNPs, adjacent to the Forest's eastern boundary, are Class I airsheds. The Forest must ensure that its activities do not reduce air quality in these Class I airsheds.

In general, the area's air quality is very good. The primary sources of PM₁₀ on the Forest are wildfire, prescribed fire and dust generated from road traffic. The major source of PM₁₀ from outside the Forest is dust generated by wind and agriculture. Agricultural burning and mechanical disturbance such as plowing, planting and harvesting crops reduce air quality.

Currently there are no air quality monitoring stations located on the Forest. The closest monitoring station is located in Jackson, Wyoming. This station has measured PM₁₀ since 1986. During the analysis period the highest 24-hour average PM₁₀ reading recorded was 124 micrograms per cubic meter in 1992. This is 26 micrograms per cubic meter less than the allowable standard. One short term value of 248 micrograms per cubic meter was recorded in 1988 during the Yellowstone wildfire situation. Annual averages have ranged from a high of 39.8 micrograms per cubic meter in 1988 (Yellowstone Fire influenced) to a minimum of 25.5 grams per cubic meter in 1993.

Caves - Scale: Subsections

Caves are present primarily in two subsections on the Forest, as discussed below.

Lemhi/Medicine Lodge - This area contains numerous small caves in limestone cliffs. Many have been identified during heritage resource inventories. Large caves in this area contain evidence of American Indian habitation in the form of pictographs and cave fills with stratified cultural deposits. Few caves in this area have sufficient depth to provide recreational opportunities.

Teton Range - The Teton Range has numerous caves but most are small and have little recreational interest to spelunkers. The Fossil Mountain Ice Cave and Wind Cave, however, have high recreational interest for exploration. Both caves are identified on Forest maps and have access trails and signs from Darby Canyon. These caves probably qualify as "significant caves" under the Federal Cave Resources Protection Act of 1988, but they have not been inventoried or nominated. Thorough inventory of caves in this area has not been completed, and new significant caves with high public interest may be discovered.

Lands - Scale: Forestwide and Subsections

The Lands program includes the adjustment of land ownership patterns, land acquisition, granting of rights-of-way, identification and resolution of trespasses and property boundary management.

Land Ownership Adjustments

Land ownership within the administrative Forest boundary is displayed in Table III-4. Land ownership adjustments have enabled the Forest to acquire lands that meet specific needs, goals and objectives.

Land ownership adjustments are valuable for recreation, wildlife habitat, riparian areas and historical resources, they also enabled us to consolidate land ownership to improve operating efficiency. Ownership adjustments reduce the miles of private/Forest Service property lines that need to be surveyed, posted and maintained. Adjustments can also reduce special use permit administration and resolve trespass and title claims.

Ownership	Lemhi/ Medicine Lodge	Centennial Mountains	Island Park	Madison- Pitchstone Plateaus	Teton Range	Big Hole Mountains	Caribou Range Mountains	Totals*
NFS Land Acres	279,655	319,248	296,482	196,424	160,806	350,222	204,949	1,808,175
Private Acres	1,883	7,559	9,986	815	963	7,661	8,364	59,840
State Acres	637	5,886	15,060	637	0	0	0	
BLM Acres	0	0	389	0	0	0	0	389
Total Acres	282,175	332,693	321,917	197,876	161,769	357,883	213,313	1,868,015

* Figures in this column are the figures of record. Differences in sums of prior columns are due to measurement method.

The Congressionally mandated Land and Water Conservation Fund can be used to purchase land interests for the Federal Government. Although the Forest has submitted yearly requests for one to fifteen such purchases, the last funded project was in 1962. Land adjustments may also occur through donation of land or partial land interest. Proponents in land transactions have been approached and encouraged to donate lands or interests in lands.

Land Exchanges have been the most effective tool in completing the objectives for land adjustments. Through eight land exchanges important wildlife and wetland habitats, scenic and historical sites, a needed gravel source and six inholdings were acquired. Lands disposed of have been, for the most part, those that have lost their Forest characteristics, are difficult to manage or consolidated Forest holdings. Table III-5 displays past land adjustments (1985-1996).

	Lemhi/ Medicine Lodge	Centennial Mountains	Island Park	Madison- Pitchstone Plateaus	Teton Range	Big Hole Mountains	Caribou Range Mountains
Purchased Acres							
Fee	2 40	-	2 76	160 59	-	-	-
Partial Land Interest	-	-	-	160 75	-	-	-
Donation Acres							
Fee	-	-	-	-	7 48	-	-
Land Exchanges Acres							
Acquired	-	640	511 65	-	-	319 94	6 5
Disposed	-	-	633 54	-	-	64 86	45
Right-of-Way Cases							
Acquired	-	1	1	-	1	2	3
Grants	-	1	-	1	1	13	4

1/ These figures are updated yearly. Current figures are on file at the Forest office.

Land ownership adjustment on the Forest has emphasized the transfer of both surface and subsurface rights. This has resulted in very little reserved or outstanding mineral ownership. Currently nonfederal minerals consist of only about 5,000 acres out of a total of about 1.8 million Forest acres.

Right-of-Way Acquisition

Right-of-way acquisition is driven by the need to provide land managers and the public access to National Forest System lands. With private lands changing hands, many roads that have been open to the public are now being closed. There is a need to gain legal access through the acquisition of rights-of-way. Eight right-of-way cases have been completed (see Table III-5) and 91 rights-of-way been identified for acquisition.

Minerals - Scale: Subsections

No specific proposals for mineral development have been addressed in this Revision process. The role of the Forest Service is to manage the surface resources to minimize adverse environmental impacts and to provide mitigation direction.

The issue of oil and gas development on the Forest is being addressed in a separate EIS. The following briefly discusses the current status of oil and gas production to give the reader an overall picture of the mineral, oil, gas and hard rock situation on the Forest.

Lemhi/Medicine Lodge - During the mid and late 1800s, lead and copper and to a lesser extent silver and gold, were mined extensively in this subsection. Since then there has been no activity and none is predicted. There are no current oil and gas leases, although during the 1980s there were numerous leases generating rental income. A recent BLM study rated the area as having a low potential for the discovery of oil and gas resources (USDI 1992).

Centennial Mountains - During the late 1950s and early 1960s phosphate was mined near Mt. Taylor in the eastern Centennials from two of the three phosphate leases located in the area. Since then no mining has occurred, but the leases still remain. Should phosphate production resume, 50 percent of all revenues generated from leasing return to the State of origin for use as the legislature may direct.

Oil and gas leases blanketed the area in the mid 1980s but none exist today. The potential for discovery of oil and gas is rated low in this area. An exploration well was drilled in the late 1980s which came up dry.

Northeast of Dubois, gold exploration is currently taking place and has been for several years. In the event of development and production the local communities would experience a boost in their economies.

Northeast of Dubois are several mining claims where the exploration, development and production of opal has been conducted for the past 30 years. One particular claim has exhibited most of this activity and has been patented (private ownership). The site is known as the Spencer Opal Mine and has operated commercially as a public digging site since 1968. Activity on surrounding nonpatented claims consists mainly of exploration.

Island Park & Madison-Pitchstone Plateaus - Oil and gas and geothermal leases blanketed the area in the mid 1980s, but none exist today. The area is rated as having no potential for the discovery of oil and gas. Congress has effectively prohibited geothermal development and mineral leasing in this area through legislation prohibiting the leasing of lands in the Island Park geothermal area (Geothermal Steam Leasing Amendments Act of 1988). There are no other mineral resources in this area of economic importance.

Teton Range - Oil and gas leases were scattered through the area in the mid-1980s, but none exist today. The area is rated as having no potential for the discovery of oil and gas. There are no other mineral resources of economic importance in this area.

Big Hole Mountains - Oil and gas leases blanketed the area in the mid-1980s, generating rental income. Fifty percent of this money is returned to the State of origin for use as the legislature directs. There are no oil and gas leases currently, pending the completion of an oil and gas EIS. A couple of exploratory wells were drilled during the 1980s, but were dry holes. The potential for discovery of oil and gas is rated as moderate in the north half of the subsection and high in the south.

Caribou Range Mountains - Oil and gas leases blanketed the area in the mid-1980s, generating rental income. Fifty percent of this money is returned to the State of origin. There are no oil and gas leases currently, pending the completion of an oil and gas EIS. The potential for discovery of oil and gas is rated as moderate in this subsection.

There are four phosphate leases located in the northern part of the subsection, which are currently inactive. Last reported activity was in the 1960s and consisted primarily of exploration. Activity is not expected on these leases for the next three or four decades.

Travertine, a marble-like building stone product, is mined in the northern part of the area and is the only active mine of economic importance on the Forest.

In the southern portion of the subsection, McCoy Creek has long been the center for recreational placer gold dredging, sluicing and panning. Mining claim activity has also occurred with limited success.

BIOLOGICAL ELEMENTS OF THE ENVIRONMENT

This section is divided into various types of ecosystems so that the relationships between biological elements within the same system can be better understood. Aquatic, riparian and terrestrial ecosystems (upland forested and upland nonforested) will be considered.

AQUATIC AND RIPARIAN ECOSYSTEMS

Riparian - Scale: Subsection

Riparian areas lie adjacent to water and are composed of vegetation communities influenced by water. Though riparian areas constitute only a fraction of the total land area, they are more productive in terms of both plant and animal species diversity and biomass per unit area than the remainder of the land base. Riparian areas are essential breeding, rearing and feeding grounds for many species of wildlife and they affect the quality of the aquatic habitat (fisheries). Often these key areas visibly reflect the quality and success of land management activities in tributary watersheds. Riparian areas are extremely important for flood control and hydrologic function. These systems are very important to the human environment from ecological, aesthetic, recreational and economic points of view. Additional information may be found in the water quality, fisheries and riparian wildlife sections. Table III-6 summarizes riparian conditions.

Grazing is considered to have shifted the species composition on 8,988 acres (32 percent) of riparian communities across the forest. Under current range management, 5,338 acres of these acres are moving toward higher ecological conditions with increasing plant biodiversity. Some 3,650 acres are remaining in less stable, lower ecological conditions, with lower plant diversity (Table III-6). Where grazing decreases the species diversity, shallow, fine-rooted species such as Kentucky bluegrass (*Poa pratensis*) become dominant and replace the deeper, thicker-rooted native herbaceous species, decreasing stream stability.

Biodiversity and sometimes stream stability are also affected by riparian community succession. Riparian areas with closed shrub canopies have little understory vegetation due to shading and may have low overall species diversity. This can negatively affect stream stability on some streams. Spruce forest riparian communities also have low species diversity due to shading and low vegetative cover to protect streambanks from erosive events unless armored by large rock.

Table III-6 Aquatic and Riparian Conditions by Subsection							
Parameter	Lemhi/ Medicine Lodge	Centennial Mountains	Island Park	Madison- Pitchstone Plateaus	Teton Range	Big Holes	Caribou Range Mountains
Miles of Intermittent Streams	610	415	455	219	164	383	158
Miles of Fish-bearing Streams	203	580	254	307	287	664	533
Miles of Non Fish-bearing Streams	10	34	3	15	51	43	19
Acres of Lakes	24	91	479	972	195	167	32
Reservoirs, Ponds, and Wetlands greater than 1 acre	37	2,345	5,867	3,264	266	10,116	5,850
Areas less than 1 acre	0	6	10	10	2	2	0
Aquatic Habitat Condition 1/ Percent Pristine	5	15	50	56	Unkn	56	62
Percent Moderate	37	44	46	44	Unkn	44	37
Percent High Human Dist	58	41	4	0	Unkn	0	0
Aquatic Habitat Trend 1/ Percent Up	13	4	0	0	Unkn	11	12
Percent Stable	87	93	92	94	Unkn	78	88
Percent Down	0	3	8	6	Unkn	11	0
Vegetation Seral Stage Percent PNC	3	4	0	0	Unkn	0	0
Percent Late Seral	61	62	87	83	Unkn	11	12
Percent Mid Seral	34	35	12	11	Unkn	78	76
Percent Early Seral	3	1	0	6	Unkn	11	12
Vegetation Trend 2/ Percent Up	16	18	8	17	Unkn	11	12
Percent Stable	66	75	83	72	Unkn	89	88
Percent Down	18	7	8	11	Unkn	0	0
Riparian vegetation meeting DVC (acres) 3/	690	13,257	1,625	200	439	1,882	637
Riparian vegetation moving toward DVC (acres) 3/	890	3,575	131	41	83	363	255
Riparian vegetation not meeting DVC (acres) 3/ 4/	500	381	367	7	903	1,304	188
<p>1/ & 2/ Aquatic Habitat Condition and Trend I Perennial streams at least 14" deep (at low summer flow), with 40-60% pools II Perennial streams between 8" to 14" deep (at low summer flow), with 20-40% pools or 60-80% pools III Intermittent or ephemeral streams less than 8" deep (at low summer flow) with less than 20% pools or more than 80% pools Pristine = 90% of riparian acres near pristine conditions Moderate = 50-89% of riparian acres near pristine conditions High Human Disturbance = less than 50% of riparian acres near pristine conditions</p> <p>3/ Only includes acres open to grazing (79%) of the Forest Does not include acres closed to grazing prior to 1995 Source FSRAMIS database</p> <p>4/ Includes acres of undetermined status</p>							

Lemhi/Medicine Lodge - The principal ecological concern affecting riparian quality in this subsection is that upland vegetation has expanded into riparian zones due to past over-utilization and/or a drop in the water table levels. A secondary ecological concern affecting riparian quality in this subsection is that within some riparian areas willows are dying out and are not being regenerated.

Principal management influences affecting riparian quality include past overuse by ungulates (domestic and wild), dispersed recreation, OHV use and roads in or adjacent to riparian areas and associated stream crossings

Centennial Mountains - Principal ecological concerns affecting riparian quality include the expansion of upland vegetation into riparian zones due to past over-utilization and/or a drop in the water table levels and some areas of fine-textured subsoils which have a moderate to high slumping potential. A secondary ecological concern affecting riparian quality is that within some riparian areas, willows are dying out and are not being regenerated.

Principal management concerns affecting riparian quality are overuse in some areas by ungulates (domestic and wild), dispersed recreation, OHV use and roads in or adjacent to riparian areas and associated stream crossings. Secondary management concerns affecting riparian quality include past mining sites that have not been rehabilitated, past timber harvest that left inadequate buffers and fuel wood gathering.

Island Park - The principal ecological concern affecting riparian quality is that there are areas where willows are dying out and not being regenerated.

Principal management concerns affecting riparian quality include high use recreation areas (including summer home, dispersed and developed recreation areas), OHV use, roads in or adjacent to riparian areas and associated stream crossings, past timber harvest which left inadequate buffers and fuelwood gathering. A secondary management concern affecting riparian quality is overuse in some areas by ungulates (domestic and wild).

Madison-Pitchstone Plateaus - The principal ecological concern affecting riparian quality is in the area of the North Fork Burn. Principal management concerns affecting riparian quality include dispersed recreation, OHV use, roads in or adjacent to riparian areas and associated stream crossings, past timber harvest which left inadequate buffers and fuelwood gathering. A secondary management activity affecting riparian quality is overuse in some areas by ungulates (domestic and wild).

Teton Range - The principal ecological concern affecting riparian quality is mass wasting.

Principal management activities affecting riparian quality include high levels of dispersed recreation, horse and OHV use, trails in close proximity to or within riparian areas and associated crossings, isolated areas of overuse by ungulates (domestic and wild), roads in or adjacent to riparian areas and associated stream crossings. Secondary management activities affecting riparian quality include past timber harvest which left inadequate buffers and fuelwood gathering.

Big Hole Mountains - The principal ecological concern affecting riparian quality is mass wasting.

Principal management activities affecting riparian quality include high levels of dispersed recreation, horse and OHV use, trails in close proximity to or within riparian areas and associated crossings and areas of overuse by ungulates (domestic and wild). Secondary management activities affecting riparian quality include sheep driveways, past timber harvest which left inadequate buffers, fuelwood gathering and IDFG feed grounds in Lower Rainey Creek.

Caribou Range Mountains - The principal ecological concern affecting riparian quality is mass wasting.

Principal management activities affecting riparian quality include high levels of dispersed recreation, OHV use, trails in close proximity to or within riparian areas and associated crossings, areas of overuse by ungulates (domestic and wild), sheep driveways and roads in and adjacent to riparian areas and associated crossings.

Water - Scale: Subsection

Subsection boundaries are used for analysis and description, although this means that some streams are split between two subsections. Channel stability information dates primarily from inventories completed in the mid-1970s to early 1980s. More current information does exist on some portions of the Dubois and Teton Basin Ranger Districts (1989-1993). It is important to determine which streams are naturally "unstable" (i.e., dynamic) due to landforms, bed and bank materials, etc. and which ones have instability induced by management practices. An attempt is made in the text to make this determination where possible. In discussions of channel stability the "good" and "fair" categories were further split into (+) and (-) to indicate better or poorer stability respectively.

Water Yield

Total annual water yield on the Forest is about 1.4 million acre-feet. Water is lost or used in many ways, including evaporation, infiltration, use by plants and animals and diversion from stream channels. Because of these and many other factors, the amount of water reaching the Forest boundary will be less than what is produced. Table III-7 shows water yield by subsection across the Forest.

Subsection	Annual Water Yield for Subsection (ac-ft)	Unit Water Yield (ac-ft per acre)
Lemhi/Medicine Lodge	96,400	0.34
Centennial Mountains	134,300	0.42
Island Park	125,600	0.42
Madison-Pitchstone Plateaus	186,400	0.95
Teton Range	405,300	2.52
Big Hole Mountains	299,100	0.85
Caribou Range Mountains	169,600	0.83

Management activities have the potential to change the timing and amount of water delivered to stream channels. As an example, timber harvest, especially in headwater areas, may allow more snow to accumulate in created openings. This may result in higher flood peaks and possible impacts to streams. Currently there are approximately 22,000 acres in headwaters that have been altered by timber harvest (out of a total of approximately 239,000 headwater acres in those watersheds that have much harvest), which includes stands in seedling, sapling and nonstocked categories. While this is approximately 9 percent on a Forestwide basis, the amount of actual headwater harvest varies widely between subwatersheds.

Water Quality

The biggest pollutant on the Forest is excess sediment, derived from within-channel erosion and upland erosion reaching stream channels. The main source of sediment is roads, specifically those segments within riparian areas, including stream crossings. Forest roads generally contribute an estimated 85 to 90 percent of the sediment reaching streams in disturbed Forest land (Burroughs 1990). Currently there are 2,957 stream crossings and 323 miles of road in AIZs. The amount of water meeting State water quality goals on the Forest is unknown. Idaho Code Section 39-3601 et seq. (effective July 1, 1995) approved adoption of new water quality standards. Streams targeted for the new regulations are those listed as Water Quality Limited (WQL) under section 303(d) of the Clean Water Act. These are to receive priority for monitoring so they may be removed from the list if water quality is good. If it isn't, special Best Management Practices (BMPs) and pollutant limits must be established.

The Clean Water Act delegates authority for establishment of WQL priorities to the States (Idaho) Senate Bill 1284 (incorporated into Chapter 36, Title 39, Idaho Code) states that the water quality criteria that must be met consist of fully supporting existing beneficial uses (where there is no numeric water quality standard) or, where there is a numeric standard, meeting that standard. This applies to all water bodies, both those that are listed and those that are not. The bill goes on to describe the priority classifications of the WQL water bodies. "Low" priority bodies (all streams on the Forest are in this category) are those where limited data suggest that beneficial uses are not fully supported, but risks to humans and aquatic life are minimal. For streams listed in this category "such changes in permitted discharges from point sources on the water body or to the BMPs for nonpoint sources within the watershed deemed necessary to prohibit further impairment of the designated or existing beneficial uses" are to be undertaken.

In other words, these streams are to have monitoring of BMPs to ensure their effectiveness and monitoring of designated beneficial uses to ensure they are supported. There is no implication, or statement, in the bill that all management activities must cease in these watersheds, we are required to meet water quality standards and make sure BMPs are protecting beneficial uses. If our monitoring points out water bodies where are not meeting water quality standards, then we have to find the source for the water quality impairment and correct the problems.

WQL streams on the Forest (as of 1996) are listed under each subsection. While other streams in the vicinity of the Forest have been listed, the designated reaches are all downstream of the Forest boundary. The fact that these streams are listed for reaches downstream of National Forest System lands, suggests that the problems identified for the streams may originate on non-Forest (often private) lands.

The Forest is in the process of validating WQL streams to determine where we have water quality concerns, and if they exist, to find the source of the concerns. We have been working with the Idaho Department of Environmental Quality (DEQ) to develop suitable monitoring and assessment methods (including the state-approved Beneficial Use Reconnaissance Program protocols, to which we are tailoring our assessment efforts). We have coordinated our monitoring efforts with other state and federal agencies and have shared all our results with DEQ and EPA. Many of the water bodies currently listed have very limited data, so there is a great deal of speculation as to whether they should remain listed. A case in point is Warm Creek, which is listed for thermal concerns but which has as its source a warm spring having a constant temperature that is far above normal state standards for temperature. Changes in management would not correct this natural anomaly. Until we can verify the condition of these streams, particularly the condition of fish habitat and fish populations, the Forest is employing especially stringent management requirements in the WQL watersheds. We have begun baseline monitoring in at least one WQL watershed where new management activities are planned. Impacts to WQL streams are analyzed at the project level, where site-specific BMPs can be tailored to a given situation.

Lemhi/Medicine Lodge - Major streams in this subsection are Medicine Lodge Creek and its tributaries. There are many perennial streams that have their headwaters in the Bitterroot and Beaverhead Ranges, that eventually flow through broad valleys. Their flows are mostly the result of snowmelt runoff and baseflow from groundwater sources. The rest of the streams in the subsection are mostly intermittent spring or snowmelt-fed streams that eventually lose flow to deep sediments in valleys. The streams fed by snowmelt generally flow only for a few months of the year.

Channel stability ranges from fair (-) to good (+). This subsection has generally declining trends in channel stability, sometimes even where grazing has been excluded.

Idaho DEQ sampled sites on streams in this subsection to assess changes in water quality from management. On Irving, Edie and Fritz Creeks, water quality was similar above and below where forest management was occurring. All sites showed impacts from grazing at the time of the survey. WQL streams here include Edie, Irving, Fritz, Warm and Warm Springs Creeks. Monitoring of water quality on these streams was conducted during 1995. In 1996, Divide and Fritz Creeks were monitored for temperature. Nutrients were listed as a concern on all these streams. There are no standards for nutrients, or any clear direction

as to what forms of nitrogen and phosphorus are to be monitored, so recommendations from researchers were used. None of these streams directly enter lakes, so a recommended maximum phosphate level of 0.1 mg/l was used in lieu of a standard. All of the streams phosphate concentrations were lower than this value. Nitrate/nitrite recommendations vary widely, from 10mg/l for drinking water to 0.3 mg/l for prevention of algal growth. Fritz (1995), Warm and Edie Creeks showed an increase in nitrate/nitrite in late July and early August, to a maximum of 0.43 on Fritz and 0.44 on Warm Creek. Divide Creek, a tributary to Warm Creek, was also sampled from July to early September, and showed nitrate/nitrite levels ranging from 0.49 to 0.73 mg/l. All levels dropped below 0.1 in September, except on Divide Creek. Temperature was listed as a concern on Fritz and Warm Creeks. Warm Creek is fed by a warm water spring source, so temperature is an erroneous concern here. State Water Quality Standards state for cold water biota, temperatures are not to exceed 22°C, with a maximum daily average of no greater than 19°C. During 1996, Fritz Creek was continually monitored from July to October and the highest readings were approximately 18°C. Divide Creek was consistently cool.

Centennial Mountains - Streams having headwaters along the front of the Centennial Mountains generally flow south and their water comes from both snowmelt and spring sources. The influence of springs increases moving east, providing these streams with more constant streamflow through the year. Major streams in the western part of the subsection include Beaver, Camas, Sheridan, Icehouse and Willow Creeks. Some streams in the western part of the subsection (e.g., Beaver and Camas Creeks) generally subside into deep valley sediments or areas of volcanic rock before they reach Mud Lake. The rest of the streams (Sheridan, Icehouse, Willow, etc.) flow through the meadows of Shotgun Valley and eventually add flow to Island Park Reservoir.

The eastern part of the subsection includes the headwaters of the Henry's Fork of the Snake River (Henry's Lake and the headwater streams) as well as the upper part of the Henry's Fork itself. It also includes Big Springs, a major tributary of the Henry's Fork that has a flow of approximately 180 cubic feet per second at its source year-round. Spring-controlled streams are prevalent here, having relatively low variation in flow throughout the year, but also having less ability to flush excess sediments than snowmelt streams.

Channel stability ratings generally range from fair (-) to good (+) with stable or declining trends throughout most of the subsection. The only standout is a poor rating on part of West Dry Creek, though there is no apparent management-related reason. Some portions of the Henry's Fork Headwaters rated as excellent. The most frequent management problems are livestock damage and roads. Specific locations of road and cow impacts are Disaster, Kay, Corral, Dairy, Long, West Rattlesnake, Sheep, Middle and West Threemile and Jesse Creeks. Other streams may also have these impacts, but comments were missing from survey forms. Sedimentation below clearcuts on Bear Gulch Creek and in-stream deflectors on Willow Creek are two other management impacts. The greatest impact from timber harvest in this area appears to be related to roads. Data is not available to assess cumulative effects to streamflows from tree removal.

Sampling at Big Springs in 1994 found water quality to be excellent and water temperatures consistently low. Monitoring by the State of Idaho in the Henry's Fork headwaters showed limited impacts to beneficial uses. Duck Creek has been found to be one of the major contributors of sediment and nutrients to Henry's Lake, however it has not been determined if the source is on private or public land. Targhee Creek was also found to be a major source of sediment and nutrients, but a survey of the Forest portion of the watershed could only find natural sources of sediments (old slumps, for example). DEQ has determined that more than 60 percent of the phosphorus going into Henry's Lake is natural, and is from Forest lands. Bacterial levels were found to be high on Hope, Duck, Meadow and Lower Jesse Creeks downstream of Forest lands. Henry's Lake Outlet meets all water quality criteria, however there have been some instances of temperature exceeding State standards for salmonid (trout) spawning. Siltation and dewatering have been described as limiting factors. In general, it appears that while there is some degradation of water quality on the Forest, it does not appear to be significant as a result of management activities.

Island Park - Many streams here show a strong influence from groundwater, having relatively low variation

in flow throughout the year. The major stream is the middle section of the Henry's Fork of the Snake River. Other drainages in the subsection are Fish, Robinson, Rock, Squirrel, Conant, Bitch, and South Badger Creeks. The portions of the Buffalo and Warm River in this subsection are low-gradient, spring-controlled streams that show little variation in flow. Fall River shows more snowmelt influence and flows through a narrow canyon, unlike the other streams. While the Henry's Fork is a spring-fed system, Island Park Dam controls its flow to a large extent, providing peak flows not just when Island Park Reservoir fills in spring, but also when irrigation and other downstream needs dictate. The western side of the subsection is fairly dry, with little surface runoff.

Channel stability ratings range from fair (-) to excellent. Management impacts stem from roads, livestock and recreation, which vary in significance in different places. The greatest impact from timber harvest in this area appears to be related to roads. No data are available to assess cumulative effects to streamflows from tree removal. Data is very scattered, but Conant Creek (upper and near the Forest boundary), one section of Buffalo River, and portions of Rock Creek were specific areas of concern while the Henry's Fork and most of Buffalo River were in good to excellent condition.

Zimmer (1981) reported occasional high levels of fecal coliform in Island Park Reservoir, probably due to inadequately treated sewage at local recreational facilities. Phosphorus levels in the reservoir were also reported to be high, especially in areas of groundwater discharge along the reservoir shoreline. The source of the phosphorus could not be identified. Nuisance levels of algal blooms have been reported in the Henry's Fork upstream of Osborne Bridge, possibly due to nutrient contributions from upstream developments. High stream temperatures have also been reported in this reach as this section of the stream is wide, shallow, and unshaded. The Buffalo River was sampled in the late 1970s and water quality was found to be good. The Henry's Fork, from Buffalo River to Riverside, is listed as a WQL segment.

Madison-Pitchstone Plateaus - Surface drainage here is not very well-developed, due to the underlying volcanic rocks which allow more water to percolate than to run off. These streams originate in or near the Park and exhibit strong groundwater influence. Major streams include the upper sections of tributaries to the Henry's Fork that were discussed under the Island Park Subsection. Main drainages within this subsection include Thirsty, North Fork, Middle and South Forks of Split Creek and the upper reaches of Moose, Partridge, Snow, Conant and Boone Creeks. There are numerous small lakes in this subsection.

Channel stability ranges from fair (+) to excellent. The North Fork Fire in 1988 caused major changes in channel stability to Moose Creek. Road systems were a watershed concern in this area even before the fire. After the fire, erosion from uplands accelerated due to loss of vegetation and burning effects on soils, which caused more water to run off slopes. The result was a dramatic increase in the amount of sediment moving off slopes and into stream channels. Increases of fine material and channel scour were noted in the lower reaches of the stream after the fire. Since 1991, however, the cross-sectional area and substrate size distribution have come to more closely resemble pre-fire values. Current conditions do not reflect watershed objectives. Logging, roads, livestock use and recreation impacts exist in this subsection. The greatest impact from timber harvest appears to be associated with roads. No data is available to assess cumulative effects to streamflows from tree removal. Possible channel impacts in the Falls River subwatershed are due to dewatering by irrigation withdrawals.

Five of the streams in the subsection (Rock, Robinson, Fish and Porcupine Creeks and Warm River) had been named by Idaho as Stream Segments of Concern before this designation was eliminated in 1995. Water quality has been generally good on these streams. The only variation from State standards has been in temperature on some of the streams which have experienced extremely low flows due to drought (Porcupine and Rock). Water temperatures on Moose Creek are consistently low. Turbidity increases, sometimes significantly, during and after rainstorms in the drainage. Hidden Lake, Loon Lake and Grassy Lake Reservoir were sampled as part of the Western Lakes Survey in 1985. All had good water quality, though Hidden Lake's total phosphorus was high.

Teton Range - Streams in this subsection originate along the west slope of the Teton Mountains. They are

steep, dynamic and characterized by coarse substrate (up to boulders in size) due to the proximity of this material to the stream channel. Glaciation has been an important influence on stream systems here. Not only did glaciers shape the major valleys, they also brought the sediment and rock material in which stream channels subsequently developed. Present-day forces such as avalanches and various types of mass failure bring not just rock but also trees and other debris to the streams, causing them to adjust to accommodate the load. These streams respond to snowmelt, having high spring peak flows which drop to their low flow levels in late summer. Major streams here include Badger, Leigh, Teton, Darby, Fox, Game, Trail and Moose Creeks.

Channel stability ranges from fair (-) to good (+). Impacts to channels stem mostly from natural causes such as avalanche debris, unstable bank materials and failed beaver dams. Localized management effects are related to roads, recreation and livestock.

Water quality sampling has been extremely limited in this subsection. Most of the available information is from the Alaska Basin Water Study conducted by the Teton Science School in 1989. The two lakes studied (Two Island and Mirror) were found to be slightly acidic. There was only one sample for alkalinity in each lake, and both were extremely low. This indicates a low ability to buffer changes to pH (e.g., changes from acid rain), probably due to the geology of the area. The Teton River (headwaters to Trail Creek) is listed as a WQL segment.

Big Hole Mountains - Streams here contribute to either the Teton River or the South Fork Snake River. They are generally confined within steep-sided valleys or canyons, and are high-energy systems, able to move a considerable amount of sediment. Snowmelt is important in these streams, so they have high spring peak flows which later drop to their late summer levels. Major streams in this subsection include Indian, Big Elk, Palisades, Rainey, Big Burns, Pine, Canyon, Moody, Horseshoe, Mahogany and Packsaddle Creeks. Packsaddle Lake, Upper and Lower Palisades Lakes, and the Palisades Reservoir are also important hydrological features in this subsection.

Channel stability ranges from poor to good (+). Impacts exist in most drainages from recreation use, especially trails along the streams and dispersed camping. Management impacts associated with cattle and roads are also very common. The Teton River subwatershed has impacts from mining (channel alteration) and loss of riparian vegetation due to lowering of water tables and channel incision. Problems in Rainey Creek are primarily associated with grazing by wildlife and cattle. In 1994, there was a fire in the headwaters of Palisades Creek, but it was generally a light burn and did not adversely affect water resources.

In-depth water quality sampling was conducted on Big Elk Creek in the late 1970s. Water temperatures were consistently good, and turbidity was consistently low. Little Elk Creek was sampled once, and had readings similar to Big Elk. Stream temperatures on Rainey and Palisades Creeks were measured on a regular basis in 1994, and all met State standards. Upper Palisades Lake was sampled during the Western Lakes Survey in 1985, and was in very good condition. Canyon Creek was intensively sampled in the mid-1970s, and once in 1994, all samples met State standards. In general, it appears that stream channel stability is a concern in many places, but (based on available data) water quality impacts are not evident. Teton River (headwaters to Trail Creek), Packsaddle, and Horseshoe Creeks are listed as WQL segments.

Caribou Range Mountains - Geology has played an important role in this subsection. The underlying geology of folded and faulted sedimentary rocks has produced perpendicular drainages, and the streams follow the weaknesses in the rocks. Valleys are bounded by steep slopes, with the width of the valleys varying depending on the distance that streams could laterally migrate. Snowmelt is important here, and streams have distinct flow peaks in spring. Water generally flows to the South Fork Snake River. Major streams include Fall, Pritchard, Bear, Beaver, Brockman, Indian, Corral and McCoy Creeks. The western portion of Palisades Lake falls within this subsection.

All reaches rated from fair (-) to good (+) in channel stability. Grazing, powerline clearing, roads in riparian areas and heavy recreational use are all listed as problems in the Fall Creek drainage. Brockman Creek shows impacts from grazing (bank trampling). Antelope Creek is heavily impacted (both on private and on Forest lands) by roads, recreation and bank trampling by cattle. Channel stability was lowest on Fall, Bear, Brockman, and Antelope Creeks, with almost all of Fall Creek in the "fair" category, as well as half the reaches on Bear. Most streams here have not been surveyed. Antelope, McCoy, Tex, Brockman, Corral and Sawmill Creeks are listed as WQL.

Idaho DEQ sampled several streams in 1994, Antelope, Sawmill, Lava, Hell, Willow and Brockman Creeks. Conclusions have not yet been drawn from their data regarding support of beneficial uses.

Fisheries - Scale: Hydrologic Unit

Streams delineated as "fish-bearing" are those stream segments that are used by any fish species to satisfy all or a portion of their requirements such as spawning, rearing of young, adult feeding and winter survival. Information on the miles of fish-bearing streams and acres of fish-bearing lakes and impoundments is broken out by subsection in Table III-6.

Native trout watersheds are those primary watersheds identified as containing contiguous well conducted subwatersheds with high aquatic integrity and population strongholds of native cutthroat trout or have the capability to achieve this condition through recovery efforts. They have been determined to be necessary for species recovery. Of the 39 primary watersheds on the Forest, 17 have been designated as native trout watersheds, Elk Creek (003), Palisades Creek (004), Rainey Creek (005), Pine Creek (006), Heise (007), Henry's Fork Headwaters (008), Robinson Creek (013), Trail Creek (017), Mahogany Creek (022), Moody Creek (024), Bitch Creek (032), Burns-Pat Canyon (035), McCoy-Jensen Creeks (036), Elk-Bear Creeks (037), Fall Creek (038), Prichard Creek (039) and Brockman Creek (040).

Fisheries resources and habitat conditions are best assessed by hydrologic unit, which is a portion of a watershed with common characteristics.

The land area immediately surrounding the various water types is referred to as the AIZ. These zones control the biological diversity and integrity of the aquatic environment. It is within these zones that the ecological functions and processes necessary for the maintenance of healthy fisheries habitat take place. Aquatic habitat conditions are expressed in terms of water quality, quantity, and timing of flow, conditions within the stream channel (pools, woody material, etc.), and health of associated plant communities. Since the hydrologic, geomorphic and ecological processes that shape the various water types differ by hydrologic unit, the sensitivity of fisheries habitat to disturbances also varies by hydrologic unit. Human-induced disturbances within the AIZ, including streamflow diversion, livestock grazing, road construction, timber harvesting, and recreation use, can disrupt natural processes and functions. Where these are intense or prolonged, fisheries distribution, abundance and productivity may be impaired.

Yellowstone cutthroat trout (large-spotted and fine-spotted form) is selected to represent the many species of fish occupying the Forest. This species requires high water quality and high habitat diversity for survival. Since these conditions are indicative of healthy aquatic ecosystems, with associated healthy riparian plant communities and functioning watersheds, it is assumed that by providing for these habitat needs, the habitat needs of all other aquatic life would be provided as well.

A complete list of the fish species by hydrologic unit is shown on Table III-8. Descriptions of the condition and trends of aquatic and riparian habitats are shown on Table III-6.

Table III-8 Fish Species by Hydrologic Unit 1/							
Fish Species	Hydrologic Unit						
	Birch	Medicine Lodge	Beaver - Camas	Upper Henry's	Lower Henry's	Teton	Palisades
Rainbow Trout 2/	X	X	X	X	X	X	X
Brown Trout 2/			X	X	X	X	X
Brook Trout 2/	X	X	X	X	X	X	X
Lake Trout 2/						X	X
Kokanee (Sockeye Salmon) 2/				X			X
Cutthroat Trout	X	X	X	X	X	X	X
Mountain Whitefish			X	X	X	X	X
Arctic Grayling				X			
Sculpin (all species)	X	X	X	X	X	X	X
Longnose Dace			X	X	X	X	X
Speckled Dace			X	X	X	X	X
Utah Sucker			X	X	X	X	X
Utah Chub			X	X	X	X	X
Redside Shiner					X	X	X

1/ Includes only fish species known to occur within Forest lands
2/ Denotes nonindigenous species known to be introduced by European man

Birch, Medicine Lodge and Beaver-Camas Hydrologic Units - These hydrologic units are assessed together because of similarities in fisheries resources and conditions. All drainages originate along the eastern aspect of the Lemhi Range or the southern aspect of the Beaverhead Mountains. As they flow onto the Upper Snake River Plain, these waters "sink" and flow underground. Recent studies document that these subterranean flows reach the lower Snake River at Thousand Springs, 150 miles away. Fish populations within the Birch, Crooked, Medicine Lodge and Beaver-Camas Creek systems are now physically and genetically isolated from the Snake River system and from each other.

Fish-bearing streams on Forest lands are small, steep to moderate-gradient and fed by snowmelt runoff and baseflow from groundwater sources. The natural capabilities of this area to produce abundant or diverse fisheries resources is relatively limited.

Upper Henry's Hydrologic Unit - All drainages flow into Henry's Lake or the Henry's Fork of the Snake River above the confluence of Fall River. Spring-fed creeks provide an environment capable of producing abundant aquatic insect and plant biomass. Where fisheries life history requirements are met, these streams are among the most productive trout fisheries in the world.

The primary natural disturbances shaping and controlling fisheries habitat are high intensity summer rains and fire. Natural processes of overland flow, slumping and tree windthrow bring organic matter, soil, rocks and nutrients into streams.

Fisheries resources in this hydrologic area are very productive and varied. Duck and Targhee Creeks are important economically and scientifically as they provide key spawning habitats for the Henry's Lake native cutthroat trout fisheries and associated IDFG managed hatchery.

Lower Henry's Hydrologic Unit - All drainages flow into the Henry's Fork of the Snake River near the confluence of Falls River. Many are similar to those of the Upper Henry's Hydrologic Unit but tend to be more strongly influenced by groundwater. Falls River is a medium to large, low-gradient system which is predominately spring-controlled.

The primary natural disturbances shaping and controlling fisheries habitat are high intensity summer rains and fire. Natural processes of overland flow, slumping and tree windthrow bring organic matter, soil, rocks and nutrients into streams.

The fisheries resources of importance within this area are primarily small headwater streams and alpine lakes spread across a small portion of the landscape.

Teton Hydrologic Unit - This area drains the western aspect of the Tetons and the northern aspect of the Big Hole Mountains. Fish-bearing streams originating in the Teton Mountains are steep, dynamic and strewn with large boulders. Stream channels developed from the sediment and rock that was delivered through glaciation. Within the Big Hole Mountains, fish-bearing streams are relatively small, moderate-gradient and fed by snowmelt runoff and baseflow from groundwater sources.

The primary natural disturbance shaping and controlling fisheries habitat in the Teton Mountains is rapid snowmelt. Natural processes of mass failure and avalanches recruit organic matter, large woody debris, soil, rock and nutrients into streams. In the Big Hole Mountains, rapid snowmelt initiates overland flow and slumping which contribute organic matter, soil, rock and nutrients to fish habitats.

Palisades Hydrologic Unit - All drainages originate along the south aspect of the Big Hole Mountains and the north aspect of the Caribou Mountains and are tributary to the South Fork of the Snake River.

The primary natural disturbances shaping and controlling fisheries habitat are high intensity summer rains and fire. Natural processes of overland flow, slumping, and tree windthrow move organic matter, soil, rock and nutrients into streams.

The fisheries resources found here are very productive and varied. Many of the streams flowing into Palisades Reservoir, and Palisades and Rainey Creeks, provide key spawning and rearing habitats for the native cutthroat trout fisheries.

Cutthroat Trout

Cutthroat trout is a sensitive species and has been selected as a management indicator. Table III-9 illustrates cutthroat trout population status and distribution on the Forest by hydrologic unit.

The only indigenous trout within the Forest is the Yellowstone cutthroat (*Oncorhynchus clarki bouvieri*). Scientific information to date indicates that this subspecies consists of two forms: the fine-spotted and large-spotted Snake River Yellowstone cutthroat. Scientists are continuing research to determine if the fine-spotted Snake River cutthroat trout is a separate subspecies (Behnke 1992).

The Forest Service in Regions 1 and 4 has prepared a draft Habitat Conservation Assessment (HCA) for Yellowstone cutthroat trout, including the large-spotted and the fine-spotted Snake River forms. The HCA is directed at defining habitat conditions necessary for the long term persistence of Yellowstone cutthroat trout. In addition, the assessment correlates habitat conditions to population distribution and species management activities within the historic range of the species. Yellowstone cutthroat trout currently occupy 41 percent of their historic habitat. Within Idaho, approximately 45 percent of the historic habitat is presently occupied. German brown, rainbow, and brook trout have been stocked into many drainages and compete with cutthroat trout (see Table III-8). Rainbow trout have been introduced into every hydrologic unit on the Forest and are likely to hybridize with cutthroat trout, causing genetic contamination of cutthroat trout populations.

Table III-9 Population Status of Cutthroat Trout by Hydrologic Unit								
Population Status 1/	Hydrologic Unit							
	Birch	Medicine Lodge	Beaver - Camas	Upper Henry's	Lower Henry's	Teton	Palisades	Average
Large-spotted Cutthroat Trout								
% strong/healthy	0	9	0	3	0	76	51	19
% depressed at risk	6	18	5	12	21	24	40	18
% extinct	94	64	95	85	68	0	9	59
% status unknown	0	18	0	0	11	0	0	4
Fine-spotted Cutthroat Trout								
% strong/healthy	-	-	-	-	-	0	0	0
% depressed at risk	-	-	-	-	-	46	42	44
% extinct	-	-	-	-	-	54	58	56
% status unknown	-	-	-	-	-	0	0	0
<p>1/ These values represent the status of that portion of the population occupying Forest Service lands within each of seven Hydrologic Units. The population status categories were adapted from assessment protocol developed by the Upper Columbia River Basin Assessment Team.</p> <p>A "-" means the fine-spotted cutthroat trout was never present in the hydrologic unit.</p> <p>"Strong/healthy" denotes populations with the following characteristics: 1) all major life-history forms that historically occurred are still present, 2) numbers appear to be stable or increasing and the population is at least half of the historic number or density, and 3) the population within the watershed or within the larger metapopulation of which the population is a part, contains at least 5,000 fish or 500 adults.</p> <p>"Depressed/at risk" denotes populations with at least one of the following characteristics: 1) a major life-history component has either been eliminated or is remnant, 2) the population within the sixth order watershed has a declining trend in abundance, or the population occurs in less than half of the habitat thought to historically support the species, or numbers are less than half of what the watershed supported historically, and 3) total abundance for the whole metapopulation of which this watershed is a part is lower than 5,000 total fish or 500 adults.</p> <p>"Extinct" denotes the species is not present and there is evidence that the species was historically present or could conceivably have had natural access to a watershed even though landscape/habitat characteristics might be outside the range deemed suitable for supporting populations.</p> <p>"Status unknown" denotes that reliable information was not available by which to make a judgement about current presence or absence.</p>								

Wildlife Associated with Aquatic and Riparian Habitats

Wildlife management indicator species include bald eagles, trumpeter swans, spotted frogs, common loons and harlequin ducks. Monitoring and analysis emphasizes habitat conditions to evaluate potential changes in the status or sustainability of these species. Table III-10 illustrates the distribution of these species and their habitats by subsection. A brief overview of these species and habitats follows. Additional information is available in Process Paper D.

Bald Eagle Populations - Scale GYA and Forestwide

GYA Overview - Bald eagles on the Forest are part of the GYA bald eagle population. A brief overview of the GYA population is presented to provide a proper context for bald eagle populations.

From 1960 to 1995, the bald eagle population in the GYA increased exponentially, from about 10 to 111 known breeding areas. In 1982 (the first year of comprehensive data), 49 breeding areas were known with 78 percent occupied by breeding pairs. An average of 0.61 young were fledged per occupied breeding area.

Table III-10 Distribution of Wildlife Management Indicator Species Associated with Riparian and Aquatic Habitats, Including Endangered, Threatened, Candidate and Sensitive Wildlife Species on the Forest within the Seven Subsections

Management Indicators, Species and Habitats	Subsections 1/							
	Status 2/	Lemhi/Medicine Lodge	Centennial Mountains	Island Park	Madison-Pitchstone Plateaus	Teton Range	Big Hole Mtns	Caribou Range Mtns
Riparian and Aquatic Habitats								
Bald Eagle Nesting Habitat	T	N	Y	Y	N	N	Y	Y
Trumpeter Swan Nesting Habitat	S	N	N	Y	Y	N	N	S
Spotted Frog Habitat	C/S	Y	Y	Y	Y	Y	S	S
Common Loon Habitat	S	N	N 3/	Y	Y	N	Y	Y
Harlequin Duck Habitat	S	N	N	N	N	Y	Y	Y

1/ Letters used for distributions among subsections are as follows

Y = Species presence and/or suitable habitat has been documented in the subsection

N = Species presence has not been documented in the subsection, suitable habitat has not been documented

U = Unverified but reliable sightings exist on the Forest, suitable habitat probably exists

S = Suitable habitat probably exists, but there have been no documented or unverified sightings on the Forest

2/ Letters used for Status are as follows E = endangered, T = threatened, NE = nonessential experimental, C= candidate for possible listing as endangered or threatened wildlife, S = sensitive species, '-' = no formal status

3/ Common loons have been observed on Henry's Lake, but this is not within the Forest

Sources of information for this table include Targhee National Forest AMS, 1992, Personal communication with K Johnson, Feb 8, 1995, B Aber, M Oechsner, B Alford, D Welch, R Newton, USFWS - Federal Register 61(40) 7613 (Feb 28, 1996)

and 23 young were produced. The number of known breeding areas had grown to 111 by 1995, with a mean annual occupancy rate of 91 percent, average number of young fledged per occupied breeding area 1.05, and average number of young produced per year of 80.8, over 14 years. Productivity has been well over that considered necessary for population maintenance (Greater Yellowstone Bald Eagle Working Group 1996).

Southeast Idaho and Forest Overview - The data we compiled on bald eagle nesting populations in southeast Idaho dates back to 1972. In 1972, there was one recorded bald eagle nest along the South Fork of the Snake River, which was not on the Forest. As of 1995, total known nesting territories in southeast Idaho numbered 42. The first recorded bald eagle nest on the Forest occurred in 1975, along the Palisades Reservoir. From 1975 to 1995, the bald eagle nesting populations on the Forest increased to 17 nesting pairs.

Bald Eagle Habitat - Scale Forestwide

Nesting habitat on the Forest is associated with large rivers (Henry's Fork and South Fork of the Snake River and Buffalo River), large lakes and reservoirs (Palisades and Island Park Reservoirs and Henry's Lake). Nests are commonly found in large trees, mainly conifers and cottonwoods. Because eagles need large trees to support their large nests, they are often found in multi-storied, late seral stands with open canopies.

During the breeding season, bald eagles eat mainly fish. They also eat waterfowl, shorebirds, upland birds and small mammals. Eagles are very opportunistic predators, especially during the winter. They will eat whatever is available including fish, waterfowl, small mammals and carrion.

Wintering bald eagles tend to congregate near bodies of water and roost communally. Major rivers and large lakes constitute the majority of winter habitats used, although temporary presence of high quality foods may entice eagles to areas far removed from aquatic zones.

Roost sites are usually located in stands of mature or old growth conifers or cottonwoods. For purposes of management, a communal roost is defined as an area usually less than 10 acres in size that contains

greater than or equal to six bald eagles on any given night Critical roost sites are defined as exhibiting traditional use for greater than or equal to five years and contain greater than or equal to 15 eagles per night for greater than or equal to 14 nights per season (USFWS 1983) No critical winter roost sites have been identified in GYA (Greater Yellowstone Bald Eagle Working Group 1996)

Bald Eagle Recovery Plan - The Forest is within the "Greater Yellowstone Bald Eagle Management Zone" as outlined in the Pacific States Bald Eagle Recovery Plan (USFWS 1986) The Recovery Plan established the following habitat and population goals for this management zone

- Habitat management goal - 65 nesting territories, which is considered the minimum number of territories needed to provide secure habitat for the recovered population
- Population management goal - 50 breeding pairs

For the portion of the Greater Yellowstone bald eagle management zone which includes the Forest, habitat management goals have been established for five areas as follows

Island Park/Henry's Fork	- 7 nesting territories
Big Springs	- 2 nesting territories
South Fork Snake River	- 8 nesting territories
Palisades	- 5 nesting territories
Henry's Lake	- 1 nesting territory
Total goal	23 nesting territories

All of these Recovery Plan goals have been exceeded with the current bald eagle populations

Prior to 1995, the bald eagle was listed as endangered under the ESA In August 1995, the U S Fish and Wildlife Service downlisted the improved bald eagle status to threatened

Trumpeter Swan Populations - Scale Rocky Mountain Population and Forestwide

Trumpeter swans on the Forest are part of the Rocky Mountain Population (RMP) (Shea 1994 and Maj and Shea 1996) The RMP comprises the nonmigratory resident tri-state (Idaho, Montana and Wyoming) flocks (including the Forest) and the migratory Canadian flocks From less than 200 birds in 1930, the RMP increased to about 2,500 birds by 1996, the highest in over a century (Maj and Shea 1996) About 80 percent of the RMP winters in southeast Idaho along the Henry's Fork of the Snake and southeast Montana along the Madison River The remaining 20 percent winter in western Wyoming and the Park

The following summarizes trumpeter swan population changes which have occurred from about 1932 to the present (from Maj and Shea 1996)

"From 1932 to the 1970s, the RMP grew from less than 200 birds (100 birds which summered in Canada and 100 birds from the tri-state area) to over 700 birds. Most of this increase was observed within the tri-state flock which had increased to over 500 birds by 1951 While the tri-state flock fluctuated between 450-650 birds (about 72 percent of the RMP) during the next 25 years, the Canadian flock increased to only 200 birds (about 28 percent of the RMP) During the 1970s, the Canadian flock started to grow, reaching 2,200 birds (86 percent of the RMP) by 1994 During the 1970s and 1980s, the tri-state flock continued to fluctuate between 400-600 birds (14 percent of the RMP) Since 1990, in an attempt to expand wintering and breeding distribution of the RMP, over 1,200 swans have been translocated from the tri-state wintering areas to southern Oregon, western Wyoming and other southeast Idaho areas Also, winter feeding at Red Rocks Lakes National Wildlife Refuge was terminated Due to translocation efforts and termination of winter feeding, the nonmigratory tri-state population has declined to less than 300 swans (239 adult birds counted in September 1994) This is the lowest number since 1945 "

Trumpeter Swan Habitat - Scale Forestwide

Nesting habitat occurs on large marshes which may be occupied by numerous breeding pairs, or on smaller lakes and beaver ponds, normally occupied by one pair

Preferred wintering sites in the tri-state area provide ice-free waters with slow current, extensive beds of aquatic plants and low levels of human disturbance. In the tri-state area during most winters, icing restricts swans to sites where geothermal waters, springs or outflows from dams maintain open water.

During the waterfowl hunting season in November and December, RMP swans concentrate in the less-disturbed habitats provided by the Park, Harriman State Park, Red Rock Lakes NWR, and the broad arms of Hebgen Lake, Montana. As these areas freeze and as human activity diminishes elsewhere, swans make greater use of other sites. About 80 percent of the RMP winters in southeast Idaho along the Henry's Fork of the Snake River and in southeast Montana along the Madison River. The remaining 20 percent winter in western Wyoming and the Park (Maj and Shea 1996).

For the period 1982 to 1994, 31 lakes and ponds on the Forest have been used at least during one or more summers, 17 of these 31 have had at least one nesting attempt, 13 of these 31 have successfully produced young during one or more years.

Spotted Frog Populations - Scale Forestwide

We do not know and are not able to provide a spotted frog population estimate for the Forest. An amphibian survey conducted on the Forest in 1992 and 1993 provides an overview on the distribution of spotted frogs on the Forest (Clark and Peterson 1994). This amphibian survey documented spotted frogs at 51 sites, distributed within five subsections, as shown in Table III-10. Ranger District records documented three additional sites with spotted frogs.

Results of the 1992 and 1993 amphibian survey, plus results of spotted frog research conducted in the Park (Turner 1960), illustrate that population detectability and abundance can vary widely between years. Turner (1960) documented that population size fluctuated greatly, depending upon breeding success, and breeding success was tied to the persistence of water at breeding sites, which was regulated by weather conditions. Clark and Peterson (1994) considered two factors, temperature and water availability, as the most important components of population detectability. They suggest these two factors may contribute to significant yearly variation in reproductive activity and foraging/dispersal patterns.

For lands adjacent to the Forest, spotted frogs have been documented in Yellowstone and GTNPs.

Spotted Frog Habitat - Scale Forestwide

Spotted frogs are most likely found near permanent water such as marshy edges of ponds or lakes, in algae-grown overflow pools of streams, or in wet areas with emergent vegetation. They may move considerable distances from permanent water after breeding, often frequenting mixed conifer and subalpine forests, grasslands, and brushlands of sage and rabbitbrush if puddles, seeps or other water is available. Spotted frogs are thought to hibernate in holes near springs or other areas where water remains unfrozen and is constantly renewed. A muddy or soupy substrate in rivers or ponds is preferred by the spotted frog for hibernation (Gomez 1994).

A spotted frog inventory/study has been in progress on the Forest for several years. A recent progress report stated the following:

All frogs were always within two meters of water. None left riparian habitats and almost all were associated with ponds until September when they left the ponds for nearby streams. Ponds within 50 m of permanent streams were an important combination of habitat characteristics for them (Bartelt and Peterson 1993).

Common Loon Populations - Scale Subsections

Common loon abundance on the Forest is highest during spring and fall migrations. Common loons have been documented using four reservoirs, nine lakes and an unnamed pond within five subsections as shown in Table III-10.

Nesting and rearing of young have only been documented at three sites: Indian Lake, Thompson Hole and Bergman Reservoir. Our records indicate only one pair uses each of these sites, and all sites are not used each year. Therefore, the total documented breeding population on the Forest ranges from one to three pairs.

In the GYA, loons nest on several lakes in the southwestern section of the Park, and on a few lakes throughout the rest of the Park, and in GTNP (Clark et al. 1989).

Common Loon Habitat - Scale Subsections

For nesting and brood rearing, common loons need lakes large enough to provide adequate runways for flight (greater than 9 acres in size), deep enough to sustain fish populations and clear enough for them to see their prey (they rely on their sight for foraging). Loons avoid lakes with high levels of human activity, fluctuating water levels, turbid water and unprotected coves.

The following lakes and ponds within the Island Park and Madison-Pitchstone Plateaus subsections have been identified as capable of providing suitable breeding habitat for common loons: Loon Lake, Moose Lake, Indian Lake, Thompson Hole, Junco Lake, Fish Lake, Bergman Reservoir and an unnamed pond. Only Indian Lake, Thompson Hole and Bergman Reservoir have documented nesting and rearing of young.

Common loon habitat on the Forest and in the adjacent National Parks occurs at the highest elevation of any other loon populations in North America (Atkinson 1991). Therefore, the time period for nesting and rearing of young is probably shorter than other areas in North America (Atkinson 1991 and Clark et al. 1989).

Harlequin Duck Populations - Scale Forestwide

Harlequin ducks have been observed along four creeks within three subsections on the Forest: Big Elk Creek, Teton Creek, Darby Creek and McCoy Creek. Successful reproduction has been documented at Big Elk Creek, Teton Creek and Darby Creek (IDFG 1992 - Idaho Conservation Data Center, Atkinson 1991, Atkinson and Atkinson 1990, Cassirer and Groves 1990 and 1991, Bud Alford, personal communication 1995). One to two pairs have been documented along each creek, therefore we estimate the breeding population on the Forest to be between three and six pairs. However, not all streams with potential suitable habitat have been surveyed, so this is considered a minimum estimate of breeding pairs.

The harlequin duck population on the Forest is part of the Pacific Northwest population. The estimated breeding population in the Pacific Northwest is as follows: Washington-274, Oregon-50, Idaho-50, Montana-110, Wyoming-40, Total-514. The documented breeding population on the Forest is part of the Idaho and Wyoming breeding populations. Monitoring of populations in Idaho and Wyoming indicate they are stable (Harlequin Duck Working Group 1993).

Harlequin Duck Habitat - Scale Forestwide

Harlequin ducks are only present on the Forest during the nesting and brood-rearing seasons; they migrate to the coasts of Oregon and Washington to winter. For nesting and brood rearing, these ducks require relatively undisturbed, low-gradient, meandering mountain streams with dense, shrubby riparian areas, and woody debris for nesting and brood rearing. They also need log jams and overhanging vegetation for

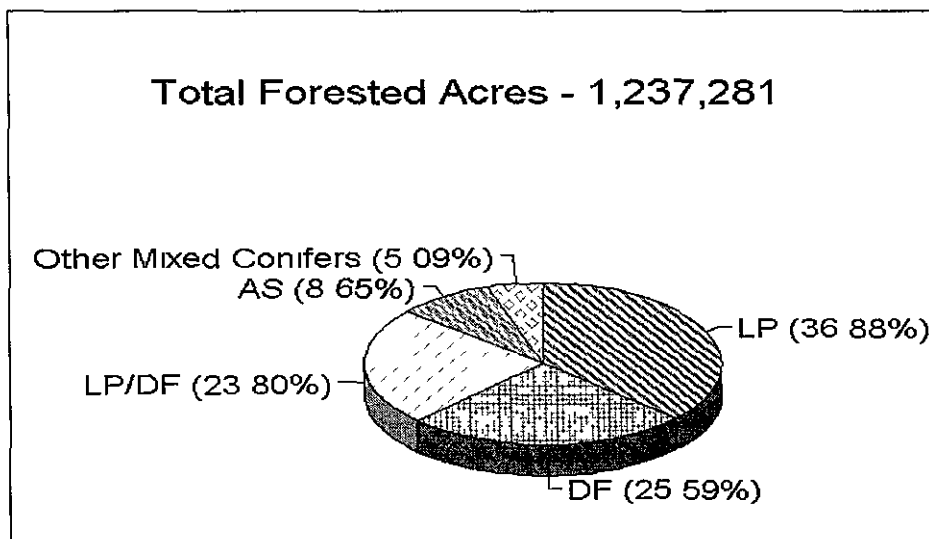
cover and loafing areas. Specific habitat requirements include streams with gradients less than three degrees, greater than 50 percent streamside shrub cover, and at least three loafing sites (midstream boulders or log jams) for every 33 feet of stream. Successful reproduction has been documented in only three locations: Big Elk, Teton and Darby Creeks. Sightings have been made at McCoy Creek, but these sightings have not indicated successful reproduction.

TERRESTRIAL ECOSYSTEMS

Upland Forested Ecosystems - Scale: Subsections

Sixty-eight forest community types currently occur on the Forest. The community types and age classes present on the Forest are displayed by subsection in Table III-3. Major forested community types are shown in Figure III-3. Minor forested community types include whitebark pine, limber pine and Engelmann spruce/subalpine fir. Two community types of cottonwoods occur on the Forest, primarily on the Snake River and lower elevational portions of the Henry's Fork of the Snake River.

Figure III-3
Major Forest Types on the Targhee National Forest



Lemhi/Medicine Lodge - Although only 37 percent of this subsection is forested, this is more forest land than occurred historically. Information from the early 1900s indicates that Douglas-fir has expanded onto lands that were formerly dominated by grasses and sagebrush. Some riparian communities also appear to have more conifers than they did historically.

Approximately 90 percent of the forested land is in the mature age class, indicating a lack of age class diversity in the subsection. With 90 percent of the forests in Douglas-fir there is also a lack of tree species diversity. Many of the Douglas-fir stands are densely stocked. The uniformity of tree species and age classes, as well as the dense stocking, make this area's forests more susceptible to ecosystem disturbances such as insects, diseases and large fires. An example of the latter was the Gallagher Peak Fire which burned 37,230 acres in 1979. This was the largest fire in the last 20 years on the Forest.

Limber pine occurs in the subsection, but is not differentiated as a community type since it occurs as a scattered tree in predominantly Douglas-fir stands. The intermingling of forest land with nonforested communities provides most of the vegetative diversity in this subsection.

Centennial Mountains - The landscape is dominated by forested communities which cover 71 percent of the subsection. Approximately 51 percent of the forested acres are Douglas-fir. Lodgepole pine (21 percent) is found in pockets on low-productivity soils. Mixed lodgepole pine/Douglas-fir (13 percent) and other mixed conifers (10 percent) are also well-represented. The presence of mixed stands indicates that species such as Douglas-fir and subalpine fir are becoming established as stands move through succession. Aspen comprises four percent of the forested acres, which is less than was historically present. Fire suppression has allowed conifers to take over areas that were previously aspen, through the process of succession. Some riparian and mountain meadow communities also appear to have more conifers than they did historically.

Mature forests cover 79 percent of the forested acres, indicating a lack of diversity in age classes. Decreasing diversity however is associated with the loss of aspen over time. Potential for severe fires, insects and diseases are concerns in this subsection, mainly because of the large component of mature forests. Western balsam bark beetle has been active in this area in recent years. Douglas-fir beetle caused losses in Douglas-fir from the late 1980s through 1992 and could again reach destructive levels. Pockets of root rot are common in the subsection, associated with partial cutting of Douglas-fir which occurred in the 1950s.

Past Douglas-fir shelterwood regeneration methods implemented on dry south and west slopes of the Centennials have failed, requiring planting to reforest the sites. Similar treatments on north-facing slopes have tended to regenerate naturally.

Island Park - The landscape is dominated by forested community types, which blanket 93 percent of the area. Forested areas are primarily lodgepole pine types (70 percent) that contain small pockets of aspen, sagebrush/grass, grass meadows and mountain brush. Douglas-fir (10 percent) and mixed lodgepole pine/Douglas-fir (15 percent) community types provide diversity in the area. Lodgepole pine occupies the floor of the Island Park Caldera and Douglas-fir cover types are concentrated on the Caldera rim. On the Caldera rim, aspen and sagebrush areas are evolving towards the Douglas-fir type through the process of succession.

Salvage harvesting has shifted 46 percent of the lodgepole pine into the nonstocked, seedling and sapling classes. Active management of aspen, as well as aspen sprouting in lodgepole pine clearcuts, has moved 34 percent of the aspen into these young classes. Other community types are concentrated in the mature age group.

Many lodgepole pine clearcuts in this subsection have not regenerated naturally and have required planting to restock the stands. The process of planting these sites is expected to continue through the year 2000.

Mature Douglas-fir on the caldera rim experienced outbreaks of spruce budworm and Douglas-fir beetle in the past decade. These problems have now subsided, but could easily recur given the mature condition of the Douglas-fir and the presence of multiple-storied stands. Due to fuel reductions and young age classes associated with harvest, fire is less of a concern here than in most other subsections.

Madison-Pitchstone Plateaus - The landscape is dominated by forests, which comprise 97 percent of the area. Lodgepole pine is the most common forested community type (76 percent), with mixed stands of lodgepole pine and Douglas-fir running a distant second place (14 percent). Relatively minor amounts of aspen and various mixed conifers provide some diversity. The southern portion of the subsection is unique in that there are many wet meadows and small lakes intermingled with the forests.

The 1988 North Fork Fire burned some 17,700 acres in the northern part of this subsection. Past timber harvesting also occurred primarily in the north half of the subsection. These two events have shifted 39 percent of the lodgepole pine into the nonstocked, seedling and sapling age classes. Active management of aspen has also provided some age class diversity.

Most areas of the North Fork Burn regenerated naturally following the fire. Approximately 1,360 acres are being planted in portions of the burn that did not reforest.

Due to fuel reductions and young age classes associated with past harvest and the North Fork Burn, fire is less of a concern here than in many areas. However, conditions in the southern portion of this subsection are presenting some fire risks as mixed aspen and lodgepole pine stands convert to Douglas-fir through succession. Mature subalpine fir and Douglas-fir in this southern area experienced outbreaks of western balsam bark beetle and Douglas-fir beetle in the past decade. These conditions have subsided, but could easily recur since vegetation conditions have not changed.

Teton Range - The landscape is a diverse mix of forested (57 percent) and open (43 percent) community types. Lodgepole pine occurs on poorer soils at lower to middle elevations. Lodgepole is mixed with Douglas-fir in 31 percent of the forested area, indicating that the pine is converting to Douglas-fir through succession. Open Douglas-fir forests, mountain brush, aspen, and sagebrush pockets are found predominantly on south and west aspects. Aspen is becoming mixed with conifers as succession proceeds, and the amount of aspen has likely declined compared with historic levels due to fire suppression. Upper elevations are characterized by dense mixed conifer forests, open grass/forb meadows, and talus slopes. Conifers are moving into riparian areas and mountain meadows due to fire suppression over time.

Since much of this subsection is designated wilderness, timber harvest and fire suppression has been limited, thus only one percent of the forested acres are in the nonstocked, seedling or sapling age classes. The large percentage of mature or older forests make this area ripe for insect infestations, diseases and large-scale fires. In recent years western balsam bark beetle has been active in the subalpine fir. Douglas-fir beetle has killed pockets of Douglas-fir in the past decade, but beetle populations have declined since 1992.

Big Hole Mountains - The landscape is a combination of community types, with 65 percent of the landscape forested and 35 percent nonforested. The most common forested community type by far is mixed lodgepole pine and Douglas-fir, comprising 47 percent of the forested acres. Aspen, pure Douglas-fir and pure lodgepole pine each account for roughly 15 percent of the forests. Mountain brush is common, consisting of mountain mahogany on south slopes and hawthorn, chokecherry, serviceberry, antelope bitterbrush and Rocky Mountain maple on various slopes depending on elevation. Grass/forb meadows and sagebrush are also present in significant amounts. The northwestern boundary of the subsection extends into the cottonwood type along the Snake River.

Only 4 percent of the forested stands are in the nonstocked, seedling or sapling age category. These are concentrated in the north end of the subsection where timber harvest has occurred. The Snake River cottonwood stands and most of the shrublands are also in late age classes. This creates hazards for large fires, insect infestations and disease problems. In the north end of the subsection Douglas-fir beetle and western balsam bark beetle caused damage in the late 1980s and early 1990s, but tapered off in 1994. Insect information is not available for the southern portion. Due to fire suppression and lack of disturbance over the years, conifers have taken over some sites that were historically nonforested. This has likely reduced overall vegetative diversity in the subsection.

Natural regeneration has been difficult to obtain in Douglas-fir stands. In the Palisades area, harvest in both lodgepole pine and Douglas-fir have failed to reforest naturally. This has resulted in the need to plant most of these areas.

Caribou Range Mountains - The Caribou Range Mountains Subsection is similar to the Big Hole Mountains in its overall vegetation characteristics. This subsection is 40 percent nonforested and 60 percent forested. The primary forest types are aspen (31 percent) and mixed lodgepole and Douglas-fir (47 percent). The interspersed forests with sagebrush, grass/forb meadows and mountain brush provides for good diversity of plant species. The northeastern boundary area of the subsection includes cottonwood forests along the Snake River.

Age class diversity is limited, as in many other areas of the forest. Because virtually no vegetation management has taken place in this subsection and fires have been suppressed for many years, only one percent of the forests are in young age classes. Most of the shrublands are also in late age classes. Risks of large fires, insects and diseases are high due to these vegetative conditions. The insect situation in recent years has been similar to that in the Big Hole Mountains Subsection. Douglas-fir is becoming more predominant as it mixes with stands of lodgepole pine, aspen or shrubs. It is likely that there is more Douglas-fir here now, and less aspen, lodgepole pine and shrubland, than existed historically. The Snake River cottonwood stands are also uniformly in the mature age class due to lack of disturbance which they need in order to regenerate.

Establishing natural regeneration of both Douglas-fir and lodgepole pine following harvest has been a problem in this subsection, and most sites have required planting.

TES and Biodiversity Indicator Plant Species - Scale: Forestwide

Fifteen sensitive plant species and one threatened plant species are currently listed on the Forest TES plant species list (Process Paper F) and occur in a broad range of habitats (Table III-11). Twenty-two rare Idaho and Wyoming plant species occur on the Forest and are indicator of biodiversity and unique habitats on the Forest (Process Paper G). Diversity of community types with a range of seral stages is important in maintaining these species on the Forest (Table III-12).

One sensitive plant species, *Astragalus paysonii*, occurs in forest ecosystems of lodgepole pine and mixed Douglas-fir/lodgepole pine communities. The plant is found in disturbed or open areas in mature stands or in early seral lodgepole pine stands following fire. Fire suppression has been identified as a cause of decline of this species over its range (Fertig et al. 1993).

One threatened plant species (Table III-11) is known to exist on the Forest. Listed in 1992 and discovered on the Forest 1996, the Ute ladies'-tresses (*Spiranthes diluvialis*) occurs on the Palisades Ranger District.

Upland Nonforested Ecosystems - Scale: Subsections

Table III-13 illustrates the acres of nonforested community types by subsection throughout the Forest. Herbaceous and shrub ecosystems dominate the landscape in the Lemhi/Medicine Lodge Subsection and are significant in the Centennial, Big Hole Mountains and Caribou Range Mountains Subsections.

Fire suppression has modified the historical 10-25 year frequency of fire in the low to mid elevation areas. Fire suppression coupled with grazing and drought cycles has increased shrub canopy cover and decreased herbaceous species composition within the sagebrush/grass and mountain brush community types. These communities are shifting from a low risk of stand-replacing fires to a high risk of stand-replacing fires over broad areas. A trend is also occurring whereby the historically high percentage of early and mid seral stages is moving toward a predominance of mid and late seral stages.

Livestock grazing has been a use of both forested and nonforested plant communities throughout the forest since before 1900. Effects of grazing, coupled with fire suppression, over time have promoted changes in plant species composition and biodiversity within grazed areas.

Typically, because cattle are grazers, upland areas used by cattle tend to become dominated by browse. Rangelands overgrazed by cattle typically become dominated by forbs, browse and other plants of low palatability and ecological status. Cattle by preference will excessively graze the gentle topography close to water before they move onto the slopes.

Sheep are both grazers and browsers. Over time, areas used by sheep tend to become dominated by grasses. Rangelands overgrazed by sheep typically become dominated by forbs and grasses of low palatability and ecological status. Sheep by preference prefer steeper slopes, do not require water as

Table III-11 Threatened and Sensitive Plants List for the Targhee National Forest				
Species	Occurrence 1/	Status R04	State	Habitat
<i>Agoseris lackschewitzii</i>	D	S	S1	Perennially wet montane and subalpine meadows
<i>Androsace chamaejasme</i> var. <i>carinata</i>	S	S	S1	Rock crevices and rocky soils of limestone and dolomite, 9,500+ft elev
<i>Astragalus amnis-amissi</i>	S	S	S3	Crevices and talus of limestone cliffs
<i>Astragalus aquilonius</i>	S	S	S3	Gravelly, sandy, clay or shale washes and bars at low elevations in sagebrush/ bunchgrass
<i>Astragalus diversifolius</i>	D	S	S1	Alkaline sedge/grass meadows and swales, in sagebrush valleys
<i>Astragalus leptaleus</i>	D	S	S1	Sedge grass meadows and streamsides
<i>Astragalus paysonii</i>	D	S	S1	Disturbed areas and openings in lodgepole pine and limber pine mixed forest
<i>Astragalus vexilliflexus</i> var. <i>nubilus</i>	S	S	S1	Sparsely vegetated open ridges and slopes, 8,000-9,600 ft, subalpine/alpine
<i>Chrysothamnus parryi</i> ssp. <i>montanus</i>	D	S	S1	Beaverhead Red Conglomerate rock and soils, Centennial Mountains
<i>Cymopterus douglassii</i>	D	S	S2	Limestone, subalpine and alpine grassy ridges and summits and meadows
<i>Draba apiculata</i> (<i>D. densifolia apiculata</i>)	S	S	S1	Most gravelly alpine meadows and talus slopes of 10,400-12,000 ft elevation
<i>Lesquerella paysonii</i>	D	S	S1	Rocky, sparsely vegetated slopes, on calcareous substrates
<i>Penstemon lemhiensis</i>	S	S	S1	Sagebrush/grass sites, Birch Creek Valley
<i>Primula alcalina</i>	D	S	S1	Wet, alkaline meadows and streamsides, Birch Creek Valley
<i>Saussurea weberi</i>	S	S	S2	Alpine talus and gravel fields, often limestone 10,000 + ft elevations
<i>Spiranthes diluvialis</i>	D	T		Herbaceous communities in perennially wet zones, between saturated Carex and aquatic habitats, and drier grass/ forb and shrub communities along streams, rivers and wetlands

1/ D-Documented on Forest, S-Suspected on Forest
2/ R4 FS T-Threatened, S-Sensitive
State S1-Critically imperiled, due to extreme rarity, S2-Imperiled due to rarity, S3-Rare in state

Table III-12 Biodiversity Indicator Species and Habitat		
Riparian Species	Occurrence 1/	Habitat
<i>Astragalus drummondii</i>	D	Wet meadows
<i>Carex aenea</i>	D	Late seral streams
<i>Carex buxbaumii</i>	D	Low nutrient bogs and peat Fens
<i>Carex livida</i>	D	Peat bogs, swampy forest
<i>Cicuta bulbifera</i>	D	Late seral bogs/marshes
<i>Epilobium palustre</i>	D	Bogs
<i>Epipactis gigantea</i>	S	Warm springs and streams
<i>Eriophorum vidicarnatum</i>	D	High elevation bogs and swamps
<i>Juncus tweedyi</i>	D	Low nutrient bogs and peat Fens
<i>Lomatogonium rotatum</i>	D	Open wet alkaline/saline soils
<i>Phlox kelseyi</i> var <i>kelseyi</i>	D	Vernally alkaline meadows/seeps
<i>Salix candida</i>	D	Bogs and swamps
<i>Salix glauca</i>	D	Montane/alpine streams/wetlands
<i>Salix pseudomonticola</i>		Wet bottomlands/mesic uplands
<i>Scheuchzeria palustris</i>		Bogs
Terrestrial Habitat Species		
<i>Astragalus bisulcatus</i>	S	Sagebrush barrens, selenium soils
<i>Astragalus gilviflorus</i>	D	Barren knolls and hilltops
<i>Castilleja pulchella</i>	D	Subalpine, alpine
<i>Corallorhiza wisteriana</i>	D	Late seral Douglas-fir and lodgepole pine mixed forests
<i>Corypantha missouriensis</i>	D	Sagebrush foothills
<i>Draba inserta</i>	D	Subalpine/alpine ridges/talus
<i>Saxifraga cernua</i>	D	Alpine moist rock crevices
1/ D-Documented on Forest, S-Suspected on Forest		

often as cattle, like to bed on ridges, and because they often have a herder, they can be herded away from riparian zones more often

Although effects are noticeable in sagebrush, aspen and grazed forest communities, they are especially evident in riparian communities that have had a history of cattle overgrazing

Approximately 79 percent (1,466,475 acres) of Forest acres are identified as range allotments which are open to grazing. Approximately 400,640 acres are presently closed to grazing. There are 154 allotments (76 cattle and 78 sheep) on the forest

Table III-13 Acres of Nonforested Community Types by Subsection

Herbaceous/Shrub Communities	Lemhi/Medicine Lodge	Centennial Mountains	Island Park	Madison-Pitchstone Plateaus	Teton Range	Big Hole Mtns	Caribou Range Mtns	Forest Total
Herbaceous	11,610	13,626	4,180	2,472	45,902	35,711	9,330	122,831
Sagebrush/Grass	139,191	71,814	8,969	521	0	20,356	49,977	290,827
Mountain Brush	7,003	3,843	3,685	1,345	7,946	53,511	15,783	93,115
Aquatic	406	2,677	2,747	1,714	680	6,073	5,285	19,582
Rock/Barren/Talus	17,562	2,144	350	53	14,096	7,189	2,075	43,469
Undesignated	0	6	335	52	21	13	6	433
Total Acres	175,772	94,110	20,265	6,157	68,645	122,853	82,456	570,256
% of Subsection	63	29	7	3	43	35	40	32

HERBACEOUS- Includes grass, sedge/forb, and grass/forb communities on all landscapes from low elevations to alpine
 SAGEBRUSH/GRASS- Low sagebrush, silver sagebrush, black sagebrush, Wyoming big sagebrush and mountain big sagebrush community types
 MOUNTAIN BRUSH - Includes chokecherry, mountain clover, mountain big sagebrush, serviceberry, antelope bitterbrush, curl-leaf mountain mahogany, hawthorn, snowberry and snowbrush ceanothus in mixed communities
 AQUATIC - Includes lake, river and riparian vegetation
 ROCK/BARRENTALUS - Includes rock outcrops, bare and rocky windswept ridges, talus slopes and boulder fields from lowlands to alpine
 UNDESIGNATED - open areas of unknown composition

As documented in the Annual Operating Plan (AOP) and/or the Allotment Management Plan (AMP), all of the allotments have grazing systems in place which implement various grazing strategies (Process Paper K), and include grazing utilization standards. As previously mentioned, grazing and browsing of vegetation by wildlife and domestic livestock can have both positive and negative effects on many components of an ecosystem.

The nonforested vegetation on the Forest is grouped into two broad plant communities: riparian and upland vegetation. Forestwide, the ecological status of these communities occurs in various seral stages that meet, move toward meeting, or do not meet DVC (see Table III-6 for riparian conditions and Table III-14 for upland conditions).

The DVC for both riparian areas and nonforested uplands is defined as: The specific future condition of rangeland vegetation and other resources such as aquatic habitat and water quality that meet management objectives as identified in the Forest Plan, AMPs, or other documents. DVC can be expressed in terms of ecological status of the vegetation; it could also include species composition, diversity of habitats, or age classes of species, desired soil protection, including conditions of soil cover, erosion, compaction, and loss of soil productivity. In riparian areas, it includes conditions of streambank and channel stability, stream habitat, streamside vegetation, stream sedimentation, and water quality. DVC are those conditions resulting from meeting the Forest Plan objectives regarding the management of riparian and nonforested upland sites, aquatic habitat, and water quality. On a forestwide scale, achieving DVC would result in a mix of plant communities that meet management objectives.

On a forestwide scale, riparian and nonforested upland areas in PFC will meet DVC.

In order to achieve PFC objectives across the forest, it will be necessary to provide a mix of plant communities by moving vegetation from one seral stage to another seral stage and/or maintain some

vegetation communities in less than mid to late seral stages on a site specific basis. For example, Some small scale areas, less than 5,000 acres, of dense sagebrush with canopy cover greater than 30 percent, ranging from high mid to late seral stage, may be treated in order to meet landscape level (thousands to hundreds of acres by definition) PFC objectives. The result is the treated vegetation (burned, rotobeat, chemically treated, etc) would move from high seral stage to lower seral stage. Another example of where the Forest could make a decision to manage vegetation in less than mid to late seral status is where a substantial quantity of nonnative plants, plants of lower seral status or plants of lower seral status dominate the landscape and reintroduction or management of desirable native plants would not be practical.

High density of mountain big sagebrush (> 30 percent canopy cover), undesirable herbaceous plants in the understory and other indicators of downward trend in vegetation are characteristics of unhealthy rangeland in unsatisfactory ecological condition. For example, on the Dubois Ranger District, there are approximately 42,310 acres in less than satisfactory condition because of high density of mountain big sagebrush due to fire suppression.

Table III-14 Acres of upland vegetation meeting, moving toward or not meeting DVC Existing situation by subsection 1/								
Plant Community 2/	Subsection							
	Lemhi/ Medicine Lodge	Centennial Mountains	Island Park	Madison- Pitchstone Plateaus	Teton Range	Big Hole Mtns	Caribou Range Mtns	Forest Total
Upland vegetation meeting DVC	228,284	187,027	196,721	22,939	49,499	230,399	113,520	1,028,389
Upland vegetation moving toward DVC	12,544	22,811	8,870	4,608	10,927	63,855	52,445	176,060
Upland vegetation not meeting DVC 2/	19,244	32,354	23,416	770	46,566	23,578	7,095	153,023
1/ Only includes acres open to grazing (79%) of the Forest. Does not include acres closed to grazing prior to 1995. Source FSRAMIS database.								
2/ Includes acres of undetermined status.								

Noxious Weeds - Scale: Forestwide

Noxious weeds are undesirable plants designated by federal or state law. These plants in abundance are not part of a properly functioning ecosystem. They generally possess one or more of the following characteristics: aggressive and difficult to manage, parasitic, carrier or host of serious insects or diseases, nonnative, new to the United States or common in the United States. Soil-disturbing activities encourage the establishment and spread of noxious weeds. They are spread across the forest by a variety of natural and unnatural activities. Introduction (seeding) and invasion of aggressive species such as timothy and smooth brome have further decreased biodiversity by out-competing native species along roadways and in riparian communities. Nine different species of noxious weeds occupy approximately 19,000 acres of forest and rangeland on the Forest (see Table III-15). As per the existing approved forestwide direction for the control of noxious weeds, the forest uses an integrated pest management approach (biological, chemical and mechanical treatments) to control the spread of noxious weeds. This direction and the Affected Environment, Chapter III, of the 1987 forestwide EA are incorporated by reference into this analysis. Presently, the Forest does not apply chemical herbicides by aerial applications and only ground application is approved.

Table III-15 Noxious Weed Inventory							
SPECIES	TOTAL ACRES						
	LEMHI/ MEDICINE LODGE	CENTENNIAL MOUNTAINS	ISLAND PARK	MADISON- PITCHSTONE PLATEAUS	TETON RANGE	BIG HOLE MTNS	CARIBOU RANGE MTNS
CANADA THISTLE	2580	5,489	567	235	8	33	6
DYERS WOAD	0	0	1	0	0	6	0
HENBANE	106	30	0	0	0	5	0
LEAFY SPURGE	40	1,694	2,405	275	2	51	8
MUSK THISTLE	10	105	22	1	2,712	1,025	38
PLUMELESS THISTLE	0	0	8	0	0	4	1
SPOTTED KNAPWEED	200	168	119	3	0	27	17
ST. JOHNSWORT	0	0	16	0	0	0	0
YELLOW TOADFLAX	150	3	492	295	0	5	0
Total	3,086	7,489	3,630	809	2,722	1,156	70

Wildlife Associated with Terrestrial Habitats

Distributions of wildlife management indicator species are displayed in Table III-16. Monitoring and analysis emphasizes habitat conditions to evaluate potential changes in the status or sustainability of these species. A brief overview of these species and habitats follows. Additional information for these species is available in Process Paper D.

Elk Populations - Scale Forestwide

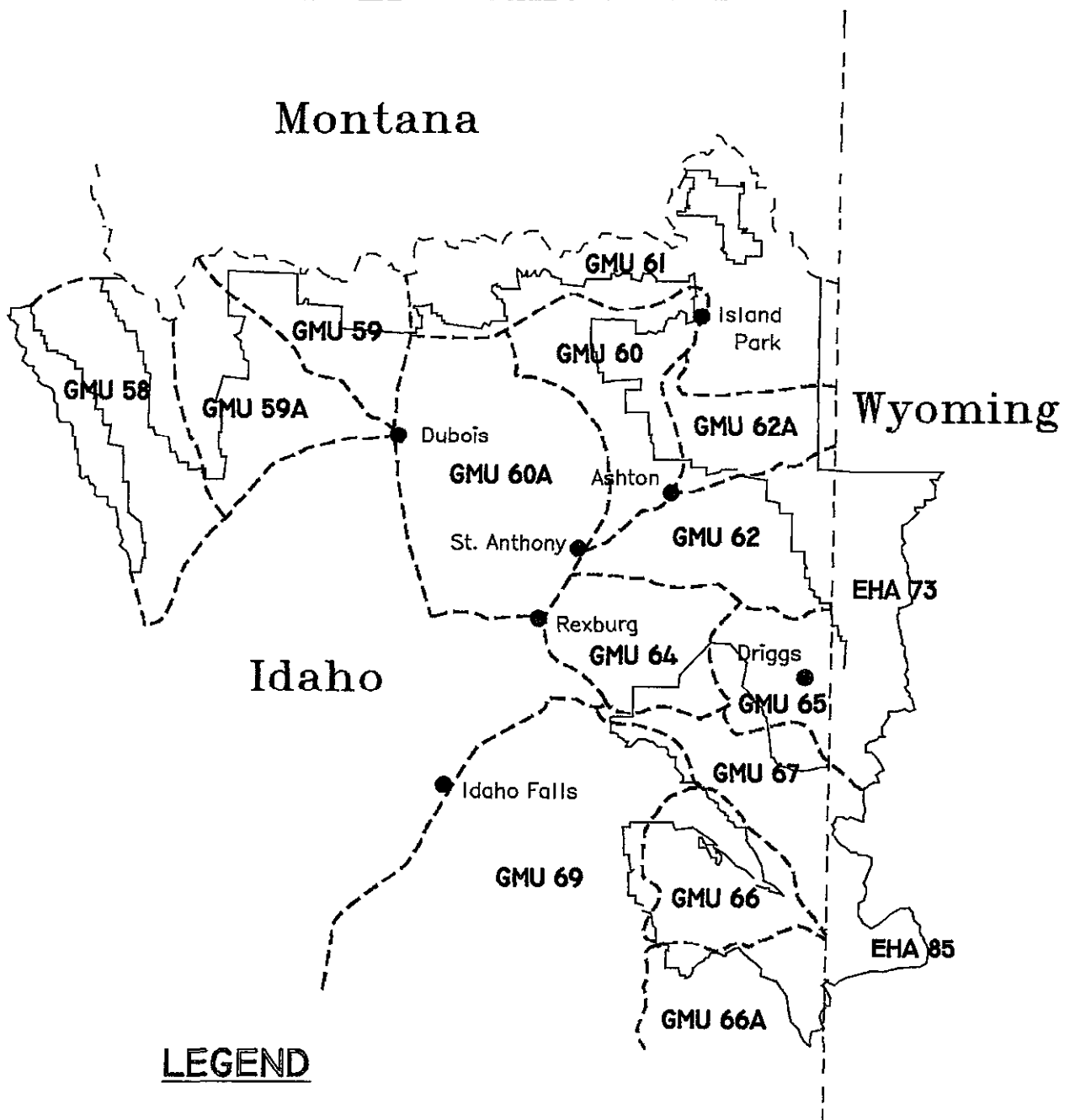
We do not know the total population of elk which use the Forest. The number of elk changes with seasons. Elk populations are lowest during the winter period because they migrate to lower elevation winter ranges. Many of the winter ranges occur off Forest lands. Elk populations on the Forest are highest during the spring, summer and fall periods, as elk migrate back from winter range areas. Some elk migrate through the Forest and summer in the Park.

For the Idaho Game Management Units which encompass the Forest (Figure III-4), elk populations have sustained annual harvests which have ranged between 940 to 3,111 animals harvested between 1979 to 1995. Elk harvests have shown a general increasing trend from 1979 to the present. The average annual harvest for the period 1979 to 1995 was 1,915 animals.

For the Wyoming Elk Hunt Areas which encompass the Forest (Figure III-4), elk populations have sustained annual elk harvests which have ranged between 66 to 205 animals harvested for the years 1979 to 1995. Elk harvests have shown a general increasing trend from 1979 to the present. The average annual harvest for the period 1979 to 1995 was 134 animals.

Age and sex composition data reported for elk populations on or adjacent to the Forest range from 29 to 53 calves per 100 cows, and the mid to low teens to 22 bulls per 100 cows (USDI Fish and Wildlife Service 1994). Using an average age and sex composition of 40 calves per 100 cows and 20 bulls per 100 cows, the pre-harvest elk population to sustain the average elk harvests from 1979 to 1995 is calculated to be 10,250 animals (the post harvest elk population would be 8,201). This is considered a minimum population.

Targhee National Forest IDFG Game Management Units WGF Elk Hunt Areas



LEGEND

- IDAHO GAME MANAGEMENT UNITS (GMU)
- WYOMING ELK HUNT AREA (EHA)



Figure III-4

Not To Scale

estimate because it does not include the need to account for animals dying from natural causes and unreported wounding losses

Elk Vulnerability - Scale Principal Watershed

EV is defined as a measure of elk susceptibility to being killed during the hunting season (Lyon and Christensen 1992, IDFG letter May 12, 1995) EV is an important component of the State Fish and Game Departments' management goals and objectives The following describes the Idaho and Wyoming goals as related to EV

Idaho Department of Fish and Game

Game Management Units 60, 61, 62, 62A, 64, 65, 66, 69 (Figure III-4) These game management units are known as "Ready Access Units " For these units, the IDFG goal for the post hunting season population is > 15 bulls per 100 cows (this equates to a maximum of 60 percent bull elk mortality), with 40 percent of bulls branch-antlered, and maintain the percentage of yearling bulls in the antlered segment of the harvest at or below 50 percent and the percentage of mature bulls (having six points on one antler) at or above 10 percent (IDFG letters May 12, 1995 and Nov 15, 1995)

Game Management Units 58, 59, 59A, 67 (Figure III-4) These game management units are known as "Front Range Units " For these units, the IDFG goal for the post hunting season population is > 20 bulls per 100 cows (this equates to maximum of 50 percent bull elk mortality), with 50 percent of bulls branch-antlered, and maintain the percentage of yearling bulls in the antlered segment of the harvest at or below 35 percent and the percentage of mature bulls (having six points on one antler) at or above 20 percent (IDFG letters May 12, 1995 and Nov 15, 1995)

IDFG stated that these goals were not being met in all Game Management Units when the spike only general hunts were started in 1991 IDFG provided the following information for each Game Management Unit (Elk Task Group Workshop, Sept 15 and 21, 1992)

- Units 58, 62, 64, 65 no data or not enough data to know if goals are being met
- Units 59, 59A, 60, 62A not meeting goals
- Units 61, 66, 67 meeting goals

Wyoming Game and Fish Department (WGF)

Elk Hunt Areas 73 and 85 (Figure III-4) The WGF goal for the post hunting season population is > 20 bulls per 100 cows This equates to a maximum of 50 percent bull elk mortality These goals are being met in these elk hunt areas

EV models (Unsworth et al 1993) have been proposed as a predictive tool that managers can use to predict mortality rates and monitor elk vulnerability (IDFG letter May 12, 1995) Research conducted by the IDFG and the University of Idaho provides the basis for this EV analysis (Unsworth et al 1993) For the Forest Plan Revision, two parameters were determined to be most important for EV analysis

- 1 Hunter-day densities (measured in total hunter-days per square mile on a watershed basis)
- 2 Motorized road and trail densities and cross-country motorized access (measured in miles per square mile on a watershed basis)

For the Idaho portion of the Forest, EV analysis is used to predict percent mortality of bull elk during the general antlered elk rifle hunting season, which usually occurs in the month of October For the Wyoming portion of the Forest, this EV analysis is used to predict percent mortality of bull elk during the general license any elk-rifle hunting season, which usually occurs during the months of September and October

Table III-16 Distribution of Wildlife Management Indicator Species Associated with Terrestrial Habitats Including Endangered, Threatened, Candidate and Sensitive Wildlife Species on the Forest within the Seven Subsections								
Management Indicators Species and Habitats	Subsections 1/							
	Status 2/	Lemhi/ Medicine Lodge	Centennial Mountains	Island Park	Madison- Pitchstone Plateaus	Teton Range	Big Hole Mtns	Caribou Range Mtns
General Forested & Nonforested Habitats								
Elk Habitat Effectiveness	-	Y	Y	Y	Y	Y	Y	Y
Elk Vulnerability	-	Y	Y	Y	Y	Y	Y	Y
Elk and Deer Winter Range	-	Y	Y	Y	N	Y	Y	Y
Gray Wolf	NE	U	U	U	U	U	U	U
Grizzly Bear Habitat	T	S	Y	Y	Y	Y	U	N
Forested Habitats								
Primary Cavity Nester Habitat 3/	-	Y	Y	Y	Y	Y	Y	Y
Three-toed Woodpecker	S	Y	Y	Y	Y	Y	Y	Y
Lewis's Woodpecker	-	Y	Y	Y	Y	Y	Y	Y
Red-napped Sapsucker	-	Y	Y	Y	Y	Y	Y	Y
Williamson's Sapsucker	-	Y	Y	Y	Y	Y	Y	Y
Downy Woodpecker	-	Y	Y	Y	Y	Y	Y	Y
Hairy Woodpecker	-	Y	Y	Y	Y	Y	Y	Y
Black-backed Woodpecker	-	Y	Y	Y	Y	Y	Y	Y
Northern Flicker	-	Y	Y	Y	Y	Y	Y	Y
Forest Owl Habitat								
Flammulated Owl	S	S	S	Y	S	Y	Y	Y
Boreal Owl	S	S	Y	Y	Y	Y	Y	Y
Great Gray Owl	S	Y	Y	Y	Y	Y	Y	Y
Furbearer Habitat								
Wolverine	S	S	Y	Y	Y	Y	U	U
North American Lynx	S	S	S	S	S	S	Y	S
Fisher	S	N	S	Y	S	Y	Y	N
American Marten	-	S	Y	Y	Y	Y	Y	Y
Northern Goshawk Habitat	S	Y	Y	Y	Y	Y	Y	Y
Red Squirrel Habitat	-	Y	Y	Y	Y	Y	Y	Y
Nonforested Habitats								
Big Sagebrush/Grassland Habitat	-	Y	Y	Y	Y	Y	Y	Y
Special and Unique Habitats								
Peregrine Falcon	E	N	Y	Y	N	Y	Y	Y

1/ Letters used for distributions among subsections are as follows
Y = Species presence and/or suitable habitat has been documented on the Forest For the grizzly bear, Y = areas within the recovery line
N = Species presence has not been documented on the Forest, suitable habitat has not been documented
U = Unverified but reliable sightings exist on the Forest, suitable habitat probably exists
S = Suitable habitat probably exists, but there have been no documented or unverified sightings on the Forest

2/ Letters used for Status are as follows E = Endangered, T = Threatened, NE = Nonessential Experimental, S = Sensitive species,
- = no formal status

3/ It is generally assumed that since conifer and/or aspen and/or cottonwood habitats exist in every subsection of the Forest, then habitat for most of these cavity nesting species occurs in each subsection

Sources of information for this table include Targhee National Forest AMS, 1992, Personal communication with K Johnson, Feb 8, 1995, B Aber, M Oechsner, B Alford, D Welch, R Newton, USFWS-Federal Register 61(40) 7595-7613 (Feb 28, 1996)

Targhee National Forest Elk & Deer Winter Range

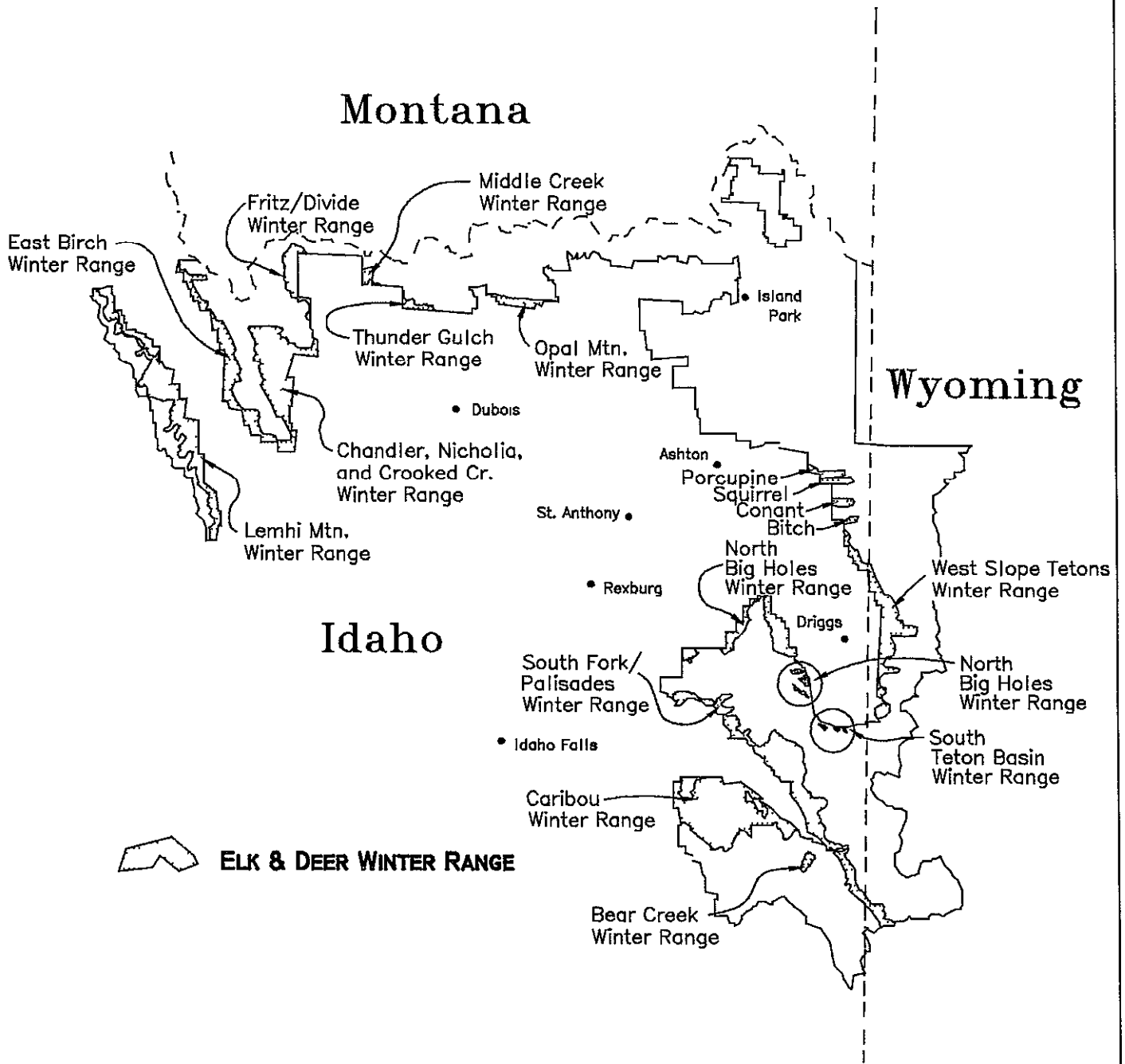


Figure III-5

Not To Scale

The bull elk mortality percentages indicate threshold levels, which if exceeded would likely require additional management actions to be initiated by the State Fish and Game Departments (IDFG letter, May 12, 1995). These management actions could include such items as shorter hunting seasons, restrictions on the type and number of animals to be harvested, restrictions on the number of hunters, more controlled hunts and less opportunity for general hunts, etc. The estimated current bull elk mortality, as calculated with the EV analysis, varies from a low of 21 percent mortality in Wyoming along the west slope of the Tetons to 97 percent mortality in the Buffalo River watershed. At the present time, 48 percent of the Forest meets State Fish and Game thresholds for EV.

Elk Habitat Effectiveness (EHE) - Scale Principal Watersheds

EHE is defined as the percentage of available habitat that is usable by elk outside the hunting season. EHE is not a measure of elk populations and it is not a measure of habitat carrying capacity (Lyon and Christensen 1992). For this EHE analysis, it is the spring, summer and early fall habitat that is usable by elk outside the general elk-rifle hunting seasons. The following two habitat parameters were determined to be most important for EHE analysis:

1. Motorized road and trail densities (measured in miles per square mile on a watershed basis). As motorized road and trail densities increase, EHE declines. This relationship is based on research by Dr. L. Jack Lyon (Lyon 1983).

2. Elk hiding cover, measured as a percentage of a watershed in hiding cover. Hiding cover is defined as vegetation capable of hiding 90 percent of a standing adult elk from the view of a human at a distance equal to or less than 200 feet (Lyon and Christensen 1992). Optimum habitat exists when 50 to 60 percent of a watershed is in hiding cover, this is based on the judgement of professional biologists involved in elk workshops on the Forest.

An EHE of 100 percent (usually displayed as 1.0) would require no motorized roads and trails within a watershed, and 50 to 60 percent of the watershed being in hiding cover. The existing values for EHE range from a low of 0.46 in a portion of the Centennial Mountains to a high of 0.74 in the Madison-Pitchstone Plateaus Subsection just south of the Park, an average forestwide EHE value is 0.57.

Elk & Deer Winter Range - Scale Forestwide

Generally, elk and deer winter range are those areas at lower elevations with lower snow accumulations, used by elk and deer during the winter months (Lyon and Christensen 1992). Map number 24 in the map packet and Figure III-5 display these winter ranges on the Forest.

The winter range areas on the Forest are the upper elevational limits of elk and deer winter ranges, more winter range acres exist at lower elevations on BLM, State, and private lands. Some elk and deer which summer on the Forest also winter on ranges in Montana and Wyoming. The distribution and number of wintering deer and elk on the Forest depends on winter severity. Generally a higher proportion of elk and deer winter at lower elevations on BLM, State and private lands. Development on private lands is a concern as it can adversely affect areas historically used by wintering elk and deer.

There are 313,825 acres of crucial mid-to-late elk and deer winter range on the Forest. These winter range areas have a wide range of vegetation types, with some of the areas mostly in mature forest and some predominantly in tall sagebrush/grass habitats. Some winter range shrub communities (such as mountain mahogany) are in overmature or decadent condition due primarily to historical fire suppression.

Currently, 12 percent of the winter range acres are closed to livestock grazing. On the acres open to livestock grazing, there are 6,352 AUMs of domestic sheep grazing and 26,423 AUMs of cattle grazing.

Currently, 78 percent of the winter range acres are meeting DVCs for condition, 13 percent of the winter range acres are improving and moving toward DVCs, and 9 percent of the winter range acres are not improving.

About 38 percent of the winter range acres are capable of being used for cross-country snowmachine use, i.e. slopes less than 50 percent and open vegetation conditions and types. Some winter range areas have historically been popular snowmachine use areas. In these areas the Forest has implemented restrictions on cross-country snowmachine use. Currently 28 percent of the winter range acres are closed to cross-country snowmachine use.

There is one feed ground for wintering elk and deer on the Forest, this is in Rainey Creek, within the South Fork/Palisades winter range area. The number of animals fed at this site varies each winter, primarily based on the severity of the winter. The Table III-17 displays data from the IDFG and illustrates what has occurred from 1978 to 1995.

Table III-17 Rainey Creek Feed Ground Data		
Winter Season	Number of Elk Fed	Number of Deer Fed
1978-79	no recorded number	no recorded number
1979-80	0	0
1980-81	0	0
1981-82	no recorded number	no recorded number
1982-83	0	0
1983-84	500	no recorded number
1984-85	200	400
1985-86	400	400
1986-87	300	400
1987-88	300	500
1988-89	200	300
1989-90	200	200
1990-91	400	100
1991-92	no recorded number	no recorded number
1992-93	no recorded number	no recorded number
1993-94	0	0
1994-95	400	250

Grizzly Bear Population - Scale Yellowstone Grizzly Bear Ecosystem (YGBE) and BMU

Portions of the Forest are within the YGBE. The YGBE has been divided into BMUs. Portions of the Forest are within the following BMUs: Henry's Lake (Subunits 1 and 2), Plateau (Subunits 1 and 2), and Bechler/Teton (Figure III-6).

The following are recovery goals for the YGBE (U.S. Fish and Wildlife Service 1993):

"Fifteen females with cubs over a running 6-year average both inside the recovery zone and within a 10-mile area immediately surrounding the recovery zone, 16 of 18 BMUs occupied by females with young from a running 6-year sum of observations, no two adjacent BMUs shall be unoccupied, and known, human-caused mortality not to exceed 4 percent of the population estimate based on the most recent 3-year sum of females with cubs. Furthermore, no more than 30 percent of this 4 percent mortality limit shall be females. These mortality limits cannot be exceeded during any two consecutive years for recovery to be achieved."

Table III-18 presents grizzly bear population data for the YGBE for the years 1987-1996 (from personal communication with Dr. Chris Servheen, USDI Fish and Wildlife Service, 1996). As of 1996, the status of the grizzly bear population in relation to the recovery goals was as follows:

- The running 6-year average for unduplicated females with cubs was 22.8, compared to the recovery goal of 15.

- Average annual human-caused mortality was 7.1 bears, compared to the recovery goal mortality limit which is to be < 8.8 bears (< 4 percent mortality limit of the population estimate)
- Average annual human-caused female mortality was 2.8 bears, compared to the recovery goal mortality limit which is to be < 2.6 bears (< 30 percent of the total known mortalities)
- The distribution of females with young was 18 of 18 BMUs, compared to the recovery goal of 16 of 18 BMU's

Knight, et al (1995) report on appraising the status of the Yellowstone grizzly bear population. Using data collected from 1976 to 1993, they report the following estimated rates of annual increase in the population

- 3.9 percent annual increase using the annual totals of distinct family groups
- 4.6 percent annual increase using reproductive and survival data
- 2.2 percent annual increase using a common probability of sighting distinct family groups

Year	Annual Undup FWC's ^{2/}	Annual Adult Female Mortality	Annual All Female Mortality	Annual Total Mortality	4% Total Mortality Limit ^{1/}	30% All Female Mortality Limit	Annual Total Mortality 6yr avg	Annual Female Mortality 6yr avg
1987	13	2	2	3				
1988	19	0	3	5				
1989	16	0	0	1				
1990	24	4	6	9				
1991	24	0	0	0				
1992	23	0	1	4	9.4	2.8	3.7 (22/6)	2.0 (12/6)
1993	20	2	2	3	9.2	2.8	3.7 (22/6)	2.0 (12/6)
1994	20	3	3	10	8.2	2.5	4.5 (27/6)	2.0 (12/6)
1995	17	3	7	17	6.9	2.1	7.1	3.2
1996	33	3	4	9	8.8	2.6	7.1	2.8

Target	Target Number	1996 Number
Unduplicated females with cubs (6 year average)	15	22.8
Known mortality limit as 4% of total population estimate	8.8	7.1
Female mortality limit as 30% of total known mortalities	2.6	2.8
Distribution of female with young	16 of 18	18 of 18

1/ Calculated as 4% of the minimum population estimate for the most current year which is based on the minimum number of females with cubs seen over the past three years
2/ Annual Undup FWC's = Annual Unduplicated Females with Cubs
3/ Calculated with updated percentage of adult females in the population as 22.3%

Targhee National Forest Bear Management Units

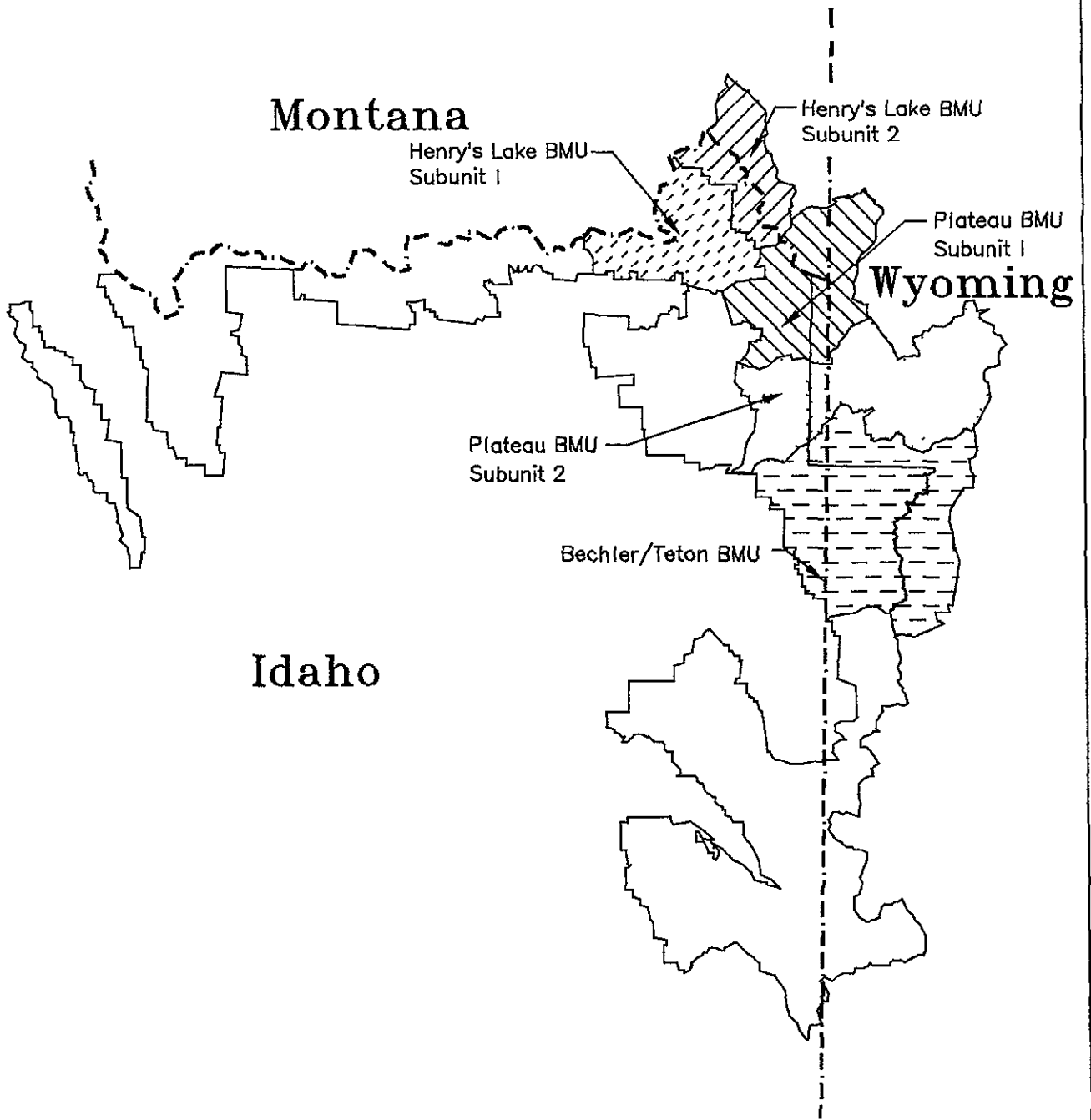


Figure III-6

Not To Scale

Following is a brief overview of grizzly bear observations for the Forest portion of each BMU Subunit

Henry's Lake BMU - Subunit 1 - Compared to the other BMUs and Subunits on the Forest, this area had the fewest grizzly bear sightings from 1959 to 1986 (Orme and Williams 1986)

From 1986 through 1995, we have records of one grizzly bear sighting in MS2 habitat, two grizzly bear sightings in MS3 habitat and two grizzly bear sightings on private lands. In addition to these sightings, radio collared bear #139 was trapped on MS3 and private lands in 1987 and 1988. Compared to the other BMUs and Subunits on the Forest, this area also had the fewest grizzly bear sightings from 1986 through 1995.

No female sows with cubs have been documented in the MS2 portion of this subunit (from available documentation dating back to 1959)

Henry's Lake BMU - Subunit 2 - Compared to the other BMUs and Subunits on the Forest, this area had the second highest number of grizzly bear sightings from 1959 to 1986 (Orme and Williams 1986)

From 1986 through 1995, we have records of eight grizzly bear sightings, all on Forest land (three of these sightings are on the border between this subunit and the Plateau BMU). In addition, there are numerous recorded observations of radio-collared bear #258 (an adult female), which was relocated into this BMU subunit in the fall of 1995. Bear #258 left this BMU subunit in the spring of 1996 and returned to her previous home range.

Sows with cubs have previously been documented in this subunit. A female sow with cubs was documented in this BMU subunit (but not on the Forest) during 1996 (Interagency Grizzly Bear Committee News Release, Oct. 28, 1996).

Plateau BMU - Subunit 1 - Compared to the other BMUs and Subunits on the Forest, this area had one of the lowest number of grizzly bear sightings from 1959 to 1986 (Orme and Williams 1986)

From 1986 through 1995, we have records of five grizzly bear sightings within subunit 1. In addition, there are many recorded observations of radio-collared bear #227 (a male) for portions of each summer from 1994 through 1996.

Searching through reports in our files, we can document that two sows with cubs were observed for the period 1965 to 1984 (one of the sows was shot and killed by hunters in the fall of 1984). From 1985 to the present, no sows with cubs have been reported in this subunit.

Plateau BMU - Subunit 2 - Compared to the other BMUs and Subunits on the Forest, this area had one of the lowest number of grizzly bear sightings from 1959 to 1986 (Orme and Williams 1986)

From 1986 through 1995, we have records of six grizzly bear sightings within subunit 2.

From 1965 to 1984, there were four sightings of bear groups (two or more bears together) but our records do not confirm that these were sows with cubs. From 1985 to 1993, no sows with cubs were observed. In 1994, one sow with cubs was observed near the southern boundary of the subunit. No sows with cubs have been reported during 1995 and 1996.

Bechler/Teton BMU - Compared to the other BMUs and Subunits on the Forest, this area had the highest number of grizzly bear sightings from 1959 to 1986 (Orme and Williams 1986)

From 1986 through 1995, we have records of 26 grizzly bear sightings, which is the highest number of sightings compared to the other BMUs and Subunits for this time period.

Four of the 26 grizzly bear sightings from 1986 through 1995 were sows with cubs. These four sightings are considered reliable, but none were verified. Therefore, these sightings have not been included in the official records for sows with cubs in each BMU. This BMU is currently occupied by a sow with cubs, based on verified sightings from the GTNP portion of the BMU.

Grizzly Bear Habitat - Scale Bear Management Unit and Subunit

Table III-19 outlines the existing habitat and conditions for the Forest portion of BMUs and subunits. Process Paper D presents an overview of food habitats, cover requirements, denning habitat, home ranges and motorized access effects. The following text represents some additional information for each BMU subunit.

Henry's Lake BMU, Subunit 1 -

- Most of the area is open to snowmachine use from December 1 to June 1.
- Even though there are nine sheep allotments and three cattle allotments in use, we have no record of grizzly bear/livestock conflicts on N F lands (1959-1997).
- Henry's Lake Flat and MS3 - About 42 percent (53,500 acres) of this subunit includes private lands on Henry's Lake Flat and highly developed Forest land classified as MS3 habitat. OROMTRD is 2.48 mi/sq mi on Henry's Lake Flat and 3.6 mi/sq mi on Forest lands. The average daily traffic for U.S. Highway 20 is about 2,400 vehicles per day. In 1995, there were 172,646 fishing hours of activity on Henry's Lake from May to October (IDFG Creel Survey Summary Sheet, Henry's Lake, 1995). Snowmachine use occurs whenever there is enough snow. Livestock grazing occurs on most of the private lands.

Henry's Lake BMU, Subunit 2 -

- In the Lionhead portion of this subunit, snowmachine use is allowed from December 1 to June 1. In the remainder of this subunit, snowmachine use can occur whenever there is enough snow.
- There have been no grizzly/livestock conflicts since sheep grazing was eliminated in this area in 1984.

Plateau BMU, Subunit 1 -

- Snowmachine use is allowed from December 1 to June 1 in the North Fork Fire area. In the remainder of the subunits, snowmachine use is allowed whenever there is enough snow.

Plateau BMU, Subunit 2 -

- Snowmachine use is allowed whenever there is enough snow.

Bechler/Teton -

- Outside of the designated wilderness areas, snowmachine use is allowed whenever there is enough snow.
- All sheep allotments in MS1 habitat have been closed. There are two sheep allotments in use in MS2 habitat and two grizzly/sheep conflicts have been documented. There are three cattle allotments in use with no documented conflicts.

Table III-19 Existing Habitat Conditions for the Forest Portion of Bear Management Units and Subunits					
Habitat Component	Henry's Lake BMU Subunit 1	Henry's Lake BMU Subunit 2	Plateau BMU Subunit 1	Plateau BMU Subunit 2	Bechler/Teton BMU
Targhee National Forest Acres	91,846	35,742	83,900	74,770	190,360
Other Ownership Acres w/in Administrative Boundary	1,526	1,608	3,277	1,320	986
Acres Outside the Administrative Boundary	35,170	60,594	96,026	199,618	150,548
Total Acres in BMU/Subunit	128,515	97,944	183,203	275,708	341,894
Percent of National Forest Acres in Management Situation 1	0	100	0	0	72
Percent of National Forest Acres in Management Situation 2	80	0	95	100	28
Percent of National Forest Acres in Management Situation 3	20	0	5	0	0
Motorized Road and Trail Miles					
Open Road Miles	92.6	36.8	115.2	71.1	187.5
Restricted Road Miles	48.1	4.8	117.4	135.5	152.0
Open Motorized Trail Miles	3.9	7.9	8.6	15.6	38.6
Restricted Motorized Trail Miles	0.0	0.0	0.0	0.0	0.0
Total Motorized Access Route Miles	144.6	49.5	241.2	222.2	378.1
Open Road and Open Motorized Trail Route Miles	96.5	44.7	123.8	86.7	226.1
Motorized Road and Trail Density (mi/sq mi)					
Open Road Density	0.79	0.63	0.85	0.60	0.63
Restricted Road Density	0.41	0.08	0.86	1.14	0.51
Open Motorized Trail Density	0.03	0.14	0.06	0.13	0.13
Restricted Motorized Trail Density	0.00	0.00	0.00	0.00	0.00
Total Motorized Access Route Density	1.24	0.85	1.77	1.87	1.26
Open Road and Open Motorized Trail Route Density	0.83	0.77	0.91	0.73	0.76
Other Access Information					
Percent of NF Acres within Designated Wilderness	0.0	0.0	0.0	0.0	34.4
Percent of NF Acres Open & Suitable for OHV Use	6.2	7.1	75.4	68.5	8.7
Percent of NF Acres within Designated Core Areas	23.0	38.0	0.0	0.0	34.0
Number of Sheep Allotments in Use	9	0	0	0	2
Number of Cattle Allotments in Use	3	1	0	0	3
Total Number of Point Activities	1,060	23	63	53	324
Administrative Points (work centers, campgrounds, etc.)	5	1	5	5	12
Sheep Grazing Points (camps)	14	0	0	0	15
Outfitter & Guide Camps	0	0	0	0	8
Special Use Points (summer homes, etc.)	3	3	8	0	5
Timber Management Activities (sales, firewood)	3	0	26	27	10
Other Point Activities (dispersed camps, etc.)	39	15	23	20	144
Private Point Sites on non-Forest lands (w/in 1 mi)	996	4	1	1	130
Total Forested Acres	60,768	28,130	86,124	75,331	168,885
Percent Mature	90.0	87.6	40.5	62.4	81.4
Percent Pole	0.7	2.7	14.0	2.1	1.6
Percent Sapling	2.1	7.0	12.3	10.1	4.3
Percent Seedling	5.0	2.6	24.6	16.1	8.8
Percent Non-stocked	2.3	0.2	8.7	9.4	4.0
Total Nonforested Acres	14,066	9,228	1,059	757	22,490
Number of Verified Bear Mortalities & Cause (1981-1994)					
Hunting/Poaching	0	0	1	0	0
Transporting	0	1	0	0	0
Self-defense	0	0	0	0	1
Unknown	1	0	0	0	0
Notes: Information for the Henry's Lake BMU/Subunit 1, starting with motorized road and trail miles is for the MS 2 portion of the Subunit. Information for the MS 3 portion and Henry's Lake Flat are discussed in the text. Also, the last verified grizzly bear mortality on the Targhee occurred in 1984. There have been no verified grizzly bear mortalities on the Targhee from 1985 to present.					

Central Idaho Nonessential Experimental Population Area and Yellowstone Nonessential Experimental Population Area for Gray Wolf. (USDI Fish and Wildlife Service 1994 b)

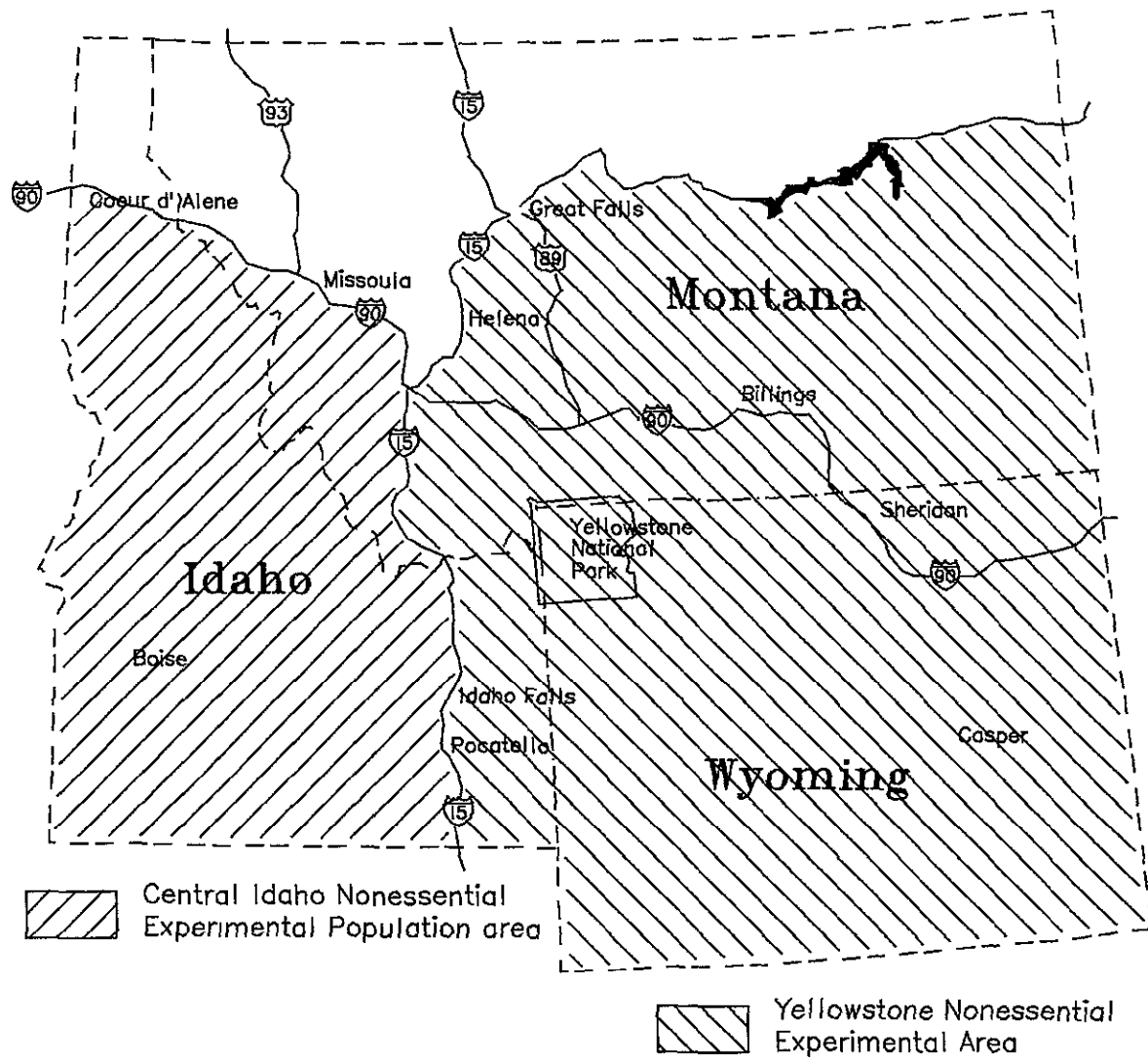


Figure III-7

Gray Wolf Populations and Habitat - Scale Forestwide

Possible sightings of gray wolves have occurred on the Forest and are summarized in the AMS and Process Paper D. There have been no reported sightings of packs or evidence of successful breeding. In April, 1994 the USDI Fish and Wildlife Service approved the Final EIS for The Reintroduction of Gray Wolves to the Park and Central Idaho (USDI Fish and Wildlife Service 1994a). In November of that year final rules were issued for the establishment of a nonessential experimental population of gray wolves in the Park, central Idaho, and southwestern Montana (USDI Fish and Wildlife Service 1994b). As a result of these actions, the following conditions exist:

The portion of the Forest west of Interstate 15 is within the Central Idaho Nonessential Experimental Population Area. The portion of the Forest east of Interstate 15 is within the Yellowstone Nonessential Experimental Area (Figure III-7). All wolves found in the wild within the boundaries of these management areas, after the first wolf releases, will be considered nonessential experimental animals (USDI Fish and Wildlife Service 1994a and b).

Status of Wolf Reintroductions - 1995 and 1996 - In the Yellowstone Nonessential Experimental Population Area

- 14 Canadian wolves were released in 1995,
- 17 Canadian wolves were released in 1996,
- 2 packs produced 9 pups in 1995,
- 3 packs produced 10 pups in 1996,
- as of September 10, 1996, there were 34 free ranging wolves and 15 wolves in captivity pens, 6 wolves have died. 3 were illegally shot, 1 was killed by a vehicle on a road, 1 was killed by agents from ADC after twice killing domestic sheep, 1 was killed in an accident (falling into a thermal pool). Note: Our records of wolves that died may not be complete,
- 1 male wolf (the mate of the wolf that died by falling into a thermal pool) was located on the Forest for a few days in 1996. This wolf has returned to the Park.

In the Central Idaho Nonessential Experimental Population Area

- 15 Canadian wolves were released in 1995,
- 20 Canadian wolves were released in 1996,
- no pups were born in 1995,
- 3 packs produced pups in 1996 we do not know how many pups,
- as of July 1996, there were 26 radio-collared wolves with known locations, there were 5 radio-collared wolves that have not been located for various periods of time,
- there have been 5 wolves that have died. 1 was killed by a mountain lion, 1 was shot, 1 died of starvation, 1 accidentally drowned during a control operation and 1 was euthanized during release.

This gray wolf reintroduction does not conflict with existing or anticipated Federal agency actions or traditional public uses of park lands, wilderness areas or surrounding lands (USDI Fish and Wildlife Service 1994b). Land use restrictions may be temporarily used by land or resource managers to control intrusive human disturbance, primarily around active den sites between April 1 and June 30, when there are five or fewer breeding pairs of wolves in a recovery area. After six or more breeding pairs become established in a recovery area, land-use restrictions would not be needed (USDI Fish and Wildlife Service 1994a).

The ability of individuals holding grazing permits on public land to harass adult wolves in an opportunistic, noninjurious manner will become part of their permit conditions so it is clearly understood exactly what can occur. There is a seven day reporting requirement for any such incident (USDI Fish and Wildlife Service 1994a).

The following conditions and criteria will apply in determining the problem status of wolves (USDI Fish and Wildlife Service 1994a). Livestock in this context refers to only cattle, sheep, horses or mules.

Wounded livestock or some remains of a livestock carcass must be present with clear evidence that wolves were responsible for the damage. Also there must be reason to believe that additional losses would occur if the problem wolf or wolves were not controlled. Such evidence is essential since wolves may simply feed on carrion they have found while not being responsible for the kill.

Artificial or intentional feeding of wolves must not have occurred. Livestock carcasses not properly disposed of in an area where depredations have occurred will be considered attractants. On federal lands, removal or resolution of such attractants must accompany any control action. Livestock carrion or carcasses on federal land, not being used as bait in an authorized control action (by agencies), must be removed, buried, burned, or otherwise disposed of such that the carcass(es) will not attract wolves.

On federal lands, animal husbandry practices identified in existing approved AMPs and AOPs for allotments must have been followed.

If additional livestock depredations were likely, proper animal husbandry practices were employed (proper disposal of livestock carcasses, etc.), artificial feeding did not take place, and federal grazing allotment plans were followed, agencies would harass, capture, move, or kill wolves that attacked livestock (defined as cattle, sheep, horses, or mules only) on public or private land. Prior to the establishment of six breeding pairs, depredating females and their pups will be captured and released at or near the site of capture, one time prior to October 1. If depredations continue, or if six packs are present, females and their pups will be removed.

Wolf recovery will not result in wolf travel corridors or linkage zones being established. The size and proximity of the areas where wolves will be managed for recovery are large enough, close enough and have enough public land between them that additional areas (travel corridors) are not required in the foreseeable future to maintain a viable wolf population after the three subpopulations become established (USDI Fish and Wildlife Service 1994a).

Primary Cavity Nester Populations - Scale Forestwide

Eight primary cavity nesting species potentially occur on the Forest. We do not know and are not able to provide population estimates for these species. Hejl et al., (1995) provided relative abundance ratings for these species for general mature to older forest habitats in the Rocky Mountains. These abundance ratings are shown in Table III-20.

Species	Relative Abundance by General Forest Habitat 1/			
	Mixed Conifer 2/	Lodgepole Pine	Spruce-Fir	Aspen
Lewis' Woodpecker	-	-	-	R
Red-naped Sapsucker	U	R	C	C
Williamson's Sapsucker	U	U	U	U
Downy Woodpecker	R	-	C	C
Hairy Woodpecker	C	U	C	C
Three-toed Woodpecker	R	U	U	U
Black-backed Woodpecker	R	R	R	R
Northern Flicker	C	C	C	C

1/ A=abundant, C=common, U=uncommon, R=rare, - = no information
 2/ Mixed conifer is primarily dominated by Douglas-fir

Three bird studies on the Forest (one completed and two in progress) have documented the presence of seven of the eight primary cavity nesting species, the Lewis' woodpecker that has not been documented in the studies (Douglas and Ratti 1984, Patla 1995 and Kliene 1996 progress reports, Hoffman and Rotella 1996 progress report) These studies indicate that red-naped sapsuckers and northern flickers are the most common primary cavity nesting species

Primary Cavity Nester Habitat - Scale Forestwide and Watersheds

Primary cavity nesting species excavate nest cavities in snags (dead standing trees) Live trees may also provide nest sites depending on the presence of infection or injury which would allow the birds to excavate a nesting cavity Table III-21 provides an overview of the habitat requirements for these species Because of the need to have large enough snags or live trees for excavating nest cavities, these species are most often associated with mature to old growth forests However, these species have been documented using areas following stand replacing fire and timber harvesting when snags are present

Species	Snag DBH (inches)	Snag Height (feet)	No of Cavities per year	Territory Size (acres) 1/	No Snags per acre for 100% Biological Potential 1/
Lewis's Woodpecker	12-27	5-170	1	0-15 (15)	48-1 01 (1 01)
Red-naped Sapsucker	9-47	15+	1	5 1-12 (10)	1 5 (1 5)
Williamson's Sapsucker	12-37	15+	1	10-12 (10)	33-1 5 (1 5)
Downy Woodpecker	6-14	6-50	2	5-50 (10)	16-5 (3)
Hairy Woodpecker	9-29	15+	3	6-25 (25)	6-1 92 (1 8)
Three-toed Woodpecker	7-19	15+	3	35-200 (75)	06- 6 (59)
Black-backer Woodpecker	8-17	6+	3	75-100 (75)	12- 6 (59)
Northern Flicker	10-51	6+	1	8-500 (40)	38- 48 (38)

1/ Numbers in parentheses indicate territory sizes and number of snags used for analysis purposes on the Forest

Four of these primary cavity nesting species (hairy woodpecker, northern flicker, yellow-bellied sapsucker, Williamson's sapsucker) require larger size snags and provide larger nesting cavities which are important for several other species of animals

We analyzed overall biological potential for the primary cavity nesting species as a group, and a biological potential analysis was done for the four species which require larger size snags These biological potential analyses are based on existing snag densities Currently, the biological potential for the primary cavity nesting species as a group is 0 61, and the biological potential for the larger cavity nesting species is 0 47 This biological potential is considered a minimum potential because it only considered snag densities Additional biological potential exists with live trees

Forest Owl Populations - Scale Forestwide and Subsections

Forest owls include the flammulated, boreal and great gray We do not know and are not able to provide population estimates for these species The following documents what we know about their relative abundance and distribution on the Forest, also refer to Table III-16 (USDA Forest Service 1994, AMS 1992)

Flammulated Owl We expect the flammulated owl to be present on the Forest only during the breeding season We consider this owl to be rare on the Forest, as we have only documented it in four locations

For lands adjacent to the Forest, flammulated owls have been documented on only three areas the Madison Ranger District of the Beaverhead N F , the Sand Creek Wildlife Management Area north of St Anthony, Idaho, and BLM land near Moose Creek (Keepout Draw) in Teton Valley

Boreal Owl The boreal owl is considered to be a year-round resident on the Forest When the AMS was completed in 1992, only three boreal owl observations had been recorded Sawtell Peak in 1987, Targhee Creek in 1988 and McGarry Canyon in 1990 All of these observations were in the Centennial Mountains Subsection Since completion of the AMS, more boreal owl surveys have been done on the Forest and boreal owls have been documented in five subsections Centennial Mountains, Island Park, Madison-Pitchstone Plateaus, Teton Range and Big Hole Mountains In relation to other owls on the Forest, we consider this owl to be uncommon in terms of abundance

For lands adjacent to the Forest, boreal owls have been documented in these areas the Leadore Ranger District on the Salmon/Challis N F , the Dillon and Madison Ranger Districts on the Beaverhead N F , the Hebgen Lake Ranger District on the Gallatin N F , Yellowstone and GTNP, the Greys River Ranger District on the Bridger-Teton N F

Great Gray Owl The great gray owl is a year-round resident on the Forest The great gray owl has been documented in every subsection on the Forest In relation to other owls on the Forest, we consider this owl to be common in terms of abundance

For lands adjacent to the Forest, great gray owls have been documented in these areas BLM lands and State of Idaho lands, the Madison Ranger District on the Beaverhead N F , Red Rocks Lake National Wildlife Refuge, the Hebgen Lake Ranger District on the Gallatin N F , Yellowstone and GTNP, the Greys River Ranger District on the Bridger-Teton N F

Forest Owl Habitat - Scale Subsection

Flammulated & Boreal Owls - The habitat components considered most important for the flammulated and boreal owls are a) the amount of mature and older Douglas-fir, mixed conifer and aspen; b) primary cavity nesting habitat for the larger woodpeckers (hairy woodpecker, northern flicker, yellow-bellied sapsucker and Williamson's sapsucker) Thirty acres encompasses the entire home range of a flammulated owl pair during the breeding/nesting period Thirty acres encompasses the largest size nest stands recorded in the literature for boreal owls Approximately 3,600 acres encompasses the winter home range of a boreal owl Summer home ranges are slightly smaller

Great Gray Owl - The habitat components considered most important for this species are a) mature or older forest habitat to provide suitable nesting sites, and b) suitable foraging habitat which includes nonstocked and seedling forests and nonforested habitats Great gray owl nest sites average 143 meters from nearest opening, a 143 meter radius circle is about 16 acres The largest home ranges recorded for great gray owls is 6.5 sq km , which is 1,622.4 acres (USDA Forest Service 1994a)

Furbearer Populations - Scale Forestwide and Subsection

We do not know and are not able to provide population estimates for wolverine, lynx, fischer and marten The following documents what we know about their relative abundance and distribution on the Forest

Wolverine - In 1985 a wolverine survey was done in Idaho to determine the location and status of populations (Groves 1987) Results of the survey indicated that three areas of the State had wolverine populations The Forest was not within one of these areas However, documented observations of wolverine on the Forest have occurred in the Centennial, Island Park, Madison-Pitchstone Plateaus, Teton Range and Caribou Range Mountains Subsections Respectively, there have been 18, one, three, seven and one observations between 1961 and 1995 Because of large home ranges, wolverine populations always exist at low densities

For lands adjacent to the Forest, wolverine have been documented in the following general areas: Leadore Ranger District on the Salmon/Challis N F, Dillon and Madison Ranger Districts on the Beaverhead N F s, Dillon District of the BLM, Hebgen Lake Ranger District on the Gallatin N F, and Yellowstone and GTNP

North American Lynx - Historically, lynx populations were minimal in the contiguous United States due to a lack of suitable habitat (U S Fish and Wildlife Service 1994c). Favorable habitat conditions for the lynx dissipate with decreasing latitude. Thus, the lynx is restricted to higher elevations the more southern the latitude (U S Fish and Wildlife Service 1994c).

The only documented reports of lynx on the Forest occur in the Wyoming portion of the Big Hole Mountains Subsection (USDA Forest Service 1994b). For lands adjacent to the Targhee N F, lynx have been documented in the Park, and the Greys River Ranger District. Based on current knowledge, it is unlikely that the Forest historically or currently provides habitat for a viable resident lynx population.

Fisher - Historically, fisher were never known to occur in the Idaho portion of the GYA (Clark et al 1989). However, one fisher was trapped in the Island Park Subsection at Warm River Butte in 1978. Also, fisher tracks were observed in the Teton Range Subsection near North and South Leigh Creeks during the winter of 1995 by a research team studying furbearers on the Forest. At this time, there is uncertainty about both the historical and current status of fisher populations on the Forest.

We are aware of one documented fisher sighting on lands adjacent to the Forest, this sighting was in 1990 near Drake Canyon (T3N, R45E, Sec 7) in Teton Basin. Also, during 1995, Yellowstone Ecosystem Studies (a private group from Bozeman, Montana) used a remote camera to photograph a fisher in Republic Creek on the Shoshone N F (K Barber, Shoshone N F, personal communication).

American Marten - Marten sightings have been documented within all subsections except Lemhi/Medicine Lodge. Marten are considered abundant on the Forest, and the state Fish and Game Departments provide a trapping season for marten.

We are not sure about the presence of American marten in the Lemhi/Medicine Lodge subsection. Suitable habitat exists for marten, however, conifer forests only make up 37 percent of this subsection, and the forests are not connected to other forested habitats with known marten populations. Therefore, there is uncertainty about marten populations and habitat in this part of the Forest.

Furbearer Habitat - Scale Forestwide and Subsections

The following documents what we know about these species on the Forest, also refer to Table III-16 (USDA Forest Service 1994b).

Wolverine - Home ranges of adult wolverine in North America range from less than 100 sq km to over 900 sq km (38.6 sq mi to 347.5 sq mi). Yearly home ranges for females with young range from 47 sq km to 105 sq km (18.2 sq mi to 40.5 sq mi). Wolverines occupy treeless alpine areas to dense forested areas. Wolverine food habits are generally described as opportunistic omnivores in summer and primarily scavengers in winter. Natal den sites have consisted of snow tunnels, talus and boulder fields, holes dug under fallen trees, within hollow trees, beaver lodges, old bear dens, under roots of trees, etc.

It has been suggested that wolverine habitat should consist of large refugia, representative of the vegetation zones that wolverine occupy. Details for these large refugia have not been established. It has been suggested that wolverine will benefit from conservation strategies for grizzly bears, wolves and cougars.

North American Lynx - Lynx habitat in the western mountains consists primarily of two structurally different forest types occurring at opposite ends of the stand age gradient. Lynx require early seral forests that contain high numbers of prey (especially snowshoe hares) for foraging and late-seral forests that contain

cover for kittens (especially deadfalls) and for denning. Intermediate seral stages may serve as travel cover for lynx but function primarily to provide connectivity within a forest landscape. Although such habitats are not required by lynx, they fill in the gaps between foraging and denning habitat within a landscape mosaic of forest seral stages.

Fisher In the western mountains, fishers prefer late-seral forests (especially for resting and denning) and occur most frequently where these forests include the fewest large nonforested openings. Avoidance of open areas may restrict the movements of fishers between patches of habitat and reduce colonization of unoccupied but suitable habitat. Large physical structures (live trees, snags and logs) are the most frequent fisher rest sites, and these structures occur most commonly in late-seral forests.

Until it is understood how these structures are used and can be managed outside their natural ecological context, the maintenance of late-seral forests will be important for the conservation of fishers.

American Marten Although American martens at times use other habitats, populations depend on coniferous forests. Martens associate closely with mesic, late-seral coniferous forests, but occur in other vegetation types. They use treeless areas less than predicted from their spatial availability, especially in winter. Clearcutting reduces marten densities for several decades. In some areas, under conditions that are not well understood, martens may use regenerating clearcuts after a decade or two if sufficient structures useful to martens persist from the clearcutting. The effect of other cutting regimes, including small patch cutting, seed tree cutting or salvage harvest of dead or damaged timber have not been widely studied.

Coarse woody debris, especially in the form of large diameter boles, is an important feature of marten habitat. Logs are most useful to martens for gaining access to subnivean areas and for resting. Removal of coarse woody debris from forests or interfering with processes that make it available in suitable sizes and stages of decay may reduce habitat quality for martens.

Knowledge of landscape-scale habitat use is almost completely lacking regarding behavioral or population responses of martens to such landscape attributes as stand size, stand shape, area of stand interiors, amount of edge, stand insularity, use of corridors and connectivity. Marten use of residual forest stands surrounded by clearcuts on Newfoundland Island was a function of stand size; stands < 15 ha (37 acres) in area had lower capture success rates than larger stands. However, the dearth of knowledge in this area makes managing forested landscapes for marten highly conjectural.

Northern Goshawk Populations - Scale Forestwide

We do not know and cannot provide a population estimate for northern goshawks on the Forest. Goshawk monitoring on the Forest has identified 50 goshawk territories, 13 of these territories are historic (meaning we have no record of activity since 1989) and 37 of these territories have been active one or more years from 1989 to the present (Process Paper D, Patla 1990, 1991, 1992, 1995 and personal communication). Not all of the Forest has been inventoried or monitored for goshawks, therefore we expect additional goshawk territories exist.

For lands adjacent to the Forest, goshawks have been documented in the following areas: Idaho National Engineering and Environmental Laboratory (INEEL), Dillon and Madison Ranger Districts on the Beaverhead N F, Red Rocks Lake National Wildlife Refuge, Yellowstone and GTNP, Sand Creek Wildlife Management Area, Greys River Ranger District on the Bridger-Teton N F, Grays Lake National Wildlife Refuge, and BLM lands.

Northern Goshawk Habitat - Scale Forestwide

The goshawk is a forest habitat generalist that uses a variety of forest types, forest ages, structural conditions and seral stages (Reynolds et al. 1992). It preys on small to medium sized birds and mammals.

(robins and chipmunks to grouse and hares), which it captures on the ground, in trees or in the air. Forests within goshawk nesting home ranges should be an interspersed mosaic of structural stages - young to old forests - to increase the diversity of habitat for goshawks and their many prey species. Northern goshawks have been documented in all seven subsections.

Nest Areas - Nest areas include one or more forest stands, several nests and several landform characteristics. Nest areas are occupied by breeding goshawks from early March until late September, and are the focus of all movements and activities associated with nesting. The size (20-25 acres) and shape of nest areas depend on topography and the availability of patches of dense, large trees.

Nest areas are often used more than one year, and some are used intermittently for decades. Many pairs of goshawks have two to four alternate nest areas within their home range. All previously occupied nest areas may be critical for maintaining nesting populations because they contain the habitat elements that attracted the goshawks originally. Additionally, replacement nest areas are required because goshawk nest stands are subject to loss from catastrophic events and natural decline.

Goshawk nest stands have a relatively high tree canopy cover and a high density of large trees. Studies suggest that the dense vegetation in these stands provide relatively mild and stable microenvironments, as well as protection from predators of goshawks. Nest areas are usually classified as mature and older forest stands.

Post-Fledging Family Area (PFA) - PFAs include the area used by the adults and young from the time the young leave the nest until they are no longer dependent on the adults for food. The PFA surrounds the nest area and, although it generally includes a variety of forest conditions, the vegetation structure resembles that found within nest stands. PFAs vary in size from 300 to 600 acres (mean = 415 acres). PFAs provide the young hawks with cover from predators, and sufficient prey to develop hunting skills and feed themselves in the weeks before juvenile dispersal. Forests in the PFA's should contain overstories and habitat attributes critical in the life-histories of goshawk prey species.

Foraging Area - Goshawks prey on birds and mammals in the larger body-size classes available to forest-dwelling hawks. Generally speaking, because larger species of vertebrates have less dense populations than smaller species, predators of large prey must hunt over large areas in order to meet their energy requirements. Goshawk foraging areas are about 5,000 to 6,000 acres.

Limited radiotelemetry evidence suggests that goshawks prefer mature forests for foraging. Additional information on the composition and structure of goshawk foraging habitat was gleaned from information on the habitat requirements of goshawk prey species. Raptor populations are often limited by prey populations, and choice of foraging habitat by goshawks is predicted, at least in part, on habitats where prey are abundant and accessible.

The foraging area comprises the largest portion of the goshawk nesting home range and therefore typically includes a greater diversity of landforms, forest cover types and vegetation structural stages. Important habitat components include snags, downed logs, woody debris, openings, large trees, herbaceous and shrubby understories and interspersed vegetation structural stages (forest seral stages).

Winter Habitat - Winter movements and winter habitat for goshawks are poorly understood. We know of only one published study in the Rocky Mountains (Squires and Ruggiero 1995). Documented migrations of four adult birds from nesting areas to winter areas ranged from 65 to 185 kilometers (40 to 115 miles). However, two of the adult birds could not be found for most of the winter period, so these distances may be minimums. Winter habitats included aspen with mixed conifer stands, spruce-fir and lodgepole pine stands, and small groves of cottonwood surrounded by open sagebrush-wheatgrass prairies (Squires and Ruggiero 1995).

One adult goshawk has been monitored during the winter period on the Forest. During the winter period, this bird made several migrations between its nesting territory in the Big Hole Mountains to the Henry's Fork of the Snake River near St. Anthony, Idaho (S. Patla, personal communication).

Red Squirrel Populations and Habitat - Scale Forestwide and Subsections

Red squirrels are so strongly associated with the conifer forests (Table III-16) that their population densities fluctuate with cone crops (Smith 1968, Gurnell 1983, Halvorson and Engeman 1983). Since red squirrels are so strongly dependent upon conifer seeds as a food supply, conifer forests must be of seed-producing age before red squirrels will make significant use of them. Habitat quality is also related to nesting cover and food-caching sites. Natural cavities are preferred by red squirrels as nest sites (Hamilton 1939, Layne 1954). However, underground nests and external tree nests are more commonly used where cavities are not available (Fancy 1980). Large diameter trees, large standing snags, and fallen trees are important sites for cone storage (Vahle and Patton 1983).

Suitable habitat for red squirrels exists in all subsections. At the present time, about 80 percent of the forested acres are of cone-bearing age (about 928,000 acres).

Red squirrels are known to defend territories of 0.5 to 7.5 acres in size (USDA Forest Service 1991). This would provide a range of 85 to 1,280 red squirrels per square mile of suitable habitat. There is about 1,450 square miles (928,000 acres) of suitable habitat on the Forest, so a population range for the Forest could be 123,000 to 1,856,000 squirrels. As stated above, red squirrel populations will fluctuate depending on fluctuations in cone crops. The red squirrel is considered abundant on the Forest.

Peregrine Falcon Populations - Scale Rocky Mountains and Forestwide

The Forest is within the American Peregrine Falcon Recovery Plan - Rocky Mountain/Southwest Population (USDI Fish and Wildlife Service 1977/revised 1984). The objectives for the Recovery Plan are a minimum of 183 breeding pairs with the following distribution: Arizona-46, Colorado-31, Idaho-17, Montana-20, Nebraska-1, New Mexico-23, North Dakota-1, South Dakota-1, Texas-8, Utah-21 and Wyoming-14.

In 1991, there were 363 known peregrine falcon pairs within the area covered by the Recovery Plan, in 1993, there were an estimated 450 pairs, and based on 1994 surveys, the current Rocky Mountain/Southwest population consists of 559 breeding pairs, surpassing the recovery objective by 376 pairs (USDI Fish and Wildlife Service 1994 and 1995).

In 1995, 13 pairs occupied territories within Idaho (six of these pairs were on the Forest), six pairs were successful in producing 16 young for an average of 1.2 young per pair and 2.7 young per successful pair (three of the successful pairs and eight of the young produced were on the Forest) (Levine et al. 1995). Peregrine falcon eyries are currently distributed within five subsections on the Forest.

The current reproductive level has been sufficient to support considerable population growth. At this time, the U.S. Fish and Wildlife Service has published an advanced notice of a proposal to remove the American peregrine falcon from the list of endangered and threatened wildlife (USDI Fish and Wildlife Service 1995).

For lands adjacent to the Forest, peregrine falcons have been documented in the following general areas: Big Butte and Medicine Lodge Resource Areas of the BLM, INEEL, Dillon Ranger District (Beaverhead N.F.), Dillon District (BLM, Montana), Hebgen Lake Ranger District (Gallatin N.F.), Yellowstone and GTNP, Market Lake and Mud Lake Wildlife Management Areas, Camas National Wildlife Refuge, Gray's Lake National Wildlife Refuge, and Gray's River Ranger District (Bridger-Teton N.F.).

Peregrine Falcon Habitat - Scale Forestwide

Peregrine falcons occupy a wide range of habitats (Table III-16), typically found in open country near rivers, marshes, lakes and coasts. They capture prey by striking from above with their talons after a high-speed dive. Foraging habitat includes wetlands and riparian habitats, meadows and parklands, croplands such as hayfields and orchards, gorges and mountain valleys and lakes which support good populations of small to medium terrestrial birds, shorebirds and waterfowl.

Cliffs are preferred nesting sites (also known as eyries), although reintroduced birds now regularly nest on man-made structures such as towers and high-rise buildings. Peregrines may travel more than 18 miles from the nest site to hunt for food, however a 10 mile radius around the nest is an average hunting area, with 80 percent of foraging occurring within a mile of the nest.

Peregrine falcons generally migrate south for the winter to the Gulf of Mexico, and into Mexico and Central America, or to large rivers and wildlife refuges in the United States (USDA Forest Service 1991).

Significance of environmental contaminants and other potential threats Peregrine falcons declined precipitously in North America following World War II. Research implicated organochlorine pesticides, particularly the pesticides DDT, DDE (a metabolite of DDT), and dieldrin, applied in the United States and Canada during this same period as causing the decline (USDI Fish and Wildlife Service 1994 and 1995). Use of these chemicals peaked in the 1950s and early 1960s and continued through the early 1970s (USDI Fish and Wildlife Service 1995).

The most significant event in the recovery of the peregrine falcon was the restriction placed on the use of organochlorine pesticides. Use of DDT was restricted in Canada in 1970 and in the United States in 1972. Restriction that controlled the use of aldrin and dieldrin were imposed in the United States in 1974. Since implementation of these restrictions, residues of the pesticides have significantly decreased in many regions where they were formerly used. Consequently, reproductive rates in most surviving peregrine falcon populations in North America improved and numbers began to increase (USDI Fish and Wildlife Service 1995).

There is no evidence, thus far, that any environmental contaminant other than DDT/DDE have been recently causing significant, widespread mortality or reproductive failure in the American peregrine falcon in the western United States (USDI Fish and Wildlife Service 1994).

Other known negative factors, such as illegal shooting and collisions with wires, fences, cars, and buildings, are much less significant to the western American peregrine falcon at the population level. On an individual nest-site basis, human-caused disturbance or habitat alterations close to an active peregrine falcon nest can be a problem. For example, in some areas, rock-climbing is a growing sport and has resulted in nest failure. Breeding-season closure of rock-climbing cliff areas in close proximity to nesting American peregrine falcons has recently prevented adverse effects. Power lines, especially distribution lines, cause peregrine falcon mortality, but the rate must be low, because many peregrine falcons nest successfully each year near power lines, especially in urban areas. Land-use practices adjacent to American peregrine falcon eyries that do not result in extensive habitat changes or excessive disturbance sometimes appear to have little adverse effect on nesting success. Generally, the recent apparent increase in the number of pairs of American peregrine falcons in the West provides evidence that significant adverse factors affecting the western subspecies at the population level are being alleviated or have been reduced (USDI Fish and Wildlife Service 1994).

Bighorn Sheep Populations and Habitat - Scale Forestwide and Subsections

Bighorn sheep are present in four areas of the Forest, with an estimated total population of 225 animals (AMS 1992)

Lemhi Mountains - These bighorn sheep are part of a population that includes the adjacent Challis N F. Forty-one bighorn sheep were transplanted on the Challis N F side in two transplants occurring in 1983 and 1984. A helicopter survey conducted in 1988 by IDFG found 31 bighorns (14 ewes, 8 lambs, 9 rams). No hunt has been authorized on these sheep.

South Beaverhead Range - (also referred to as the southern Bitterroot Mountains or the Medicine Lodge area). Forty-one bighorn sheep were introduced into the south Beaverhead Range in four transplants between 1976 and 1982.

This herd has not grown as expected. We do know that the transplanted bighorn sheep had lung worms at the time they were transplanted. A helicopter survey conducted in 1988 by IDFG found only 17 bighorns (13 ewes, 3 lambs, 1 ram).

The ear tags or remains of several of the released sheep have been found since the releases, but mortality causes are unknown. No hunt has been authorized on these sheep. Monitoring of bighorn sheep through recording of ground observations has been done by the Dubois Ranger District and IDFG. The highest number recorded from ground observations was 37 animals (5 rams and 32 ewes and lambs) in October 1995 (Process Paper D).

The Dubois Ranger District has implemented several habitat projects for bighorns in the south Beaverhead Range. Seven water developments, three of these in cooperation with the Foundation for North American Wild Sheep, have been installed for bighorns. Other water developments for upland game, deer, and elk on Forest Service and BLM lands are used by bighorns on transition range. Prescribed burns have been done to reduce sagebrush density and improve forage quality for bighorns.

All of the winter observations we know about have been on the Birch Creek side of the mountain range (we are not aware of observations in the Nicholia, Chandler, Kelly and Snakey drainages during the winter).

Lionhead Area - These bighorn sheep are part of a population that includes the Gallatin N F in Montana. During the summer and fall months, 12 to 15 sheep can frequently be seen in Idaho. Idaho has never authorized a hunt on this herd. Montana has authorized hunts on this population.

This sheep population winters on high elevation windswept ridges. There is historical low elevation winter range available, but the sheep do not use it. In the early 1990s, the Montana Department of Fish, Wildlife and Parks introduced bighorn sheep into the low elevation winter range, hoping they would associate with the bighorns at the higher elevations during the summer, and re-establish the migration to the low winter ranges. This has not happened, the introduced bighorns have remained at the low elevations year-around.

Westslope of the Tetons - These bighorn sheep are part of a population that includes GTNP. WGF authorizes a hunt for bighorns on the Forest, no bighorn sheep hunting is allowed in GTNP. A total of 11 rams were harvested from 1977 to 1986, no bighorns have been harvested during the hunt from 1987 to 1991. Table III-22 is a summary of herd composition counts which have been done by WGF.

Interviews with old timers who were familiar with the Teton Range suggest that the bighorn population may have declined to a low point in the 1930s and 1940s, with some recovery in numbers during subsequent years. Minimum counts of bighorn sheep (not necessarily based on full coverage of suitable habitat) have ranged from 39 to 97 since 1976. Whitfield (1983) believed that the total population approached 125 in

1981 and was static or declining Annual winter counts and high winter mortality during the last two years indicate that the population may have declined substantially

Date	Total	Rams	Ewes	Lambs	Unclass
November 1991	66	21	28	17	
February 1991	90	27	40	23	
November 1989	54	19	27	8	
December 1988	89	25	35	29	
March 1981	46	10	25	11	
January 1979	60	13	28	10	9
Dec/Jan 1977-78	39	12	18	9	
Jan/March 1976	53	17	23	13	(+18 tracks)
Nov/Dec 1975	26	9	11	6	
April 1974	42	14	15	7	6
March 1957	60	8	12	10	30

Winter range is one limiting factor for this bighorn sheep population All of the bighorns are wintering at elevations above 9,000 ft on windswept ridges For the past 8-9 years, no bighorn sheep have been documented wintering on the Forest, all have been found wintering in GTNP

Since 1994, GTNP has been doing a bighorn sheep study which involved radio-collaring and tracking Movements during the winter were minimal, commonly with sheep located only a few hundred meters away from the previous location Movements increased substantially in May when sheep commonly moved to lower elevations at the mouth of the canyons where snowmelt had occurred on south and east exposures. Summer ranges consisted of upper-elevation grassy benches and ledges near cliff areas for escape

Neotropical Migratory Bird Populations and Habitat - Scale Rocky Mountain and Forestwide

We do not know and cannot provide population estimates for neotropical migratory birds Hejl et al (1995) conducted an extensive review of literature on forest birds in the Rocky Mountains, and provided a relative abundance rating for species during the breeding season for general forest habitats, emphasizing mature or older stands Information from Hejl et al , (1995) for the four general forest types which encompass the Forest and bird species documented to occur on or adjacent to the Forest (AMS 1992) are listed in Process Paper D Of the 143 species listed there, 52 (36 percent) are long distance migrants, 48 (34 percent) are short distance migrants, and, 43 (30 percent) are permanent residents

Predator Control

Predator control activities have been conducted on the Forest since it was first established The 1996 APHIS-ADC Decision Notice and EA for Predator Damage Management in Southern Idaho provides direction for USDA Animal and Plant Health Inspection Service-Animal Damage Control (APHIS-ADC) in con-

ducting predator control activities on the Forest The APHIS-ADC Decision Notice selected the alternative, "Current Program plus Livestock Protection Collar " The Affected Environment, Chapter III, of the 1990 Targhee Forestwide Predator Control EA is incorporated by reference into this analysis The applicable sections of the Affected Environment, Chapter 2, of the 1996 ADC EA are also incorporated by reference into this analysis

Unique Ecosystems

Research Natural Areas (RNAs) - Scale Forestwide

RNAs are part of a national network of ecological areas designed in perpetuity for research and education and/or to maintain biological diversity on National Forest System lands (Table III-23) RNAs are for non-manipulative research, observation and study They also assist in implementing provisions of the NFMA

The forest currently has nine established RNAs, each having unique features representing some of the Forest's diversity In addition, there are three proposed RNAs No other areas are being evaluated for RNA status Site-specific information for existing and proposed RNAs on the Forest can be found in the 4063 files, which contain Environmental Analysis Reports, and/ or the Establishment Records and project files

Table III-23 Research Natural Area Descriptions				
Area Name	Year Established	Ranger District	Size in Acres	Area Features
Meadow Canyon *	1981	Dubois	3880	alpine tundra, rare plants
Copper Mountain	1987	Dubois	550	alpine grassland
Thurman Creek	1991	Island Park	330	spring fed streams
Moose Cr Plateau	1991	Island Park	440	obsidian sands, lodgepole pine
Willow Creek	1987	Ashton	1100	aspen, limber pine, mtn maple
Webber Creek	1988	Dubois	2245	high mtn grassland
Burns Canyon	1996	Palisades	490	sub alpine fir/whitebark habitat
Targhee Creek	1996	Island Park	2640	wet meadows, lakes, alpine & sub alpine
Sheep Mountain **	1996	Dubois	1542	alpine vegetation
Wyoming Creek	proposed	Ashton	401 1/	willow, meadow
Sheep Falls	proposed	Ashton	300 1/	waterfall, lodgepole pine
Rock Lake (WY)	proposed	Ashton	300 1/	lake lily pads, meadow
* Targhee National Forest = 3,595 acres, Challis National Forest = 285 acres ** Targhee N F = 6 acres, Salmon N F = 822 acres, Challis N F = 714 acres 1/ approximate acres				

Targhee National Forest

Average Daily Traffic (ADT) at Selected Locations

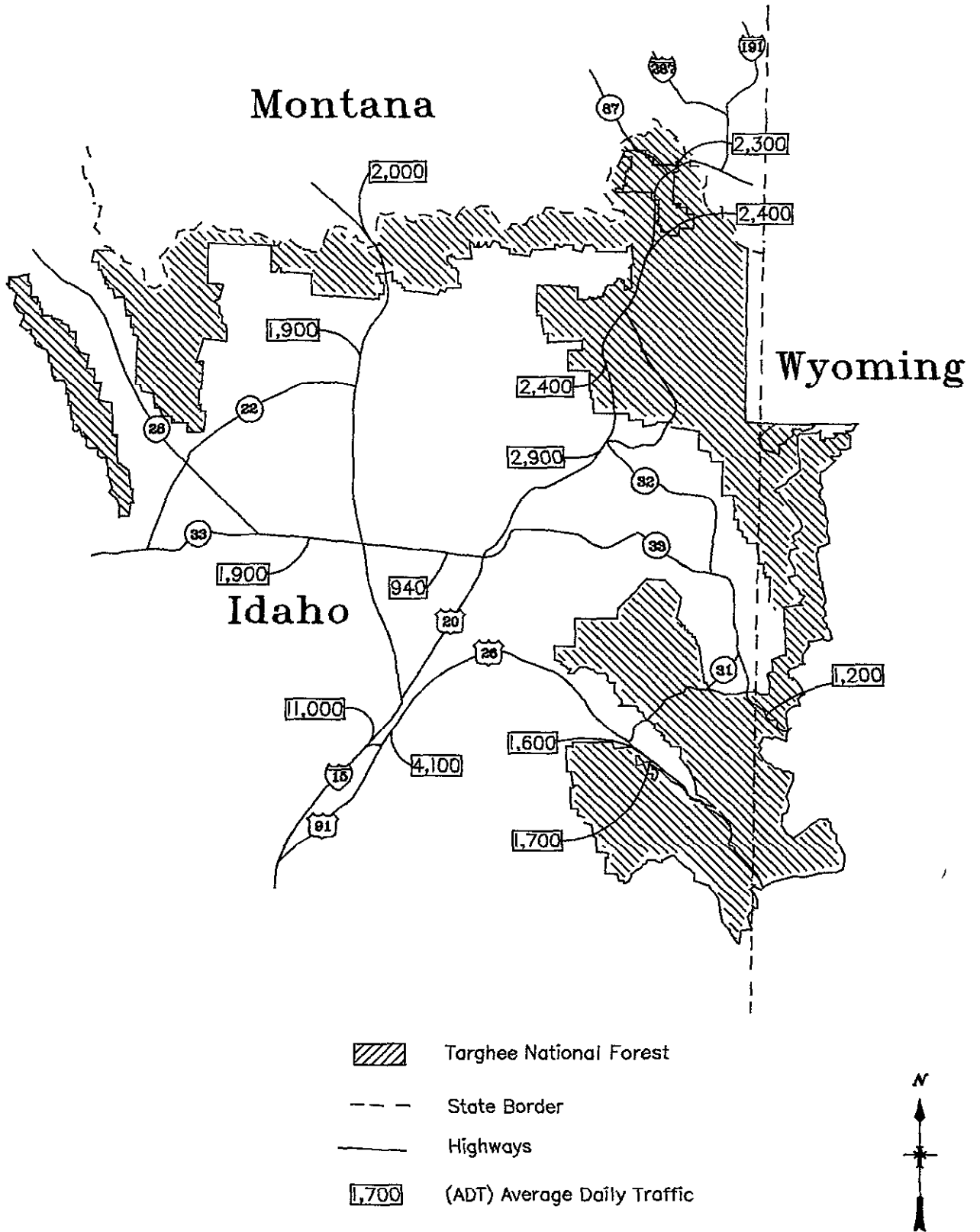


Figure III-8

FOREST USE AND OCCUPATION

ACCESS MANAGEMENT

Road System - Scale: Forestwide

The Forest road system provides access for recreation, industry and administration. Land transportation by motorized vehicles is the principle means of travel on the Forest. Seven major highways run through the Forest and all primary access begins from one of these highways. Average daily traffic counts collected by the Idaho State Highways Department (Gillespie 1994) suggest the heaviest traffic occurs on the highways between Idaho Falls and the northeast part of the Forest (Figure III-8). Many of the Forest's roads were constructed in the mid-1970's as part of the timber salvage program and provided access to recreationists, firewood gatherers and hunters. The roads have also proved useful for fire suppression activities. Forestwide there are 1,985 miles of open roads. In addition, motorized use is restricted on some roads as follows: 73 miles of roads have seasonal restrictions, 733 miles of roads have yearlong restrictions. Table III-24 displays the status of roads.

Functional Class	Open All Vehicles	Seasonal Restrictions (miles)	Yearlong Restrictions (miles)
Arterial	196	0	0
Collector	504	0	0
Local	1285	73	733
Total	1,985	73 *	733 *

* Open to snowmobile travel if designated

The Forest road system is essentially in good shape, with annual maintenance on arterial and collector roads and some local roads depending on resource needs. Further information on the Forest Development Road System can be found in the Transportation section of the AMS.

The current road system has created resource conflicts with wildlife, fish and watersheds. Road restrictions or reclamations have been requested by agencies and individuals to reduce resource conflicts. Law enforcement problems have also increased over the years due to the need to enforce restrictions.

The Forest has begun restricting and/or reclaiming roads to reduce resource conflicts. Many of the spur roads built during the salvage program are now restricted. Motorized use was restricted on 377 miles of road from 1981-1991 and on an additional 1,245 miles in 1992-1993.

There are approximately 2,791 miles of existing roads (Table III-25). Of these, 10 percent are classified as arterials. They are often two-lane and paved or have a good gravel surface and can handle unrestricted traffic at moderate speeds. Branching from the arterial roads are the collectors. Collector roads are medium standard roads that constitute about 25 percent of the mileage in the transportation system. Collector roads are stable enough for most traffic during normal season of use. Small single-lane roads, known as local roads, are found throughout the Forest and make up 65 percent of the road system. These minimum standard roads provide access for specific purposes, such as harvesting timber, maintaining electronic communication sites or reaching a trailhead. They allow limited passing, but the road conditions require that vehicles move slowly. Many of the local roads are currently restricted to vehicular traffic much of the time.

Two-track roads exist that are referred to as low standard roads (sometimes called "ghost roads"). These isolated roads were not designed or maintained for public use, they are created by repeated use by the

public Some vehicles cannot travel on these roads Road surfaces are generally rough and irregular with no drainage Some of these roads do not allow motorized use

Table III-25 Existing Road and Trail Access			
	Existing		Existing
Roads		Trails	
Miles - Open 1/	1,985	Miles - Open 1/	773
Miles - Seasonal Restrictions 2/	73	Miles - Restricted 4/	628
Miles - Yearlong Restrictions 3/	733	Miles - Nonfunctional	NA*
Miles - Reclaimed/Obliterated	NA*		
Total Miles	2,791	Total Miles	1,401
1/ Miles - Open means road and trail miles without restrictions on motorized use 2/ Miles - Seasonal Restriction means road miles on which motorized use is restricted for only a portion of the spring/summer/fall seasons 3/ Miles - Yearlong Restriction means road miles on which motorized use is restricted for the entire spring/summer/fall seasons 4/ Miles - Restricted means trail miles on which motorized use is restricted either for a portion of the spring/summer/fall seasons or yearlong (as in designated *wilderness areas) * This table refers to present time It does not take into account the 1,622 miles of road that were reclaimed or obliterated between 1981 and 1993			

The National Forest Scenic Byways Program was developed to increase public awareness and understanding of the National Forest and State activities and recreation opportunities Presently there are two Scenic Byways that pass through the Forest, the Mesa Falls and Teton Scenic Byways The Mesa Falls Scenic Byway follows old State Highway 47 from Ashton to where it ties back to US Highway 20 About 20 of the total 29 miles are located on the Forest The Teton Scenic Byway Route travels east from Idaho Falls to Swan Valley along Highway 26, then north to Victor on Highway 31, from Victor to Teton on Highway 33 to the intersection of Highway 32, and then to Ashton on Highway 32

The Forest has been working with the Federal Highway Administration on improving Forest Highways Funding provided by the Federal highways Administration allows the Forest to make improvements on roads which normally could not be made Roads that are identified for improvements are required to accommodate current conditions and impending future growth and road uses Without improvements, the highways cannot satisfy current and future traffic demands, safety requirements, Forest Service land and resource management objectives and maintenance capabilities of the various agencies

The roads that have been slated for improvement and the expected year for reconstruction are Forest Highway number 62, Mesa Falls (1997-1998), Forest Highway number 76, Fred's Mountain or Grand Targhee road (1999-2000), and part of the Kilgore-Yale road (est 2000)

There are 235 existing and 109 potential/needed material sources for gravel, rock riprap, and earth borrow sites This should serve the Forest's needs for the planning period The 1993 Compendium of Material Sources is available for further information

Summer Access for Off-Highway Vehicles (OHV) - Scale: Forestwide

Approximately 61 percent of the Forest (1,126,000 acres) is currently open for summer cross-country motorized and mechanized vehicle access There are 1,985 miles of open road and 773 miles of open trail (Table III-25) The Forest conducted an analysis of motorized access and road/trail density in the spring of 1995 to accurately inventory these opportunities The analysis is documented in Appendix C

There are very few trails designed specifically for motorized OHVs or mountain bikes, although some are *suitable in their present condition*. The Forest is currently reconstructing four to six miles of trail each year for motorized use. There is a significant increase in demand for such opportunities. Both types of use are increasing at a rate of five to ten percent per year on the Forest and adjacent lands. The highest concentration of these activities is in the Big Hole and Caribou Range Mountains Subsections, where there is significant use by motorcycles and mountain bikes. As noted in the Soil and Riparian section, there are areas of concern for OHV effects on soil and vegetation. There are no serious adverse consequences as a result of this use. However, it is possible that motorized use is affecting some big game wildlife habitat potential or vulnerability to hunting pressure.

Winter Access - Scale: Forestwide

There are approximately 450 miles of winter trails that are groomed on the Forest and 1,511,000 acres open to cross-country snowmobiling, see Table III-26. Groomed snowmachine and cross-country ski trails and their use are most numerous in the Island Park and Big Hole Mountains Subsections. The Centennial Mountains, Madison-Pitchstone Plateaus and Caribou Range Mountains Subsections surrounding these two hub areas also provide many winter opportunities. In contrast, the most undeveloped backcountry opportunities and the least used by both skiers and snowmachiners are found in the Lemhi/Medicine Lodge and Teton Range Subsections. Within the Teton Range Subsection, the Jedediah Smith Wilderness is closed to snowmobiling.

Snowmachine use and the associated commercial business has increased dramatically since 1985. Retail snowmachine sales, repair and related business growth in motel and restaurant services has increased noticeably in the Ashton, Island Park and West Yellowstone areas. Because of the intensity of snowmachine use in some areas, there is a need to develop guidelines for management of winter recreation on the Forest and in the GYA. An interagency assessment is currently underway to determine how to manage winter visitor use to avoid impacts to wildlife or user conflicts. Management guidelines are expected to be prepared through this assessment by late 1997.

Special use permits for outfitter-guide operations for snowmobiling, dog sledding and skiing are scattered across the Forest, but are most numerous in the Madison-Pitchstone Plateaus subsection where there are six commercial snowmachine operations. This is due to attractions such as the Two-Top National Snowmachine Trail near West Yellowstone, the Mesa Falls Scenic Area and an excellent grooming program by Fremont County, Idaho. Growth in snowmobiling has been increasing at five to ten percent per year annually across the Forest. As a result, the Forest constructed one new parking area and day lodge for winter users at Big Springs, in Island Park.

This winter activity has resulted in some concerns regarding conflicts with wintering wildlife, and several travel access closures have been implemented to reduce conflicts. A wildlife winter range and recreation analysis began several years ago for the Teton Basin Ranger District. The analysis from that study has been incorporated into the Revised Plan process as the goals, objectives, prescriptions and management direction were developed (Appendix C).

WILDERNESS AND RECREATION RESOURCES

Recreation, tourism and N F use are important to the area economy. The Idaho Department of Commerce estimates that tourism in Idaho is a two billion dollar industry, with 23 million visitors each year. The visitors to the Forest may account for over 10 percent of this industry. Table III-26 displays current recreation and wilderness information by ecological subsection.

Wilderness and Recommended Wilderness - Scale. Subsection

There are currently two designated wilderness areas on the Forest. These are the Jedediah Smith Wilderness (123,451 acres) and the Winegar Hole Wilderness (10,715 acres). The Jedediah Smith is mostly in the Teton Range Subsection with the balance in the Madison-Pitchstone Plateaus Subsection. Winegar Hole is totally within the Madison-Pitchstone Plateaus Subsection. Winegar Hole is largely primitive with very little recreational use. This is mostly due to access difficulty, since there are only four miles of trail in the area. Use of this area is mostly for hunting big game.

Activity	Lemhi/ Medicine Lodge	Centennial Mountains	Island Park	Madison- Pitchstone* Plateau	Teton Range	Big Hole Mtns	Caribou Range Mtns	Forest Total 1/
# Outfitters permitted (summer and winter use)	5	11	11	5	30	18	3	83
Average outfitted use-days	338	240	2299	3739	5814	5858	594	18,882
Outfitter fees paid	\$0.8M	\$1.0M	\$7.2M	\$13.7M	\$9.9M	\$17.0M	\$5M	53.0M
Groomed snowmobile trails (miles)	0	73	103	96	0	112	66	450
Groomed x-country ski trails (miles)	0	10	29	11	0	5	1	56
Backcountry snowmobile area (acres)	65M	91M	49M	55M	30M	72M	50M	412M
Backcountry ski tour area (acres)	5M	15M	0	0	45M	0	0	65M
Special use permits (non-outfitter/guide)	0	40	89	13	14	39	84	267
Undeveloped campsites (dispersed sites)	45	62	25	18	19	36	88	293
Heavy-use dispersed sites	4	24	6	4	19	29	20	106
Miles summer trails *	93	237	83	56	233	524	175	1,401
Wilderness acres	0	0	0	41.6M	92.6M	0	0	134.2M
Roadless area acres (includes wilderness study)	241.8M	127.7M	0.991M	11.4M	40.1M	307.9M	148.8M	878.6M
Acres open to OHVs	183M	192M	269M	158M	51M	163M	116M	1,132M
Miles road open	292	534	562	158	53	219	168	1,985
Miles trail open to OHV use	65	95	33	32	38	350	160	773
# of Developed sites	3	3	20	8	5	15	7	61
Miles W, S, & R Rivers	0	18	87	25	30	54	31.5	245.5
1/ Forest Totals may differ slightly from sum of individual numbers due to rounding								
* Includes Nonfunctional trails								

The Jedediah Smith is intensively used in the summer with approximately 60,000 visits for hiking, backpacking and horseback riding. This is a spectacular mountainous area on the west slope of the famous Teton Mountain Range. These wilderness areas are two of twelve designated in the GYA which total 3.8 million acres, and provide significant areas of biodiversity important to the GYE.

The Wyoming portion of the Palisades Roadless Area was designated by Congress as a Wilderness Study Area in 1984. The Study Area contains approximately 129,100 acres. Of these acres, over 79,800 are administered by the Bridger-Teton N.F. and 49,300 acres are administered by the Forest. In addition, there are 110,520 acres of this roadless area in Idaho which have had no action or recommendation taken on them. The studies on the Wyoming portion have not been conducted. Much of the Palisades Roadless area is under special use permit for heli-skiing operations which have been in existence for over 15 years. This heli-skiing operation is a recreational business operating out of Jackson, Wyoming. The Palisades area is also used by a large number of snowmobilers, except in the steep, avalanche prone areas.

Portions of Italian Peak, Lionhead, and Winegar Hole Roadless Areas (65,000 acres) were recommended wilderness in the 1985 Forest Plan, but no legislative action has been taken to-date.

Roadless Areas - Scale: Forestwide

There are 16 areas on the Forest which qualify as roadless or roadless adjacent to designated wilderness. These areas are described in the Process Paper Q and Forest Plan map number 25. These areas total about 841,000 acres. This acreage is approximately 30,000 acres less than the 1993 inventory. This is due to improved calculation from computer digitizing the area boundaries. The new roadless area acreages are shown in the Rating of Wilderness Characteristics Factors Table in Process Paper Q. Within these roadless areas, some 243,000 acres are closed to summer OHV use. The majority of the roadless acres are contained in the Lemhi/Medicine Lodge, Centennial Mountains, Big Hole Mountains and Caribou Range Mountains Subsections. The 1993 roadless inventory showed a net increase in qualifying acres over the inventory in the 1985 Forest Plan. This is because several of the roading and timber harvest projects proposed in that Plan were never completed. These areas were added to the previously inventoried areas. In contrast, the Signal Peak, Warm River South and East and Moody Creek areas incurred enough development to require them to be removed from the inventory. In 1990, the Centennial Mountains Wilderness Suitability Study EIS (Mt. Jefferson) was completed and none of the Forest portion was recommended wilderness. The Mt. Jefferson area was thereby released for management according to the 1985 Forest Plan direction.

There is an existing appeal settlement agreement with the Caribou N.F. concerning Bear Creek and Caribou City roadless areas on that Forest. The agreement states that no timber entry is scheduled before the year 2000 and that none will be made.

Wild, Scenic and Recreational Rivers - Scale: Forestwide

In November, 1994, an eligibility inventory was completed for the entire Forest, and approximately 245.5 miles of rivers and streams were determined eligible (Table III-26). These stream segments are described in detail in Process Paper R. The largest mileage of eligible stream segments is in the Island Park Subsection and the Big Hole Mountains Subsection has the second highest. The remaining subsections (excluding the Lemhi/Medicine Lodge) all have lesser mileages ranging from 17 to 31.5 miles.

The largest potential classification mileage is for Wild, followed by Recreational and Scenic which are almost equal. Suitability studies have not been completed for any of these streams.

Visual Resources - Scale: Subsection

The Forest has some very unique and outstanding scenery. It encompasses peaks over 10,000 feet, arid lands, timbered highlands, lakes and waterfalls. During the past decade, the greatest change in visual resources occurred among the vast expanses of mature lodgepole pine found in the Madison-Pitchstone Plateaus and Island Park Subsections. Large portions of this mature timber were clearcut. Some of this timber harvest occurred near major travel routes and use areas such as campgrounds, resorts, summer home areas and private lands. This changed many of the solid timbered areas to open meadow-like mosaics of scattered timber stands. Even though this was a drastic change from the past, it also provided variety in terms of scenic views and vistas. In some instances, this type of harvest enhanced areas from a visual standpoint.

The following displays the Forest acres currently in each visual quality objective.

<i>Visual Quality Objective</i>	<i>Acres</i>
Preservation	137,761
Retention	226,882
Partial Retention	804,784
Modification	519,184
Maximum Modification	148,189

Most of the Preservation acreage falls within the Jedediah Smith and Winegar Hole Wildernesses, which are in the Teton Range and Madison-Pitchstone Plateaus Subsections. Most of the Modification and Maximum Modification acres are in the Island Park and Madison-Pitchstone Plateaus Subsections. The other classifications are scattered throughout the subsections.

Developed Recreation Sites - Scale: Forestwide

Demand for new types of specialized facilities such as trailheads, mountain biking trails, boat ramps, fishing access and snowmachine facilities is increasing at five to ten percent annually. A strong increase in demand for group camping sites is an example of this type of specialized recreation facility need.

As shown in Table III-26, there are 61 developed recreation sites with facility investments over \$50,000 on the Forest. This figure includes both existing and planned sites. These sites, which include facilities such as campgrounds and boat ramps, have a total capacity of 8,890 persons at one time (PAOT). These sites receive approximately 608,000 visits and result in 703,000 12-hour recreation visitor days (RVDs) annually. Use is increasing approximately two percent per year. The Big Hole Mountains Subsection has the most sites (19), and the Island Park Subsection has the next largest number (18). The remaining subsections each have seven sites. Utilization rates for these sites range from low (<20 percent) to high (60 percent) across the Forest, the highest rates in the Warm River/Island Park and Palisades areas.

Developed recreation facilities are in fair to good condition across the Forest, but there is a significant backlog in heavy maintenance and reconstruction needs. The Forest has been able to reconstruct a few of the major sites. Approximately two-thirds of the developed campgrounds are operated and maintained by private concessions under special use permit from the Forest. Because many of our campgrounds and other developed facilities are adjacent to or along travel routes to Yellowstone and GTNP, use patterns on the Forest are affected by management actions and physical attractions of these parks.

Dispersed Recreation - Scale: Forestwide

The largest number of dispersed activity and camping sites are in the Caribou Range and western Centennial Mountains Subsections as shown in Table III-26. The next largest numbers of sites are in the Lemhi/Medicine Lodge and Big Hole Mountains Subsections. These sites receive approximately 1,147,000 visits.

and result in 992,000 RVDs annually. Dispersed sites have few or no structural facilities for recreation. They are used for general camping and to provide access to fishing, hunting, OHV areas and trails. Some of these sites have received increased use and number of camping spots, such as at Horseshoe Lake which has increased from three to seven sites in the last decade. Many dispersed activity uses are increasing at a rate of approximately four percent.

The capacity in PAOT of these sites is greater than the developed sites on the Forest. There are 106 heavy use dispersed sites on the Forest, and some of these dispersed campsites are showing damage to vegetation and soils. Field reviews during the summer of 1996 indicate a few of these sites are in need of management actions to stabilize or minimize such impacts.

There are approximately 773 miles of open and 628 miles of restricted trails for use on the Forest. Summer use trails are most abundant in Big Hole Mountains, Caribou Range Mountains, Teton Range and Centennial Mountains Subsections (Table III-25).

Outfitters and Guides - Scale: Forestwide

There are 83 permitted outfitter/guide operations on the Forest at the present time (Table III-26). Outfitted activities are most numerous in the Teton Range and Big Hole Mountains Subsections. The Centennial Mountains and Island Park Subsections also have a moderate number of permitted operations.

Forestwide, the largest number of these permits is for summer activities. These permits are for guided activities such as hunting, horseback riding, river trips, fishing, wagon rides, backpacking, horsepacking, etc. These activities represent a commercial industry with an annual income estimated at over 1.8 million dollars, and fees to the government of over \$53,000. There is continuing interest in new permits, however capacity determinations and commercial allocations have only been made for a few parts of the Forest. Therefore, a moratorium was recently initiated on the Forest to deny any new applications for permits, except in areas where capacity had been determined to be available through environmental analysis and documentation.

Special Uses - Scale: Forestwide

Excluding outfitter-guide permits, there are 267 other recreation special use permits on the Forest (Table III-26). These are issued for summer homes, organization camps, special events, ski areas, etc. The highest number of these are located in the Island Park and Caribou Range Mountains Subsections where there are large numbers of summer homes. There are moderate numbers of permitted activities in the Centennial Mountains and Big Hole Mountains Subsections. The Forest administers permits for 203 summer homes, 32 recreation special events, 14 organization camps and two regional-sized ski resorts. Development of the Grand Targhee Ski Resort is occurring, and all activities are guided by the 1995 Master Development Plan for the Resort. These permits are the major portion of the activity and result in returns to the treasury in the hundreds of thousands of dollars annually.

There are over 200 nonrecreation uses authorized by special use permit on the Forest. Uses authorized include roads, water transportation systems such as ditches, canals and pipelines, hydropower, communication sites, municipal watersheds, telephone, telegraph and power transmission lines, uses related to agriculture and industry, and uses related to research, training, cultural and historic resources.

ECONOMIC AND SOCIAL ENVIRONMENT

Figure III-1 shows how area population centers and county lines rest relative to the subsection boundaries outlined for the Forest. The area primarily affected by the Forest in terms of economic and social concerns comprises Bonneville, Clark, Fremont, Jefferson, Madison and Teton counties in Idaho. Together these counties make up the great majority of the Forest's total administrative area and account for the largest part of Forest-related employment, personal income and payments to local governments. These counties are recognized as being the Area of Primary Forest Economic Influence (APFEI) (Table III-27). Information for the Shoshone-Bannock reservation at Fort Hall is also provided.

County/CDP 1/	Population	% high school graduates	% college graduates	Unemployment % (yr)	Infant deaths per 1,000 live births (yr)	Occupied housing units wood heated	Social Security Recipients / % for 1993	Housing units owner-occupied %	Median household income \$ in 1989
Bonneville 2/	65,980	84	23	4.4 (1994)	5.1 (1993)	9.6/	10,030 / 15	72	\$30,462 8/
Clark 2/	762	75	14	5.7 (1994)	0.0 (1993)	32.6/	160 / 21	63	24,583 8/
Fort Hall CDP 3/	2,681	38	4	50.0 4/ (1985)	9.8 5/ (1984 - 85)	20	186 / 7 7/	74	23,533 8/
Fremont 2/	10,937	76	11	8.0 (1994)	0.0 (1993)	40.6/	1,865 / 17	80	23,498 8/
Jefferson 2/	16,543	78	12	5.6 (1994)	5.6 (1993)	28.6/	2,350 / 14	81	24,421 8/
Madison 2/	23,674	88	19	4.1 (1994)	4.5 (1993)	18.6/	1,875 / 8	60	23,000 8/
Teton 2/	3,439	80	17	3.6 (1994)	3.7 (1993)	51.6/	560 / 16	74	22,799 8/

1/ CDP Census designated place
2/ U S Counties 1996 on CD-ROM [machine-readable data files]/prepared by the Bureau of the Census --Washington The Bureau [producer and distributor], 1996 Website <http://govinfo.kerr.orst.edu/document/usaco/abstract.html>
3/ U S Census Bureau The Official Statistics 1990 U S Census Data URL <http://bigsur/b/gov/cdrom/lookup>
4/ Shoshone-Bannock Tribes 1985 The Fort Hall Indian Reservation Comprehensive Land Use Plan (DRAFT) Fort Hall, Idaho As reported in U S Department of the Interior - Bureau of Land Management, 1996 Challis Resource Area Draft Resource Management Plan and Environmental Impact Statement Salmon, Idaho
5/ Colter, Belma, Joanne Jensen, and Marlene Lindroth August 1, 1995 Community Assessment of Fort Hall Service Unit Delivery Area (DRAFT) Public Health Nursing and Shoshone-Bannock Tribes Fort Hall, Idaho
6/ Machlis, Gary E, Jo Ellen Force, and Jean E McKendry An Atlas of Social Indicators for the Upper Columbia River Basin, 1995, Contribution Number 759, Idaho Forest, Wildlife and Range Experiment Station, University of Idaho, Moscow, Idaho
7/ Population figure of 2,735 used in calculating the percentage figure, consistent with rate calculation procedures used in 3/
8/ U S Bureau of the Census County and City Data Book 1994 Washington, DC U S Government Printing Office, 1994

Some observations can be readily made Bonneville county has the highest median household income and the highest incidence of college graduates Clark county has the highest incidence of Social Security recipients Fort Hall's median household income is somehow comparable to the counties listed and yet its unemployment rate seems inconsistently high This may be the result of having more wage-earners per household and/or some distortion in the estimate of unemployment Fremont county's high rate of unemployment was possibly associated with timber harvests which were declining from peak levels Jefferson county had the highest incidence of owner-occupied housing units and high school graduates Because most of these counties have very small populations, statistics must be thought through Teton county's infant death rate for instance, actually reflects the death of only a single infant Teton county has the highest rate of heating with wood and the lowest unemployment rate

The Forest is of lesser economic importance to other area counties including Teton and Lincoln counties in Wyoming and the Idaho counties of Bannock, Bingham, Butte and Lemhi Bannock and Bingham counties have no lands administered by the Forest The Forest does manage significant amounts of land in Butte, Lemhi, Lincoln, and Teton (Wyoming) counties However, management of the Forest as depicted in the various alternatives under consideration is not expected to have significant effects on these coun-

ties Even though these counties are not included in the APFEI they still have important links to the Forest The Grand Targhee Ski Resort, for instance, is located in Teton County, Wyoming It is an important source of income and employment Services and supplies for the facility must come through Teton County, Idaho, however

People from outside this area also have strong ties to the Forest Besides Idaho, Wyoming and Montana the Forest receives many visitors from Utah, California, and the rest of the nation The designation of an area of influence does not diminish the interests others have in the area or the attention paid to their input

Most of the area's population lives in cities like Idaho Falls, Blackfoot and Rexburg The area's population is relatively small and concentrated in Bonneville County which contains Idaho Falls, the area's largest city with a population in excess of 42,000 It regularly ranks as Idaho's second- or third-largest city

Perhaps the most striking characteristic of the area's population is the growth that has occurred in Bonneville and Madison counties during recent decades, and Teton county in recent years. Since 1950 the population within the APFEI has more than doubled, from 63,334 in 1950 to 137,991 in 1994 (REIS 1996) Bonneville and Madison counties have increased over 2.5 times during that same period Teton county's population has increased by more than six percent annually from 1990 to 1995 Available information indicates this population growth is traditional (based on employment growth), rather than being the cause of employment growth (Taylor and Fletcher 1995)

Table III-28 displays the relatively low population density of the six counties making up the APFEI, about 19 people per square mile Clark county is one of the least populated counties in the United States That characteristic poses many problems for its county commissioners who must address an abundance of needs with limited resources Based largely on their low populations, Clark, Fremont and Teton counties have all been identified as areas of low socioeconomic resiliency (USDA 1996)

As shown in Table III-28, dividends, interest and rent make up about 13 percent of APFEI personal income, transfer payments 14 percent Clark county has low figures in both of these categories (eight and ten percent respectively) Teton county has the high figure for dividends, interest and rent at 19 percent, while Fremont county has the high figure of 21 percent for transfer payments

Employment and Income

Although information is presented herein by county, economic sector or other grouping it is important that the associations among the various components not be overshadowed Area barley farmers support the Anheuser-Busch barley malting facility in Idaho Falls Idaho's largest potato farm is located in the area and potato growers support a wide-ranging potato industry including fertilizer, irrigation equipment, storage and packing facilities, equipment manufacture and repair and other agricultural support activities Some 9,000 workers at the INEEL live throughout the area and thus contribute to the well-being of a number of local communities

The entire area benefits from its proximity to Yellowstone and GTNPs Recreationists travelling through the area use the lodging and retail sectors of the economy Perhaps more importantly, many of those recreationists have bought summer homes in the area With improvements in roads and vehicles, more and more people are locating in areas which were previously considered inaccessible during the winter months

The presence of large numbers of recreationists drawn to the world-class attraction of the Park has made the area attractive for other types of spin-off recreation Examples are the grizzly bear theme park in West Yellowstone, Montana, just outside the APFEI and fishing on the Henry's Fork and South Fork of the Snake River

The Grand Targhee Ski Resort has emerged as a destination resort. Although it is located in Wyoming, all traffic into it flows through the APFEI. The resort has been successful in establishing itself as a year-round facility with attendant increases in the numbers of people employed and the seasons during which they are employed. Grand Targhee employs 166 people on a full-time equivalency basis on the site. Another 23 people are employed off-site. (USDA Forest Service, Grand Targhee DEIS 1992)

Unusual associations have developed as the area's economy has grown and evolved in different ways. The sand dunes in Fremont County draw large crowds of recreationists, but much of the economic activity associated with the dunes is associated with Madison County which offers a greater variety of retail services and the nearest hospital.

Major employment in the APFEI comes from the services, wholesale and retail trade, and government sectors (Table III-29). The Service sector includes a wide range of activities such as automobile repair, funeral services, lodging, health care, legal services, engineering services, amusement and miscellaneous repair shops.

The respective counties' economies differ greatly. Clark, Fremont, Jefferson and Teton Counties rely heavily on agriculture and related activities for their economic bases (Cook and Mirer 1989). Bonneville and Madison Counties both rely heavily on the services sector (most notably the INEEL and Ricks College) for their economic bases. The entire APFEI is within the 14 county Idaho Falls economic subregion as defined by the Bureau of Economic Analysis (BEA). The percentage of jobs in that subregion supported by recreation is estimated at 30 percent (Quigley et al. 1996).

The economy of Bonneville county is much larger than those of the other counties in the APFEI and thus tends to overwhelm the statistics. The primary economic driver of Bonneville county is the INEEL which accounts for the large showing of service sector employment.

Changes continue to occur in the local area's economy. Coors Brewing, long a purchaser of locally grown barley, pulled out of the local market. Canola is being grown on larger acreages of area farms. Idaho Forest Industries, long a major employer in Fremont County, closed its sawmill in St. Anthony in 1992. Louisiana-Pacific closed its Rexburg mill in 1995. The INEEL has eliminated thousands of jobs. Snowmachine activity has blossomed to the point that anticipated restrictions on their use in the Park seem likely to spur increased use on the Forest and other lands surrounding the Park. Jet ski use on area waterways is another recent development in area recreation.

Many people in the local area rely on Forest commodity production for their livelihoods to some extent. Loggers, mill workers, ranchers and truckers fall into this category. Area mills relying in part on timber from the Forest include numerous smaller mills producing posts, poles, house logs and dimension lumber. Before its closure in 1992, the large stud mill in St. Anthony (Fremont County) received about 80 percent of its raw material from the Forest. About half of the material processed at the Rexburg mill before its closure in 1995 likewise came from the Forest. The Forest is a significant supplier to the remaining facilities in the APFEI. Dead timber serves as an important fuel supply for home heating in the local area thereby providing a source of income for some and a source of heat for others.

Some area residents rely on Forest rangeland as a source of seasonal forage for their livestock. Normally this forage is an integral part of the ranch's overall operations. Alternative sources of supply suitable for the permittees' needs are difficult to come by.

Recreation is an important part of the local economy and one with significant growth potential. It includes readily-identifiable recreation resources like the Grand Targhee Ski Resort, Kelly Canyon Ski Resort, outfitters and guides, and snowmachine rental. Other related activities include sales at area restaurants, motels and retail establishments. Harriman State Park and private facilities located off-Forest also rely on the Forest for an expanded range of activities for their visitors.

County/ CDP	Agriculture, Forestry, Fisheries	Mining	Construction	Manufacturing	Trans Com Util	Wholesale Trade	Retail Trade	Finance Insur, Real Estate	Service	Government	Farm	Total
Bonneville												
1990	518	27	3,264	1,943	1,137	2,674	8,262	2,385	12,554	4,822	1,355	38,941
1994	736	34	3,491	2,277	1,355	3,440	9,442	2,540	14,696	5,563	1,312	44,886
Clark												
1990	67	NA	11	0	18	NA	73	NA	NA	125	288	682
1994	46	NA	NA	NA	12	NA	70	12	28	160	285	788
Fort Hall CDP												
1990	43	30	81	102	118	20	147	36	289 2/	267 3/	NA 4/	866
1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fremont												
1990	136	NA	138	381	159	219	604	108	607	997	851	4,202
1994	222	NA	271	194	184	198	656	117	739	1,040	826	4,451
Jefferson												
1990	566	15	444	563	183	387	705	171	644	1,067	1,235	5,986
1994	647	17	688	765	213	394	856	236	696	1,134	1,195	6,841
Madison												
1990	292	NA	365	1,217	262	729	1,703	363	3,369	1,355	804	10,462
1994	NA	NA	427	1,235	251	828	2,123	516	3,766	1,484	784	11,794
Teton												
1990	65	0	94	63	21	23	211	60	223	291	433	1,484
1994	76	0	151	77	52	20	349	69	355	372	420	1,941

CDP Census designated place, outside APFEI
NA Not available
1/ 1990 Census figures as reported in The Official Statistics at URL <http://bigsur/b/gov/cdrom/lookup> for Ft Hall 1990 figures and 1994 figures in U S counties 1996 on CD-ROM [machine = readable data file]/prepared by the Bureau of Census --Washington The Bureau [producer and distributor], 1996 Website <http://govinfo.kerr.orst.edu/document/usaco/abstract.html> for the counties
2/ Includes all government employees
3/ Broken out from the Service sector in which it is included
4/ Farm Households 53 , Self-Employed workers 25

Another recreation-related economic spin-off has been the proliferation of summer home residences in the area. This has increased the local tax base without increasing demands on area schools.

Some area residents have noticed an increasing level of recreation use which they attribute to overcrowding in the adjacent Yellowstone and GTNPs which are attracting record numbers of visitors.

The Forest Service employs some 140 workers to manage the Forest. The Forest Service is a major employer in the area and the great bulk of its annual budget (Table III-30) goes to salaries of Forest employees living in the local area. Additional background information on the local area is available in the Forest's AMS.

Payments to Local Governments - Scale: Regional

The Forest also plays a role in the area economy by generating revenues, a portion of which are returned to local governments. These funds result from the Payment In Lieu of Taxes (PILT) program administered by the U S Department of the Interior and from the 25% Fund (payments made under the National Forest Revenue Act of 1908 as amended).

1993	15.4
1994	15.7
1995	15.3
1996	13.8

Payments resulting from the 25% Fund are to be used as directed by the respective state legislatures for the benefit of roads and schools in the local government area where they were generated. Payments from the 25% Fund are calculated based on Forest receipts, both in cash and in kind, accruing from management activities in the local government area.

PILT payments are calculated for each local government (Table III-31) based on the amount of acreage administered by certain federal agencies, population, a schedule of payments, the Consumer Price Index, other federal payments (like the 25% Fund payment received in the prior year), and the level of funding. PILT payments may be spent by the local government for any governmental purpose.

Amenity Interests - Scale: Regional

Many people in the area, and outside the area, enjoy the Forest for the recreational opportunities it provides, for the scenic vistas it offers, for its aesthetic values, for its importance to wildlife and fish and for the contributions it makes to the greater ecosystem. Interests include those associated with the effects of clearcutting on the visual landscape and on area plants, fish, and wildlife, spiritual concerns, land ethics, and environmental concerns in general.

Many people value the Forest even though they have never been here. They recognize its place and importance in the larger ecosystem. The large clearcuts of lodgepole pine that began in the 1960s have been photographed extensively from the air and have been widely published. People have commented,

favorably and unfavorably, about this activity. The photographs have heightened the level of public consciousness of clearcutting on the Forest.

Understandably, most of the recreation that occurs on the Forest is associated with people who live in close proximity to it. Out-of-area recreationists, with the exception of hunters and anglers, are more likely to focus their recreational activities on the big-name attractions like Yellowstone and GTNPs. Local people have often grown up in the area, experiencing the Forest from the time of their youth, and enjoy the greater sense of freedom associated with the less-restrictive recreational experience available on the Forest compared to the Parks. Big game hunting, particularly elk hunting, is a fall experience of extreme importance to those who enjoy it.

Within the Forest boundaries are wildernesses, big-game herds, two ski resorts, waterfalls, a world-class fishery and the kind of scenery associated with the adjacent Park and GTNPs. These features give rise to a great deal of recreational use by those from outside the immediate area. Big-game hunting, camping, hiking, skiing, and recreational driving are major attractions for this group. Most of the big-game hunters are from other parts of Idaho. Residents of the adjoining states and California are the most common out-of-area users of the Forest.

Table III-31 25% Fund Payments and Payments in Lieu of Taxes (PILT) 1/							
COUNTY	Nominal Dollar Terms						
	1992	1993	1994	1995	1996	Average '92-'96	Average '94-'96
BONNEVILLE							
Total PILT	\$ 383,279	\$ 390,416	\$ 380,758	\$ 390,666	\$ 442,650	\$ 397,554	\$ 404,691
PILT Not Targhee-Related	145,646	148,358	144,688	148,453	168,207	151,070	153,783
Targhee-Related PILT (62.0%) 2/	237,633	242,058	236,070	242,213	274,443	246,483	250,909
Targhee-Related 25% Fund	56,915	45,129	36,292	38,225	24,457	40,204	32,991
Total Targhee-Related	294,548	287,187	272,362	280,438	298,900	286,687	283,900
Total PILT and Targhee 25% Fund	440,194	435,545	417,050	428,891	467,107	437,757	437,683
CLARK							
Total PILT	38,100	38,100	39,900	38,281	42,166	39,309	40,116
PILT Not Targhee-Related	18,593	18,593	19,471	18,681	20,577	19,183	19,576
Targhee-Related PILT (51.2%) 2/	19,507	19,507	20,429	19,600	21,589	20,126	20,539
Targhee-Related 25% Fund	115,570	91,639	73,697	77,622	49,647	81,635	66,989
Total Targhee-Related	135,077	111,146	94,126	97,222	71,236	101,761	87,528
Total PILT and Targhee 25% Fund	153,670	129,739	113,597	115,903	91,813	120,944	107,104
FREMONT							
Total PILT	209,630	226,134	254,597	284,206	344,608	263,835	294,470
PILT Not Targhee-Related	54,294	58,569	65,941	73,609	89,253	68,333	76,268
Targhee-Related PILT (74.1%) 2/	155,336	167,565	188,656	210,597	255,355	195,502	218,203
Targhee-Related 25% Fund	170,578	135,255	108,774	114,567	73,278	120,490	98,873
Total Targhee-Related	325,914	302,820	297,430	325,164	328,633	315,992	317,076
Total PILT and Targhee 25% Fund	380,208	361,389	363,371	398,773	417,886	384,325	393,343
JEFFERSON							
Total PILT	141,608	141,606	141,585	135,840	148,716	141,871	142,047
PILT Not Targhee-Related	141,608	141,606	141,585	135,840	148,716	141,871	142,047
Targhee-Related PILT (0.0%) 2/	0	0	0	0	0	0	0
Targhee-Related 25% Fund	0	0	0	0	0	0	0
Total Targhee-Related	0	0	0	0	0	0	0
Total PILT and Targhee 25% Fund	141,608	141,606	141,585	135,840	148,716	141,871	142,047
MADISON							
Total PILT	32,640	34,009	36,450	38,225	44,391	37,143	39,689
PILT Not Targhee-Related	10,412	10,849	11,628	12,194	14,161	11,849	12,661
Targhee-Related PILT (68.1%) 2/	22,228	23,160	24,822	26,031	30,230	25,294	27,028
Targhee-Related 25% Fund	13,440	10,657	8,571	9,027	5,774	9,494	7,791
Total Targhee-Related	35,668	33,817	33,393	35,058	36,004	34,788	34,819
Total PILT and Targhee 25% Fund	46,080	44,666	45,021	47,252	50,165	46,637	47,479
TETON							
Total PILT	43,411	46,615	51,376	56,200	66,700	52,860	58,092
PILT Not Targhee-Related	3,126	3,356	3,699	4,046	4,802	3,806	4,183
Targhee-Related PILT (98.2%) 2/	40,285	43,259	47,677	52,154	61,898	49,054	53,909
Targhee-Related 25% Fund	28,532	22,623	18,194	19,163	12,257	20,154	16,538
Total Targhee-Related	68,817	65,882	65,871	71,317	74,155	69,208	70,447
Total PILT and Targhee 25% Fund	71,943	69,238	69,570	75,363	78,957	73,014	74,630
TOTAL APFEEI							
Total PILT	848,668	876,880	904,666	943,418	1,089,231	932,573	979,105
PILT Not Targhee-Related	373,679	381,331	387,011	392,824	445,717	396,112	408,517
Targhee-Related PILT (56.0%) 2/	474,989	495,549	517,655	550,594	643,514	536,460	570,588
Targhee-Related 25% Fund	385,035	305,303	245,528	258,604	165,413	271,977	223,182
Total Targhee-Related	860,024	800,852	763,183	809,198	808,927	808,437	793,769
Total PILT and Targhee 25% Fund	1,233,703	1,182,183	1,150,194	1,202,022	1,254,644	1,204,549	1,202,287

1/ Source for 25% Fund figures are the annual 25 Percent Reports maintained in Forest File designation 6550-6 Source for PILT payments are the annual press releases from the U S Department of the Interior, Bureau of Land Management Columns may not sum due to rounding

2/ This information is based on the percentage of total PILT entitlement lands which the Targhee National Forest comprises It is meant to show how important the Targhee National Forest component is in terms of total PILT payments The parenthetic percentage is the Targhee's percentage of total PILT entitlement acres

Products such as timber, firewood, and grazing that the Forest provides are obviously important to the local communities. Less obvious are the plant products that individuals collect (commercially or for personal use) for food and medicinal purposes. Mushrooms, dried flowers and plants, trees and shrubs for landscaping, huckleberries and chokecherries (plus other berries) are yearly utilized by people both locally and from other areas. These products also have cultural significance to local American Indian tribes who utilize a wide variety of plants from the many habitat types on the Forest as shown in Table III-32.

Habitat	# of Species
Douglas-fir	50
Lodgepole Pine	42
Spruce/Fir	34
Limber Pine	9
Whitebark Pine	8
Mixed Conifer	54
Aspen	34
Sagebrush/Grass	70
Grass/Forbs	57
Mountain Brush	99
Alpine	21
Riparian/Aquatic	102
Rock/Barren/Talus	17

Tribal Interests - Scale: Regional

The Forest lies within the aboriginal territory of the Shoshone-Bannock Tribes. The Tribes collectively comprise a single, federally recognized Indian tribe with a governing body, the Fort Hall Business Council, which is duly recognized by the Secretary of the Interior. Tribal members are successors-in-interest of Indian signatories to the Fort Bridger Treaty. In part, that treaty led to the creation of the Fort Hall Indian Reservation in the Idaho Territory as a permanent tribal homeland. The 544,000-acre reservation lies generally between Blackfoot and American Falls, Idaho.

Article 4 of said treaty secured for the Tribes in perpetuity the continuation of a wide variety of "use rights" to off-Reservation lands. More specifically, by virtue of Article 4 of the treaty, the Tribes expressly reserved the right to hunt "on the unoccupied lands of the United States so long as game may be found thereon" including such lands owned by the federal government outside the boundaries of the Reservation. The courts decided in the Tinno decision (*State v. Tinno* 1972) that the right to hunt also included a right to fish (*Shoshone-Bannock Tribes* 1992b). Hanes (1995) observed, "The court agreed that the Indian peoples expected rights to harvest food on the unsettled lands as a means of subsistence and an integral part of their way of life."

The Tribes have historically used the Forest for hunting, fishing and gathering. American Indians historically used at least 838 species of plants on the Forest, covering virtually every type of plant community. These activities are important economically as well as socially and culturally. Part of the economic importance to the Tribes lies in their use of hunted meat to provide food for the elderly and the disabled. "The philosophy and management direction from the Tribes has always been for subsistence hunting and this is reflected in the Tribes Big Game Regulations," (*Shoshone-Bannock Tribes* 1992a).

Rights to believe, express, and exercise traditional religions are protected by various federal laws, including the American Indian Religious Freedom Act of 1978. This includes, but is not limited to, access to sites, the use and possession of sacred objects and the freedom to worship through ceremonial and traditional rites. Additionally, rights reserved under treaty may possess an inherent measure of resource protection. (U.S. v. Washington (759 F.2d 1353, 1985) in Shoshone-Bannock Tribes 1992b.)

The Forest has worked with representatives of the Tribes to coordinate the Revision with them. Representatives of the Tribes have stressed the following points:

- Treaties are the supreme law of the land (U.S. Constitution, Article 6, Clause 2). Treaty rights cannot be negotiated at the Department level of the United States government. Consultations with the Tribes are on a government-to-government basis.
- The multiple jurisdictions they have to work with make any attempts at working with the Forest an extremely frustrating exercise. Their territory lies within the boundaries of many National Forests, on lands administered by the Bureau of Land Management, on state lands and on lands privately held. This complicates even relatively simple matters like interpretive signs.
- The processes the Forest uses to handle archaeological sites and cultural values do not fully address the Tribes' concerns. It is important to protect sites, to keep them unpublished and to recognize that providing access to sites invites vandalism. It is important for the Forest to consult with the Tribes on a case-by-case basis when providing protection to sites. It is important that vandalism of sites be vigorously prosecuted to serve as a deterrent.
- The Revision must recognize the sacredness of the land, need for protection, obligation to consult with the Tribes as outlined in the American Indian Religious Freedom Act, the NEPA and NFMA, and many aspects of reserved rights including, but not limited to, the priority nature of rights reserved under the treaty, as well as an inherent measure of resource protection to satisfy these rights.
- The Forest must be recognized for its religious and spiritual significance to the Tribes. That significance is not limited to vision quest sites or traditional camp sites. The Forest and even the lands beyond its borders are important in their entirety. As with many other religions, tribal members are not free to share all the dimensions of their faith.

The Tribes also have a significant economic interest in the Forest. These include subsistence activities like hunting, fishing and gathering. They also include important aspects of Tribal life like sharing the fruits of the land. Riverine ecosystems are important to the Tribes not only for their resources but also for the role they play in the Tribes' religion. The Forest will continue to work and coordinate with the Tribes.

Heritage Resources - Scale: Subsection

Lemhi/Medicine Lodge - This area contains over 200 heritage resources of predominately American Indian sites including habitation sites and rock art. The aboriginal settlement pattern for the area is related to scarce perennial water sources in generally high altitude settings. Archaeological excavations in the area indicate that high altitude hunting camps were used primarily for hunting mountain sheep.

European-American settlement in this area was focused on homesteading and lead mining in the late 19th century. The Birch Creek Charcoal Kilns is the most significant site relating to this period of settlement and is a major tourist attraction. The remains of ancillary sites associated with the lead mining industry are found in several canyons. The Working Cabins also have interpretive potential for late 19th century homesteading.

Impacts to heritage resources, such as prehistoric American Indian lithic scatters associated with hunting camps, are occurring from livestock grazing and antelope hunting blind construction. Construction of

hunting blinds involves digging a hole up to two feet deep, which can disturb cultural deposits. Since permanent water sources in this area are scarce, most springs have evidence of prehistoric American Indian occupations. Livestock tend to congregate at these springs, trampling surface cultural deposits. Soil erosion from lack of vegetation in these areas exposes buried cultural deposits.

Centennial Mountains - The Centennial Mountains contain the highest frequency of heritage resource sites on the Forest. Over 400 heritage resources of predominately American Indian sites have been identified. The aboriginal settlement pattern for the area is seasonal occupations for the extraction of obsidian and collecting camas plants for medicinal use. Site types include base camps, obsidian workshops, quarry sites and hunting camps. The most significant archaeological site in this area is the Big Table Mountain Obsidian Source. Monida Pass and Targhee Pass provided natural travel routes across the Continental Divide into the buffalo hunting grounds of Montana. The Nez Perce travelled through this area extensively. As a result, the Nez Perce National Historic trail has been designated through the area. These passes were also utilized extensively during the 19th century by fur trade companies and later as stagecoach routes.

European-American settlement of the area is in the form of late 19th and early 20th century homesteads along the Forest fringe bordering the upper Snake River Plain.

Some prehistoric American Indian sites, such as lithic scatters associated with hunting camps and lithic workshops, have been affected by logging. Monitoring following timber harvest in this subsection showed that all heritage resource sites located in cutting units were damaged by logging. Site avoidance recommendations discussed in Heritage Resource Survey Reports were not followed during timber sale administration. State authorities are aware of these, and the situation has been corrected.

Island Park - Heritage resources in the Island Park area are primarily related to the Tie Hack Period (cutting trees for railroad ties) and early Forest Service history. The 140 sites identified are composed primarily of tie hack camps associated with the Yellowstone Railroad, Forest Service administrative sites such as guard stations, ranger stations, fire lookouts and recreational cabins dating to the early 1900s. Social patterns in this area are closely related to the logging industry, Forest Service management and tourism. Few American Indian sites have been identified.

The most significant heritage resources in this area are Mesa Falls Lodge, Bishop Mountain Lookout, Squirrel Meadows Guard Station and Warm River Fish Hatchery. These sites receive high public visitation and have economic values associated with tourism.

Heritage resources in this area have been impacted by logging, road construction, historic building removals and the North Fork Fire.

Madison-Pitchstone Plateaus - The Madison-Pitchstone Plateaus contains one of the lowest frequencies of heritage resource sites on the Forest. Relatively extensive inventory has identified only 25 sites. The majority of these are tie hack sites associated with the Yellowstone Railroad. American Indian sites are few and seem to be related to transitory movements through the area. The only site identified as suitable for enhancement and interpretation is the Big Springs Fire Lookout.

Teton Range - The Teton Range has high frequencies of American Indian sites in the upper reaches of the drainages. Over 79 heritage resource sites have been identified. The vast majority are associated with high altitude adaptations by American Indians. This area may also contain spiritual sites important to local tribes. Historic Euro-American sites are generally related to early 1900s ranching.

This area has high economic values for heritage resource tourism with an emphasis on high altitude adaptations.

Big Hole Mountains - This area contains over 100 heritage resource sites with most sites located along the northwestern edge of the Big Hole Mountains. The majority of these sites are American Indian hunting camps and lithic workshops. Historic Euro-American sites are associated with early 20th century mining and ranching. The Palisades Mountains area is one of the least inventoried areas of the Forest. Site types and frequencies are relatively unknown.

There is potential to enhance and interpret early 20th century lime kiln and mining sites. Interpretation of a National Register-eligible American Indian site at Table Rock Campground also has potential.

Caribou Range Mountains - The Caribou Range is one of the least inventoried areas of the Forest, however, 50 heritage resources have been identified. All but two sites are American Indian hunting camps, lithic workshops and volcanic glass quarry sites. This area also contains the Currant Creek and Brockman Guard Stations, Forest Service administrative sites eligible for the National Register of Historic Sites. Potential exists for interpretation of the guard stations as early 20th century Forest Service sites.

Quality of Life - Scale: Regional

The Center for Business Research and Science (CBRS) and the Center for Rural Economic Development (CRED) of Idaho State University have conducted recent surveys of Quality of Life perceptions among area residents in Fremont County and the City of Idaho Falls. These two areas are vastly different in terms of population, income structure, employment opportunities and other demographic characteristics. In both surveys, many of the questions relate to concerns people have with regard to their everyday lives—things like shopping and local government services. The amount of information presented which relates to the Forest is limited. The surveys do provide some insight into how area residents perceive their living environments (CBRS, CRED a and b).

Fremont County

Air Quality and "Open Spaces and Green Spaces" were the quality of life attributes respondents were most satisfied with. Employment opportunities and the Availability of Retail Shopping were the attributes with the least amount of satisfaction. Among respondents, 43 percent felt that Tourism was the type of ideal business they would like to see locate in Fremont county. Some 34 percent felt the same way about General Manufacturing. Employment Opportunities, Level of Individual Well-Being and Public Education were identified as being the most important in determining quality of life (CBRS, CRED a and b).

City of Idaho Falls

Favorable characteristics of life in Idaho Falls included a Low Local Tax Rate, Medical Services and Salary and Wage Levels. In making choices among conflicting alternatives, respondents found these selections to be the most acceptable: Limit Economic and Population Growth (32 percent) and Increase Taxes and the Local Cost of Living (31 percent). The least acceptable choices were to Permit Degrading of the Environment (30 percent) and Increase Taxes and the Local Cost of Living (27 percent) (CBRS).

University of Idaho - Clark County

A separate survey was recently conducted of Clark county residents by the University of Idaho (McGuire and Harp). The strongest points of agreement in that study follow:

- 1 Livestock grazing is compatible with other natural resource uses. Agreement, 88.5 percent
- 2 We have enough area legally designated as wilderness in Idaho. Agreement, 83.9 percent
- 3 Large old trees that are cut and harvested will eventually be replaced by vigorous young trees that will be just as valuable. Agreement, 81.8 percent

It is noteworthy that while Clark county respondents feel they have enough legally designated Idaho

wilderness, that fewer than 20 percent agree with a "need to build roads and other accommodations that will provide greater access to undeveloped natural areas." Many people have advanced the view that they would like to enjoy these "undeveloped natural areas" without the extra restrictions associated with wilderness designation.

The three most serious concerns respondents identified for their community to deal with over the next five years are listed below:

- 1 Availability of good jobs for young people (32.7 percent)
- 2 Availability of money needed to develop economically (16.1 percent)
- 3 Individual and family income levels (11.3 percent)

University of Idaho - Interior Columbia River Basin

Still another survey of public views was conducted by the University of Idaho of Interior Columbia River Basin residents (Rudzitis et al. 1995). Some of its findings were highly predictable. For instance, respondents overwhelmingly identified Employment Opportunity and Access to Family and Friends as their most important reasons for moving to or staying in the area (58 percent). Most people have to make a living and word-of-mouth (from family and friends) is a traditional means for gaining employment. Family and friends normally comprise one's support system as well.

Respondents did not see "commodity-based strategies as the dominant management strategies to be pursued on public lands," but they did "in particular, feel some degree of timber harvesting and grazing on public lands should continue."

The most important public land uses were identified as:

- 1 Protect water and watersheds (20.2 percent)
- 2 Protect ecosystems (18.3 percent)
- 3 Recreational uses (16.9 percent)
- 4 Timber harvesting (16.3 percent)
- 5 Preserve wilderness values (9.6 percent)

Interestingly, "protect endangered species" polled less than two percent of respondents.

Utah State University and Washington State University Surveys in the Columbia River Basin (Brunson et al. 1994, Tennert et al. 1994).

Survey work conducted for the Interior Columbia Basin Ecosystem Management Project provided the following relevant attitude information (Trent 1995).

- Strong support exists for protection of fish and wildlife on public lands. The public generally supports a multiple benefits mode of management which emphasizes a long-term balance between human and ecological concerns.

- The public feels environmental and economic concerns can go hand in hand and should be given equal weight, if possible. If this is not possible, the environment is considered more important.

- The entities which the public trusts and feels should influence management decisions are local rural communities, western U.S. public opinion, university research scientists and the USDI Fish and Wildlife Service. Entities the public feels should have influence but in whom they do not have a great deal of trust include the Forest Service and the BLM. The public also feels it should play an active role in public land management.

Expect Conflicting Views

In any event, land managers need to know that the wide range of views they hear from the public are predictable. The case study conducted in the Teton county (Idaho) community of Driggs by the University of Idaho concluded that, "Driggs had yet to agree on what the future of the community should be," (Harris et al 1996). Likewise, tabular data presented in Trent, 1995, shows that in response to every survey question, Eastside Assessment public involvement participants were less neutral than those randomly polled. Perhaps it borders on tautology to observe that people who get involved are less likely to be dispassionate in their views.

Minorities and Women - Scale: Regional

Various programs have been implemented on the Forest to focus the resources of these group members on Forest activities to the benefit of both the Forest and the individuals. This effort is reflected in Forest Service hiring, supervising and contracting procedures. Under authority of a number of civil rights and equal employment opportunity acts and executive orders the Forest intends to continue:

- Eradication of all forms of illegal discrimination from facilities, programs, activities, contracting and hiring practices
- Positive action in helping to provide developmental opportunities for the disabled, minorities, women and all other employees
- Providing coordinators for the Equal Employment Opportunity, Federal Women's and Hispanic programs
- Civil Rights Action Team activities and civil rights training for all employees.

Coordination with Other Agencies - Scale: Regional

The importance of coordinating management within the GYE has been recognized by the public land management agencies. To that end, the Greater Yellowstone Coordinating Committee was established in the early 1960s. This group consists of National Park and National Forest managers who meet twice yearly to discuss issues and improve coordination between the two agencies.

There are many examples of how the various National Forests and Parks of the GYE have coordinated management across jurisdictional boundaries. The agencies have an ecosystem-wide Grizzly Bear Recovery Plan. Changes in these uniform guidelines for grizzly bear management are coordinated among the Forests and Parks. Uniform regulations for recreation use in the area were initiated for the 1995 summer season. Federal and state agencies in the GYE are implementing coordinated guidelines for management of noxious weeds and exotic plants. Fire management is another area where resources and policies are shared across Forest and Park boundaries. Currently the Forest is participating in the integrated winter sports planning taking place throughout the ecosystem. As the Revision for the Forest is implemented, coordination with fellow managers in the ecosystem will continue.

PRODUCTION OF COMMODITY RESOURCES

TIMBER

Timber - Scale: Forestwide and Subsection

The amount of forested land by species group, age class and subsection on the Forest was displayed earlier in Table III-3

Table III-33 displays the average mature volume of saw timber growing on the Forest by species and subsection

	Lemhi/ Medicine Lodge	Centennial Mountains	Island Park	Madison- Pitchstone Plateaus	Teton Range	Big Hole Mtns	Caribou Range Mtns	Total
LPP Bd Ft Volume	33,932	162,977	669,854	505,069	66,689	120,130	16,185	1,574,836
DF Bd Ft Volume	479,399	585,610	139,244	35,007	125,839	169,818	76,945	1,611,862
MX Bd Ft Volume	1,545	136,783	190,792	119,708	127,484	482,708	257,351	1,316,371
MX3 Bd Ft Volume	0	156,620	43,991	40,394	60,940	92,888	50,409	445,242
S/F Bd Ft Volume	0	21,147	2,916	8,200	17,185	13,168	6,283	68,899
AS Bd. Ft Volume	611	16,017	13,892	8,567	17,018	68,716	68,083	192,904
Total Merchantable Volume MBF	515,487	1,079,154	1,060,689	716,945	415,155	947,428	475,256	5,210,114
1/ MBF per acre (LP=6 1, DF=9 0, Mixed LP/DF=7 9, Other Mixed Conifer = 12 4, Spruce/Subalpine Fir=13 9, Aspen=3 2) x 57 (About 57% of the forested land is tentatively suitable) LPP = Lodgepole pine, DF = Douglas-fir, MX = Douglas-fir/Lodgepole pine, MX3 = three or more conifer species mixed, S/F = Englemann Spruce/Subalpine fir, AS = Aspen								

Tentatively Suitable Forest Land

While the volumes shown in Table III-33 exist on the Forest, not all acres are available for timber harvest. In order to determine which land can be managed for timber production, a Tentatively Suitable Forest Land Classification process was used.

Tentatively suitable forest land is defined as land that is producing or is capable of producing crops of industrial wood and meets the following criteria:

- Has not been withdrawn by Congress, the Secretary of Agriculture, or the Chief of the Forest Service
- Existing technology and knowledge is available to ensure timber production without irreversible damage to soils productivity, or watershed conditions
- Existing technology and knowledge provides reasonable assurance that it is possible to restock adequately within 5 years after final harvest
- Adequate information is available to project responses to timber management activities

Tentatively suitable acres for the Forest have been determined and the process is displayed in Process Paper C. This amounts to 703,100 acres or approximately 57 percent of the total forested land on the forest. Table III-34 displays Tentatively Suitable Acres by Ranger District and Ecological Subsection.

	Lemhi/ Medicine Lodge	Centennial Mountains	Island Park	Madison- Pitchstone Plateaus	Teton Range	Big Hole Mtns	Caribou Range Mtns	Total
Dubois	13,040	79,700	0	0	0	0	0	92,740
Island Park	0	91,100	64,000	47,640	0	0	0	202,740
Ashton	0	0	151,070	107,230	3,330	0	0	261,630
Palisades	0	0	0	0	0	33,580	30,730	64,310
Teton Basin	0	0	31,090	0	17,710	32,880	0	81,680
Total	13,040	171,800	246,160	154,870	21,040	66,460	30,730	703,100

The 703,100 acres shown above is 249,300 less than the 952,400 acres identified in the 1985 Plan. The primary difference between the two is associated with the amount of nonforest acres. The 1985 analysis identified 390,300 acres of nonforest lands and the current analysis identifies 681,079 acres, a difference of 290,779 acres.

The current analysis utilizes more up-to-date data than in 1985. The Forest has more stand exam information than previous and land-sat data was used in areas where stand exam data did not exist. A comparison of the two analyses is found in Process Paper C.

Similarly, Table III-35 displays tentatively suitable acres by species and age class.



Table III-35 Timber Information by Subsections

	Lemhi/ Medicine Lodge	Centennial Mountains	Island Park	Madison- Pitchstone Plateaus	Teton Basin	Big Hole Mtns	Caribou Range Mtns	Total	
Total Acres	282,600	332,100	316,140	197,980	161,690	358,680	231,110	%	1,862,300
TOTAL FORESTED AC	103,887	225,013	276,375	190,115	92,183	227,215	122,495		1,237,283
% of Total Ac	37	71	93	97	57	65	60		66
TENT SUIT ACRES	13,040	170,800	246,160	154,870	21,040	66,460	30,730		703,100
% of Forested Ac	13	76	89	82	23	29	25		57
% of Total Ac	5	52	78	78	13	19	14		38
Tentatively Suitable Acres by Species and Age Group									
Lodgepole Pine (LPP)									
Nonstocked	0	2,500	17,420	13,480	170	4,270	250	10	38,090
Seedlings	1,970	10,980	48,340	27,250	0	770	60	23	89,370
Saplings	0	4,730	19,580	14,900	0	1,160	0	11	40,370
Pole	0	4,810	9,810	8,470	1,510	690	0	7	25,290
Mature	0	22,560	81,920	62,250	4,440	13,920	1,590	49	186,680
Douglas-fir (DF)									
Nonstocked	0	580	300	610	90	510	0	1	2,090
Seedlings	180	1,610	0	60	0	180	0	1	2,030
Saplings	0	0	0	0	0	0	0		0
Pole	0	290	320	0	100	60	0	1	770
Mature	10,890	79,930	23,780	5,290	980	3,310	3,910	94	128,090
Mature-prior harvest	0	3,430	0	0	0	120	0	3	3,550
Mixed LPP and DF									
Nonstocked	0	0	0	0	0	0	0	0	0
Seedlings	0	200	210	680	0	330	0	1	1,420
Saplings	0	360	1,800	330	0	0	0	3	2,490
Pole	0	190	1,920	200	0	70	70	2	2,450
Mature	0	14,020	30,410	13,170	4,240	23,920	10,460	94	96,220
Other Mixed Conifers									
Nonstocked	0	180	860	40	20	360	0	3	1,460
Seedlings	0	900	0	480	0	150	0	4	1,530
Saplings	0	0	0	0	0	0	0		0
Pole	0	0	0	0	0	0	0		0
Mature	0	16,810	3,440	3,960	5,220	7,570	1,830	92	38,830
Spruce/Subalpine Fir									
Nonstocked	0	0	0	0	0	0	0		0
Seedlings	0	0	0	0	0	0	0		0
Saplings	0	0	0	0	0	0	0		0
Pole	0	0	0	0	0	0	0		0
Mature	0	1,920	160	740	670	200	180	100	3,870
Aspen									
Nonstocked	0	480	700	330	0	0	0	4	1,510
Seedlings	0	10	1,180	760	0	430	80	6	2,460
Saplings	0	30	390	310	210	0	0	3	940
Pole	0	190	320	0	200	0	400	3	1,110
Mature	0	4,090	3,300	1,560	3,190	8,440	11,900	84	32,480
Total									
Nonstocked	0	3,740	19,280	14,460	280	5,140	250		43,150
Seedlings	2,150	13,700	49,730	29,230	0	1,860	140		96,810
Saplings	0	5,120	21,770	15,540	210	1,160	0		43,800
Pole	0	5,480	12,370	8,670	1,810	820	470		29,620
Mature	10,890	139,330	143,010	86,970	18,740	57,360	29,870		486,170
Mature-prior harvest	0	3,430	0	0	0	120	0		3,550
TOTAL	13,040	170,800	246,160	154,870	21,040	66,460	30,730		703,100

Based on the number of tentatively suitable forested acres identified in Process Paper C and shown in Table III-34 and a gross volume per acre derived from local forest yield-tables, Table III-36 displays the total gross volume (MCF and MBF) by species by ecological subsection that is currently growing on the tentatively suitable forest acres

Table III-36 Merchantable Volume (MCF and MBF) for Tentatively Suitable Forest Land								
	Lemhi/ Medicine Lodge	Centennial Mountains	Island Park	Madison- Pitchstone Plateaus	Teton Range	Big Hole Mtns	Caribou Range Mtns	Total
MERCHANTABLE VOLUME IN THOUSANDS OF CUBIC FEET (MCF) BY SPECIES 1/								
LPP MCF Volume	0	33,727	122,470	93,064	6,638	20,810	2,377	279,086
DF MCF Volume	19,983	146,672	43,636	9,707	1,798	6,074	7,175	235,045
LP/DF MCF Volume	0	24,184	52,457	22,718	7,314	41,262	18,044	165,979
Other mixed MCF Volume	0	43,874	8,978	10,336	13,624	19,758	4,776	101,346
Spruce/Fir MCF Volume	0	4,710	392	1,815	1,644	491	442	9,494
Aspen MCF Volume	0	3,096	2,498	1,181	2,415	6,389	9,008	24,587
TOTAL MERCHANTABLE VOLUME MCF	19,983	256,263	230,431	138,821	33,433	94,784	41,822	815,537
MERCHANTABLE VOLUME IN THOUSANDS OF BOARD FEET (MBF) BY SPECIES 2/								
LPP Bd Ft Volume	0	138,406	502,579	381,904	27,239	85,399	9,755	1,145,282
DF Bd Ft Volume	97,738	717,372	213,426	47,478	8,795	29,707	35,092	1,149,608
MX BD Ft Volume	0	110,926	240,604	104,201	33,547	189,255	82,760	761,293
MX3 Bd Ft Volume	0	208,629	42,694	49,148	64,785	93,951	22,712	481,919
S/F Bd Ft Volume	0	26,655	2,221	10,273	9,302	2,777	2,499	53,727
AS BD Ft Volume	0	12,953	10,451	4,941	10,103	26,729	37,688	102,865
TOTAL MERCHANTABLE VOLUME MBF	97,738	1,214,941	1,011,97	597,945	153,771	427,818	190,506	3,694,694
1/ MCF per acre LP=1 5, DF=1 8, Mixed LP/DF=1 7, Other Mixed Conifer=2 6, Spruce/Subalpine Fir=2 5, Aspen=0 8 2/ MBF per acre LP=6 1, DF=9 0, Mixed LP/DF=7 9, Other Mixed Conifer=12 4, Spruce/Subalpine Fir=13 9, Aspen=3 2								

Table III-37 displays the estimated potential growth on tentatively suitable lands. The majority of this growth occurs between ages 20-119

Table III-37 Potential Growth on Tentatively Suitable Lands		
Potential Growth (cubic feet/acre/year)	Tentatively Suitable Lands (acres)	Unsuitable Lands 1/ (acres)
less than 20	0	60,345
20-49	168,744	112,178
50-84	499,202	324,265
85-119	35,154	26,709
120-164	0	5,342
165-224	0	5,342
225	0	0
1/ Timber productivity classification for unsuitable lands is estimated		

Future Supply and Demand

The projected demand-supply situation in the United States implies rising prices for timber. In the U.S. economy, demand and supply market commodities are equated through price adjustments and other workings of the market. When demand increases faster than supply, price brings the two together by reducing demand and/or by inducing supply increase (USDA Forest Service, 1990 RPA Assessment).

In general, it is expected that the price of softwood roundwood will follow the historic trend and continue to increase faster than the rate of inflation for at least the next 50 years, an indicator that demand from an increasing population will rise faster than supply can respond.

Supply

The local demand-supply situation generally reflects the national and regional trend. The following is a brief analysis of supply and demand for our area.

Table III-38 displays sources of timber that have been available in the past. The volumes shown, (except for private land which is an estimate) are averages from fiscal years 1992-95 sell program from the agencies listed. While the actual amounts available in the future are unknown, all sources (except for the Forest) are assumed to be constant for at least the next three to five years. Of the total, 15.1 MMBF or 51 percent historically came from the Forest. This includes sawtimber, roundwood, commercial and personal use firewood.

Source	Total Annual Quantity (MMBF)	Sawtimber	Products
Targhee N F	15.1	8.8	6.3
Caribou N F	1.6	1.2	0.4
Bridger-Teton N F	0.2	0.0	0.2
Bureau of Land Mgmt	3.2	3.0	0.2
State of Idaho	4.3	4.1	0.2
Private Land	5.0	5.0	0.0
Total	29.4	22.1	7.3

Demand

Table III-39 below displays the expected demand for wood products in our area from all users. It does not include previous demand from Louisiana-Pacific as they have closed their Rexburg mill. It also assumes the present number and mix of large and small timber operators will remain fairly constant.

Present Level	Survival Level	Maximum Efficiency Level
35.7	31	36

The current demand for wood products in our area, all operators, large and small (including personal use firewood), is about 35.7 MMBF annually. The minimum level of timber demand, from all operators, necessary to meet the survival needs of timber industry and personal use is 31.0 MMBF. This level of harvest

will just barely provide for the existence of the current number of operators at their minimum operating level, plus meet the current demand for "walk-in-the door" products and personal use firewood. To provide for maximum efficiency of mill operation and meet all demands for wood products that small operators receive and meet the current demand for personal use firewood and walk-in traffic, the level of timber offer should be approximately 36 0 MMBF.

Reforestation/Timber Stand Improvement

Table III-40 indicates past levels of reforestation (artificial and natural) and timber stand improvement (thinning) Activities that have occurred on the Forest.

	Reforestation Acres	TSI Acres
1981-90	104,562	11,563
1991	3,152	1,210
1992	2,874	397
1993	3,163	759
1994	4,361	493
1995	2,753	111
1996	3,515	172
1997	766	850

LIVESTOCK GRAZING

Livestock Grazing - Scale: Forestwide and Subsection

Approximately 79 percent (1,466,475) of the 1.87 million acres under Forest grazing administration are identified as being in grazing allotments, which are open to grazing. These acres, about 782,005 (53 percent) acres are capable for livestock grazing. Approximately 400,640 acres (21 percent) are presently closed to grazing. There are 154 allotments (76 cattle and 78 sheep) on the Forest where livestock grazing occurs, of which 109 have AMPs. A portion of one of these allotments, Moose Creek S&G, is located on the Bridger-Teton N.F. All allotments on the Forest are managed under various strategies (Process Paper K). A summary of grazing activity by subsection is displayed on Table III-41.

Indicator	Subsection						
	LEMHI/MEDICINE LODGE	CENTENNIAL MOUNTAINS	ISLAND PARK	MADISON-PITCHSTONE PLATEAUS	TETON RANGE	BIG HOLE MTNS	CARIBOU RANGE MTNS
AUMS Sheep	3,111	16,464	2,016	2,830	3,162	14,899	13,267
AUMS Cattle	14,161	30,067	21,273	3,765	2,182	11,092	9,776
No of Sheep	8,930	17,770	2,072	0	3,700	18,500	21,013
No of Cattle	3,633	7,697	4,833	1,241	522	2,293	2,343
NO OF PERMITS	42	75	43	10	17	46	44

The current permitted livestock use reported on the Forest is 148,775 AUMs. Permitted livestock consists of 22,066 cattle and 71,985 sheep. Currently 182 permittees hold 277 grazing permits which authorize grazing on the Forest. Presently, based on 1993 data, the numbers of livestock actually using the forest are 20,362 cattle for 84,212 AUMs and 54,478 sheep for 44,006 AUMs.

As Table III-42 demonstrates, of these 154 allotments, 15 sheep allotments and one permit are vacant where little or no grazing presently occurs, unless authorized. There are no vacant cattle allotments or permits on the Forest.

District	Allotment Name, Number	Permitted AUMs	Status
Dubois	Huntley Canyon, 158	585	1
Dubois	Little Creek Cottonwood, 146	600	2
Dubois	Rattlesnake, 153	571	2
Dubois	West Indian Creek, 161	1220	2
Dubois	Willow Creek, 162	540	3
Island Park	Reas Pass, 226	633	1 and 4
Island Park	Dry Creek, 220	383	1 and 4
Island Park	Jesse Creek, 224	467	1 and 4
Island Park	Blue Creek, 217	775	2 and 5
Island Park	Hotel Creek, 222	374	2 and 5
Ashton	Fish Creek, 311	830	1 and 5
Ashton	Partridge Creek, 309	600	1 and 5
Ashton	Trail Canyon, 310	800	1 and 5
Ashton	Black Mountain, 308	600	1 and 5
Ashton	Driveway Wells, 306	666	2
Palisades	Garden Prichard, 40206	750	1

1 = No grazing is authorized on these allotments
2 = Vacant allotment open to grazing
3 = Two permits (1 sheep and goat and 1 cattle and horse) occupy the same allotment. The sheep and goat permit is vacant, and the cattle and horse permit is not vacant.
4 = Management Situation 1 Grizzly Bear Habitat
5 = Management Situation 2 Grizzly Bear Habitat

A vacant allotment is an allotment where a livestock grazing permit has not been issued. The allotment may or may not be available for use by domestic livestock. District Rangers have the authority to authorize or deny grazing of vacant allotments. If grazing is authorized, it can be either permanent or temporary. On the Forest, when vacant allotments are temporarily grazed, they are referred to as swing allotments. A swing allotment is temporarily grazed by an existing permittee whose authorized allotment is not available.

swing allotment is temporarily grazed by an existing permittee whose authorized allotment is not available (whole or in part) The idea of using a vacant allotment on a temporary basis rather than a permanent basis is to provide flexibility for existing Forest permittees and their allotments At this time, cattle are not allowed to graze vacant sheep allotments Also, permittees who do not presently have an existing grazing permit on the Forest are not allowed to use swing allotments

The Forest coordinates grazing activities on six allotments with the Bridger-Teton N F Five are located on Forest lands (along the Snake River, above Alpine Junction, along highway 26/89) where the Bridger-Teton N F administers all resources, except grazing For these five allotments, the management direction (grazing utilization standards and guidelines, permit/allotment administration, AMP development, etc) in the Targhee Forest Plan applies The sixth allotment is that portion of the Moose Creek S&G allotment within the Bridger-Teton N F where the Forest also administers grazing activities and the Bridger-Teton N F administers everything else

To better manage livestock, many structural improvements have been constructed using equal (50 percent Forest Service and 50 percent permittee) contributions from the Forest Service and the grazing permittees These improvements include 563 miles of fence, 670 water developments, 72.5 miles of pipeline, 8 wells, 16 corrals, 7 stock bridges, 2 herder cabins, 74 cattleguards, and 25 miles of stock trail The Forest portion of these improvements is generated from grazing receipts (RBRB funds) and usually is in the form of materials and supplies Range improvement structures are maintained by the grazing permittees

A capability analysis has been completed for all allotments with range analysis surveys Areas capable and not capable of grazing livestock have been determined by field inspections using specific criteria (Process Papers H and I) identified in Forest Service Handbook FSH 2209.21 As shown on Map 29, of the 154 allotments (1,466,475 acres) where grazing is permitted, eight on the Island Park District, totalling 853 acres, do not have a range surveys and one on the Teton Basin District, totaling 1,446 acres, does not have a range survey

Not all areas on the Forest that are capable of grazing livestock are suitable for grazing For example, approximately 21 percent (400,640 acres) of the Forest is presently closed to grazing (Map 29) Even though these acres are now closed, at one time they were designated as being in allotments with about 53 percent of the lands capable of grazing domestic livestock Other areas on the Forest where grazing is not suitable are fenced developed recreation sites, some special use sites, administrative sites, RNAs, developed spring and seeps and some critical wildlife habitat such as bighorn sheep range in the Teton Range subsection A suitability analysis has not been conducted for all allotments on the Forest The suitability for livestock grazing is determined through a site-specific analysis, from which AMPs are developed As per direction found in the Rescission Act of 1995 (Section 504 of Public Law 104-19), the Forest has a schedule in place to complete this analysis for allotments that need it and intends to comply with this law as funding from Congress will allow

CHAPTER IV ENVIRONMENTAL CONSEQUENCES

READER'S GUIDE - In this chapter you will find:

A description of the consequences of implementing the alternatives with respect to the following components and key issues

- Ecological Processes and Patterns
 - Ecological Processes and Disturbances
 - Ecological Patterns
- Physical Elements of the Environment
- Biological Elements of the Environment
 - Aquatic and Riparian Ecosystems
 - Terrestrial Ecosystems
- Forest Use and Occupation
 - Access Management
 - Wilderness and Recreation Resource
 - Economic and Social Environment
- Production of Commodity Resources
 - Timber
 - Livestock Grazing
- Irreversible and Irrecoverable Commitment of Resources

The consequences are described in some or all of the following terms - Consequences Common to All Alternatives, Consequences Which Vary by Alternative and Cumulative Effects

ECOLOGICAL PROCESSES AND PATTERNS

This component describes the potential effects to forest structure, composition, disturbance regime and pattern. It is assumed that all future site-specific management activities will result from ecological assessments conducted in a manner similar to that described in the draft document entitled *Proper Functioning Condition* (Process Paper W).

Two issue indicators were developed for this component. The first issue indicator of "health of forest structure and composition" was derived by totaling the number of acres, under each alternative, where forest structure and composition may be maintained or improved through timber management activities. The second issue indicator is the "use of fire." It was derived by totaling the number of acres, under each alternative, where prescribed fire (both management-ignited and natural) may be used to maintain or improve ecological sustainability. Table IV-1 displays these indicators by alternative.

Table IV-1 Ecological Process and Pattern Indicators by Alternative							
Indicator	Alternatives						
	1	2	3	3-M	4	5	6
Prescribed Fire							
Prescribed Fire Allowed with Few Restrictions 1/ (MM Acres)	1 63	1 75	1 75	1 75	1 75	1 75	1 75
Open Roads Miles 2/ Open Trail Miles 2/	1,882 572	1,863 470	1,589 435	1,577 540	1,372 427	1,237 232	1,228 81
Sustainability of Forest Structure and Composition 3/							
Health of Forest Structure and Composition (M acres) 4/	48 5	58 6	52 9	45 2	39 8	29 8	20 7
Connectivity							
Acres of Aquatic Zones Connectivity Maintained (M acres)	342	325	448	512	533	590	793
Forested Acres In Mature-or- Older Age Classes(M acres) 5/	959 1 76%	956 3 76%	959 7 76%	967 0 77%	972 0 77%	978 5 78%	987 5 78%
1/ All Prescriptions Except 1 1 1, 1 1 2, 1 1 3, 1 1 4, 1 1 5, 2 2, 2 3, 2 4, 2 9 1, 2 9 2, 4 1, 4 1, 4 3, 8 2 2/ The word "open" means the roads and trails do not have any restrictions on motorized use 3/ Estimated M acres of silvicultural treatments for the first decade (ASQ, unscheduled, TSI and reforestation) 4/ Maintained or improved 5/ Assumes all harvest leads to reduction of mature component Also assumes no ingrowth into the mature category in the first decade Percents are percentages of total forested acres							

ECOLOGICAL PROCESSES AND DISTURBANCES

Old Growth, Late Seral and Mature Forests

In Chapter III, it was noted that about 79.6 percent of the forested acres were classified as mature, which included old growth and late seral forests. Additional analysis using permanent forest inventory plots indicated that 8.7 percent of the forested acres meet old growth characteristics for live trees and standing dead trees, 68.4 percent of the forested acres could be classified as late seral and 2.5 percent of the forested acres are younger and smaller mature trees.

Consequences Which Vary by Alternative - We modelled the effects of all standards and guidelines and management prescriptions to estimate the amount of timber harvesting that may occur. Table IV-2 displays how proposed timber harvesting (scheduled and unscheduled) in each alternative will change the amount of old growth, late seral and mature forest at the end of the first decade. On a forestwide basis, Alternative 2 has the highest proposed timber harvest, which reduces these acres about three percent at the end of the first decade. Alternative 6 has the lowest proposed timber harvest, which reduces these acres about one percent at the end of the first decade.

On a watershed basis, the following changes in mature, late seral and old growth forest acres are estimated:

- Four watersheds (010, 011, 012, 013) do not have any proposed timber harvesting that would create additional openings for the first decade in all alternatives. These are the watersheds where most of the lodgepole pine salvage timber harvesting occurred during the last two decades.
- 30 watersheds will have < five percent of the mature, late seral and old growth forest acres harvested.
- Six watersheds will have from 6 to 10 percent of the mature, late seral and old growth forest acres harvested.
- Four watersheds will have from 10 to 17 percent of the mature, late seral and old growth acres harvested.

At the end of the first decade, we estimate conditions for the principal watersheds for all alternatives:

- 23 watersheds will have > 90 percent of the forested acres in mature, late seral and old growth stages.
- 5 watersheds will have 80 to 89 percent of the forested acres in mature, late seral and old growth stages.
- 5 watersheds will have 70 to 79 percent of the forested acres in mature, late seral and old growth stages.
- 7 watersheds will have 60 to 69 percent of the forested acres in mature, late seral and old growth stages.
- 3 watersheds will have 50 to 59 percent of the forested acres in mature, late seral and old growth stages.
- 1 watershed will have 33 percent of the forested acres in mature, late seral and old growth stages.

Studies on the historical amount of old growth, late seral and mature forests have been completed for two watersheds, the Camas Creek watershed (025) and the upper Henry's Fork watershed (008). Both of these watersheds are in the Centennial Mountains Subsection. The following summarizes these studies:

Camas Creek Watershed (Report of the Camas Creek Landscape Team)

1850	54 percent in an early seral stage 39 percent in a mid seral stage 6 percent in a late seral
1900	27 percent in an early seral stage 64 percent in a mid seral stage 8 percent in a late seral
1950:	7 percent in an early seral stage 35 percent in a mid seral stage 57 percent in a late seral
1995	7 percent in an early seral stage 36 percent in a mid seral stage 56 percent in a late seral

Upper Henry's Fork watershed (Patten and Hansen, 1995)

1790-1870	< 20 percent open (nonforested) 80+ percent in mature forest
1870-1910	major natural disturbance about 1870 70-80 percent in open, seedling, sapling 20 percent in mature forest
1910-1950	< 20 percent open 50-60 percent in pole size forest 20-30 percent in mature forest
1950-1988	< 20 percent open 5-10 percent seedling, sapling (logging) 0-5 percent in pole size forest 60 percent in mature forest

Table IV-2 Percent Mature/Late Successional/Old Growth Forest at the End of the First Decade for each Alternative									
WSH NO	Ac Forested	Existing	Alt 1	Alt 2	Alt 3	Alt 3-M	Alt 4	Alt 5	Alt 6
002I	6 727	100	99	99	99	100	100	100	100
002W	15 810	100	98	98	99	99	99	99	100
003I	12 820	100	99	99	99	99	100	100	100
003W	15 427	98	97	96	97	97	97	97	97
4	28 305	100	99	99	99	99	99	99	100
5	18,856	96	92	92	92	92	94	94	96
6	26 493	99	95	95	95	95	96	98	98
007/033	24 209	92	89	88	88	89	89	91	92
8	102 475	68	68	68	68	68	68	68	68
009A	50,925	87	81	80	81	83	84	85	87
009B	33,727	63	58	57	58	59	60	61	63
10	43,329	33	33	33	33	33	33	33	33
11	108 590	53	53	53	53	53	53	53	53
12	82 970	57	57	57	57	57	57	57	57
13	45 913	64	64	64	64	64	64	64	64
014/034	30 120	87	77	75	77	80	80	87	87
015I	15 342	73	67	72	67	67	71	71	71
015W	18 457	78	73	77	73	73	76	78	76
016I	16 046	78	67	65	67	70	76	76	76
016W	37 464	98	95	94	95	95	97	97	97
017I	5916	100	98	96	97	97	97	97	98
017W	20,284	100	99	99	99	99	99	99	99
18	10 747	100	98	98	98	98	98	98	98
19	14 160	100	97	96	97	97	98	97	98
20	15,663	87	85	83	84	84	84	84	85
021I	16 031	61	57	56	56	57	57	59	59
021W	46 652	83	82	81	82	82	82	82	82
22	30,924	95	91	92	91	92	92	92	94
023/024	35 815	81	78	77	77	78	78	79	79
25	56 670	77	67	66	67	70	70	70	74
026A	20 170	83	76	75	77	78	78	80	82
026B	22 640	79	64	62	65	68	68	71	75
027/028	25 554	93	90	90	90	90	91	91	93
29	18 005	85	82	81	82	82	83	83	85
030A	17 647	97	95	94	95	96	95	95	96
030B	23 035	77	75	74	75	76	75	75	76
031A	18,214	100	98	98	98	99	98	98	99
031B	5 810	99	94	93	94	95	95	95	96
35	4 749	100	94	96	96	97	97	97	97
36	12 833	98	94	97	97	96	96	96	96
37	43 055	100	98	97	97	97	98	98	99
38	41 313	98	94	94	94	95	96	96	98
39	9 815	95	91	91	91	92	92	92	92
40	9 346	95	92	92	92	92	93	93	93
Forestwide	1 259,053	79	76	76	76	77	77	78	78

Currently, the Camas Creek watershed (025) has 77 percent of the forested acres in old growth, late seral and mature seral stages. This is a higher percentage than existed from 50 to 150 years ago. The highest amount of timber harvesting (Alternative 2) still maintains 66 percent of the forested acres in old growth, late seral and mature seral stages.

Currently, the Upper Henry's Fork watershed (008) has 68 percent of the forested acres in old growth, late seral and mature seral stages. This is a higher percentage than existed from 50 to 150 years ago. All alternatives still maintain 68 percent of the forested acres in old growth, late seral and mature seral stages.

Cumulative Effects - It is not possible to identify and display how much timber harvesting will occur just in old growth or just in late seral forests because we do not have a completed, mapped inventory and the exact locations of future timber harvesting are not known. The inventory, mapping and locations of future timber harvesting will occur as site-specific analysis is done for specific projects.

Fire

The role of fire as an ecosystem disturbance agent has been greatly diminished by fire suppression since the early 1900s. To sustain healthy ecosystems on the Forest it is important to reestablish fire as a disturbance agent. This can be done by allowing lightning-caused fires to burn (prescribed natural fires) or by intentionally setting fires (prescribed management-ignited fires) to achieve specific management goals. Using prescribed fire in concert with silvicultural treatments to reestablish historic fire intervals should reduce the suppression costs and resource losses caused by severe wildfires. The following indicators measure how likely the Forest is to use prescribed fire as a tool in the next decade, given the risks and costs involved.

- 1 Acres where use of prescribed fire is allowed, with few restrictions
- 2 Acres where timber harvest is allowed with few restrictions. This tends to reduce the risks associated with using prescribed fire.
- 3 Miles of motorized road and trail access. Access can reduce the risks and costs associated with prescribed fire.

Consequences Common to All Alternatives - Fire management plans are required for portions of the Forest that will receive prescribed burning. To date, only one such plan has been written, the Jedediah Smith Wilderness Fire Plan (this fire plan has not yet been approved). This fire plan applies to all alternatives. This plan will result in increased natural fire ecology within the Wilderness, with the most potential for stand-replacing fires in the northern portion. Stand-replacing fires would only occur under drought conditions. In the southern part of the wilderness, fires would be expected to remain small and burn in isolated groups of trees.

Forestwide it is estimated that some 11,000 to 21,000 acres of the sagebrush/grass type will be burned in the first decade in all alternatives, which amounts to about 4 to 8 percent of this type on the Forest. The effect of this will be to move acres with dense sagebrush canopies to earlier seral stages where sagebrush is less dominant. This will create more of a mosaic of age classes than currently exists, thereby improving diversity by reestablishing grasses and forbs on these sites. However, the magnitude of this program is not sufficient to significantly alter the seral class distribution of sagebrush/grassland overall. Although the existing seral class distribution of this type is unknown, preliminary studies indicate the Forest supports a higher percentage of mid- and late-seral stages than existed historically. For example, on the Dubois Ranger District, there are approximately 42,310 acres in less than satisfactory condition because of a high density of mountain big sagebrush.

All alternatives allow the use of prescribed fire to some extent. Acreages of other vegetation communities to be treated with fire are unknown in any alternative, but the likelihood that management will use this tool varies by alternative.

Consequences Which Vary by Alternative - Table IV-1 shows, by alternative, the number of acres where prescribed fire is allowed without significant restrictions on its use. All alternatives except Alternative 2 allow 1,750,000 acres of prescribed fire with few restrictions. This equates to approximately 97 percent of the Forest. Alternative 2 allows 1,630,000 acres, which equates to approximately 90 percent of the Forest acres. Table IV-1 also displays that Alternative 2, followed by 1, 3, 3M, 4, 5 and 6 allow varied amounts of timber harvest.

Motorized road and trail access to prescribed burn areas can be important for reducing risks and costs associated with prescribed fire. Roads and trails can serve as containment lines and provide escape routes. Motorized access route mileage is summarized by alternative in Table IV-1. Motorized roads and trails generally decrease from Alternative 1 through 6.

Based on the three indicators, Alternatives 1 and 2 would allow for the highest use of prescribed fires, Alternatives 3 and 3M significantly lower amounts and Alternatives 4, 5 and 6 the least.

Cumulative Effects - Overall, the low number of acres scheduled for timber harvest and the restricted motorized access across the Forest will limit the use of prescribed fire for all alternatives, especially in the forested types. Alternative 2, with the highest number of acres scheduled for harvest, only harvests 2-3 percent of the existing mature-or-older forested acres over the next 10 years. Additional vegetation manipulation will occur via nonscheduled harvest (including unsuited lands) such as firewood removal, but this small amount of fuel manipulation is not enough to allow managers to restore fire over large acreages with acceptable risks. For community types where fire intervals are outside their historic range, all alternatives are expected to delay a return to more natural fire regimes for at least the next decade. A discussion of these effects by community type follows.

Sagebrush/Grass Ecosystem - With the removal of several fire cycles from these ecosystems, the preponderance of big sagebrush stands fall within the dense canopy coverage class (greater than 15 percent canopy coverage). Under all alternatives, only approximately 4 to 8 percent of the Forest sagebrush/grass acres are projected to be manipulated during the first decade. As a result, the majority of the big sagebrush acres will continue to decline in overall watershed conditions (loss of understory vegetation resulting in increased susceptibility to erosion, reduced water infiltration and decreased organic matter recruitment).

As these ecosystems simplify, becoming a homogeneous dense canopy of dense sagebrush, they become increasingly susceptible to fires of higher severity and intensity than what historically occurred. Implications of such fires include the following:

- 1 Potential for loss of species not adapted to these "altered" fire regimes (e.g., Idaho fescue),
- 2 Loss of nutrients and a lowering of site productivity potential (more nutrients being stored within the dense overstory versus within the soil profile as historically was the case, thus being more susceptible to loss through ignition),
- 3 Higher potential for having more acres severely burned with subsequent chances for altering the soil's physical and chemical properties,
- 4 Alteration of the natural resistance and resiliency of the soils.

Lack of management within the sagebrush/grass ecosystem will also result in more acres which historically supported sagebrush/grass being converted to conifers and subsequent decrease in overall inherent site productivity.

Aspen Ecosystem - Aspen is mainly found on soils that have a high inherent productivity due to the nutrient cycling (leaf fall) that occurs within healthy stands. Over time as conifers invade these sites the

soils begin to acidify and nutrients are leached out of the productive surface layers to lower depths within the soil profile. If left unchecked, these soils will mature and develop into soils more suitable for conifers and less likely to support healthy vibrant aspen communities. This will reduce future options or make future options more at risk for success.

Currently 93 percent of the aspen on the Forest is mature or at pathological rotation age. Inability to regenerate significant amounts of aspen by fire will maintain most of this type in the mature class and will result in aspen's being replaced by conifers in many cases. Where this occurs, the ability of the soils to support aspen may be lost due to changes in soil chemistry or due to loss of clone root vitality. Severe fires are more likely to occur where conifers have become mixed with aspen, which would tend to regenerate aspen as long as fires are not so hot that they destroy the aspen root systems (most root nodes for sprouting are 3-6 mm below the surface).

Dry and Moist Douglas-fir, and Mid and Lower Elevation Subalpine Forest Fire Groups - These fire groups occur within all subsections. Mean fire intervals within these fire groups indicate that one or more fire cycles may have been removed from these areas mainly through fire suppression. Results of altering the fire regimes in these fire groups include the following:

1. Thickening of the forest or potential loss of certain habitats (e.g., aspen stands, wet/dry meadows, riparian areas etc.) due to encroachment.
2. Accumulation of more large organic materials on the forest floor. As organic matter accumulates, decomposition rates decline and nutrient cycles stagnate. Nitrogen mineralization rates decline.
3. Decrease in stream flow and on-site water balance. Increase in interception, evaporation and transpiration. Available water is less.
4. Development of ladder fuels.

Implications if fires of higher intensity and severity were to occur are as follows:

1. The potential increases for the loss of species not adapted to these "altered" fire regimes (e.g., old, past fire-resistant Douglas-Fir).
2. Loss of nutrients and a lowering of site productivity potential. Storing more nutrients above ground in the denser (more stems per acre) forest canopy instead of the soil profile as was historically the case makes them more susceptible to loss through fire.
3. There is a higher potential for having more acres severely burned with subsequent chances for altering the soils' physical and chemical properties or of developing water-repellant layers with subsequent sensitivity to increased overland flows and erosion.
4. The natural resistance and resiliency potential for the soils would be altered, requiring longer recovery time and thus a longer risk period for resource damage.

Historic forest structures of large, widely spaced Douglas-fir trees would not be restored during the first decade. Susceptibility to Douglas-fir beetle and western spruce budworm are expected to remain high due to dense stocking and multiple-storied structure.

Due to the long fire intervals (50-350 years) in the subalpine fir type, the historic fire patterns most likely have not been significantly changed due to fire suppression. Failure to reintroduce fire in subalpine fir within the next decade is not expected to cause important impacts to this community type.

Lodgepole Pine - Historic fire regimes in the lodgepole pine community type have not been seriously

disrupted on the Forest. Significant lodgepole pine acreages have been returned to early age classes by past timber management and within the Greater Yellowstone Ecosystem a large proportion of this type was affected by the fires of 1988. Although the possibility of severe stand-replacing fires still exists within this type, such fires are in line with what historically occurred. The consequences of not reintroducing fire to this type are expected to be insignificant over the first decade.

High Elevation Whitebark Pine - Lack of fire reintroduction at high elevations where whitebark pine is found may contribute to the decline of this species. Newly burned areas which provide seedbeds will continue to be lacking. Since much of the whitebark pine is mixed with subalpine fir, fires would likely be of high intensity leading to loss of mature whitebark pine trees. Both these conditions would reduce opportunities in this species for improved genetic resistance to white pine blister rust via gene recombination.

Insects and Disease

The environmental consequences discussed here focus primarily on pest management through forest vegetation manipulation. Forest management on timberlands provides the best opportunity to prevent or reduce the amount and impact of pest-related damage, although direct actions against pests may be necessary in specific (small scale) situations, as it relates to forest vegetation. With greater opportunity to manage forest vegetation, less damage would be anticipated. Areas managed intensively for timber would present the greatest opportunity to reduce or prevent timber losses, while areas managed non-intensively for timber production would have anticipated higher timber losses. Another method in treating insects and disease is the use of baiting or trap trees. Prescribed fire may be an appropriate tool in managing insects and disease, under some conditions.

Reducing competing vegetation in plantations increases available soil moisture and available light and is essential for acceptable seedling survival and growth. Controlling tree densities in timber stands improves tree health and vigor and greatly increases their resistance to insect attack. Replacing existing stands which contain a component of overmature, decadent trees with young trees reduces mortality caused by insects and disease.

Indicators - Amount of treated acres of mature and older age classes

Consequences Common to All Alternatives - All alternatives allow some treatment of insects and disease, including vegetation manipulation. However, the intensity of application and opportunities for managing pests will vary according to the kinds and intensities of resource management planned for each alternative. Plantations of seedling, sapling and pole-size stands existing from previous vegetation manipulations will be treated during this planning period in order to enhance vigor and growth. The amount of treatment in these stands will be about the same for all alternatives.

All alternatives allow insects and disease to play their natural role in ecological succession in one or more management prescription areas. Endemic levels of insects and disease are natural and should be expected.

Vegetation management in developed recreation areas should result in improved health of the vegetation, decreased tree mortality and fewer hazardous trees. Vegetation management in developed recreation areas should remain about the same as the current situation assuming the same level of funding as in the past.

Consequences Which Vary by Alternative - The amount of forested vegetation manipulation varies in each alternative. The alternatives with the most acres in the 5-series prescriptions allow for the most vegetation management. Alternative 2 allows the most forest management and Alternative 6 the least (see Table II-1 and Table IV-1). While the level of insects and disease activities expected from each alternative is difficult to measure, the amount of vegetation manipulation in each alternative is not significantly different.

Cumulative Effects - All alternatives provide a low level of vegetation management and will not affect levels of insect and disease activity significantly from past forest plan activities. While the levels of vegetation management are lower than the previous planning period, treatment of mature stands at any level is beneficial in reducing insect and disease conditions.

Under all the alternatives pest-caused mortality would be expected to increase as mature timber stands continue to become overmature. This could result in both an increased level of annual losses and the increased possibility of large periodic losses from insect and disease epidemics. Pest-caused mortality would likely increase as vegetation management decreased, though the differences between alternatives are not likely to be significant.

ECOLOGICAL PATTERNS

Forest Structure, Composition and Natural Disturbance

Indicators - Health of forest structure and composition

Consequences Common to All Alternatives - The primary consequence common to all alternatives is that the existing conditions of the forest structure and composition will remain unchanged on at least 96 percent of the forested landscape over the coming decade. Areas with sustainable conditions of structure and composition will generally remain healthy. Areas such as the heavily harvested lodgepole pine forest within the Island Park Ecological Subsection are expected to improve in both structure and composition. Most areas that do not have healthy conditions of structure and composition due to fire exclusion are expected to remain unhealthy. There is an increased risk that some of these areas could be burned by wildfire or their condition could be further reduced by outbreaks of insects or pathogens.

Silvicultural activities such as timber harvest and fire (management-ignited and natural) directly affect forest structure and composition by changing plant species composition, ages, density and canopy characteristics. When properly designed and executed, silvicultural activities can maintain and improve forest structure and composition. However, silvicultural treatments are proposed on less than four percent of the forested landscape.

Consequences Which Vary by Alternative - The amount of forested landscape where timber harvest could take place varies by only about two percentage points between alternatives. Table IV-1 shows that between 20,700 and 58,600 acres could be treated. The proposed alternative could treat up to 45,200 acres. Management-ignited and natural fire could occur on 1.63 to 1.75 million acres per decade.

Cumulative Effects - Past management practices have inadvertently reduced the health of forests by altering their structure and composition. Past fire management practices reduced the spread of naturally ignited fires over much of the Forest. This allowed many stands to become overstocked and increased their susceptibility to damage by wildfire and to outbreaks of insects and pathogens. Past silvicultural practices did not always strive to achieve desirable conditions of forest structure and composition. Some timber harvest areas, although small in proportion to the entire forested area, left some landscapes out of balance in regard to structure and composition.

The present level of silvicultural treatments is very small as is the proposed level of treatment.

Cumulatively fire exclusion and to a much lesser extent timber harvest, has reduced the health of the forested landscape by altering the structure and composition. The proposed alternatives do little to change this trend.

Connectivity

Indicators

- 1 Acres where aquatic connectivity is improved or maintained
- 2 Open motorized road & trail miles, which decrease connectivity
- 3 Percent of forested acres in mature or older age classes
- 4 Patterns of mature forests

Consequences Which Vary by Alternative

Aquatic Influence Zone - Buffers intended to protect the entire AIZ and retain abundant riparian vegetation are utilized in Alternatives 4, 5 and 6. It is anticipated that these alternatives will restore near natural levels of connectivity at a relatively rapid rate (10-30 years). Alternative 3M which protects the entire AIZ but retains less riparian vegetation, will eventually restore near natural levels of connectivity. Alternatives 2 and 3 employ narrower buffers and less protective standards and guides. It is expected that these alternatives will not restore natural levels of connectivity. Alternative 1 provides the narrowest buffers and the least protective standards and guides. This alternative is expected to be the least effective in restoring natural levels of connectivity. Alternatives 1, 2 and 3 would not fully restore many stream reaches. Further information on aquatic ecosystems is shown in Table II-1 and under Aquatic and Riparian Resources in the Biological Elements section of this chapter.

Terrestrial Zone - Since open motorized roads and trails can interrupt wildlife movement and plant dispersal, the miles of such roads can be used as an inverse measure of connectivity. This is displayed for each alternative in Table IV-1. All alternatives show a gradually decreasing number of open motorized access miles. All alternatives are expected to reduce open road mileages from the existing conditions, thereby providing benefits to connectivity.

The amount and pattern of mature or older age classes across the Forest can also indicate levels of connectivity for species requiring this type of habitat. Higher amounts of mature age classes would likely provide greater connectivity. The percentage of forested acres in mature or older age classes is shown by alternative in Table IV-1. Across all alternatives the mature forested acres exhibit very little variation, ranging from 76 percent to 78 percent. Alternative 2, with the highest potential timber harvest acreage, would harvest 33,080 acres in the first decade, which translates to 2.7 percent of the forested land. This is not expected to create adverse effects on connectivity. Patterns of mature forest distribution do not vary by alternative. There is nothing in any alternative that would prevent managers from providing for connectivity by spatially arranging site-specific projects to approximate historic vegetation patterns.

Cumulative Effects - Clearcutting over the past decade in the Island Park and Madison Pitchstone Plateaus Subsections has altered vegetation patterns and connectivity from what existed historically in some watersheds. Since no created openings are planned in any of these watersheds in any alternative within the next decade, there is little likelihood that these areas will move further from their historic patterns, nor will they be restored to historic patterns. Connectivity based solely on vegetation patterns has not been significantly changed by past timber harvest in other subsections.

Current levels of motorized road and trail density have reduced connectivity from historic levels forest-wide. Reductions in motorized roads and trails proposed under all alternatives will eliminate some of these past effects. Road restrictions which occur near adjacent ownerships are expected to increase habitat connectivity over the current situation between Forest lands and those of its neighbors.

Along the western border of the Park, connectivity is significantly increased by road reclamation and restrictions in Alternatives 4, 5 and 6. More moderate gains are realized in Alternatives 1, 2, 3 and 3M.

Changes in connectivity from what existed historically may have already affected individual species or

ecosystem sustainability, however, the nature and magnitude of such effects on the Forest and whether they exist, are not known at this time

Adjacent Land Use Patterns

Land uses occurring adjacent to the Forest may or may not be consistent with management being proposed for the Forest. How the Forest fits within the context of its neighbors is an important factor in understanding the broad ecosystem patterns that result when the various alternatives are implemented. The Process Paper P contains information on current management of lands adjacent to the Forest.

Consequences Common to All Alternatives - For the most part, management of the Forest is expected to be compatible with adjacent land uses occurring on both public and private lands. However, there are some cases where conflicts may arise.

In all alternatives, the existence and effectiveness of winter ranges for elk, deer and antelope may be affected by activities on private land. Subdivision of agricultural lands for homes and businesses is expected to reduce winter range on private lands, thereby increasing pressure on the Forest's winter range. This is a concern especially in the Teton Range and Big Hole Mountains Subsections, where housing developments are increasing rapidly in key winter range in the Teton Basin and Swan Valley areas.

Other inconsistencies between Forest management and adjacent jurisdictions exist where there is a strong commodity emphasis next to designated or recommended wilderness. Intensive management activities can detract from the wilderness character and experience by creating noise or visual impacts that are not consistent with wilderness. The most obvious example of this lies along the western boundary of the Park where the Forest's past intensive timber management ends in a sharp, straight line against the wilderness emphasis of the Park. In all alternatives this will remain visible for several decades. Another situation that creates inconsistency is managing for nonmotorized recreation or wilderness adjacent to developed private lands. Private development and associated activities can detract from the intended nonmotorized experience by creating noise or visual impacts that do not appear natural.

In addition, keeping motorized vehicles off Forest lands is extremely difficult when individual homes have direct access to the Forest. This inconsistency exists in every alternative to some extent.

Consequences Which Vary by Alternative - Conflicts between grizzly bears and humans may become a problem where bear habitat exists next to private ranches or housing developments. Any conflicts that may arise would likely be tied to higher grizzly bear occupation of Forest habitat than currently exists. Although BMUs on the Forest do not change between alternatives, the likelihood of conflicts may be greater in alternatives which provide for better habitat effectiveness if there is a resultant increase in grizzly bear occupancy on Forest lands adjacent to other public and private lands (see the Biological Elements section of this chapter). Such problems would also be more prevalent in years when grizzly bear food sources are scarce. Adjacent lands most likely to experience conflicts between bears and ranching operations are in the Henry's Lake area, where grizzly bear habitat lies directly adjacent to active ranches. Private developments in Island Park, Henry's Lake Flat, Shotgun Valley and Robinson Creek/Fall River are those most likely to experience conflicts with grizzly bears.

There is an area of discontinuity between the Forest and the Gallatin N F in Alternative 2. The Lionhead area has been proposed as wilderness on both the Forest and Gallatin N F's in all alternatives except Alternative 2. The Forest portion in Alternative 2 would have a commodity emphasis which would not match well with the Gallatin N F proposal for wilderness. In addition, current management on the Gallatin is for intensive range management adjacent to a portion of Forest proposed for the Lionhead wilderness area. This creates a management inconsistency in Alternatives 1, 3, 3M, 4, 5 and 6.

Except for Alternative 2, all the alternatives recommend the Lionhead Roadless Area for wilderness. The

Lionhead recommended wilderness lies next to private lands which are rapidly being developed in Henry's Lake Flat

Private developments in the Swan Valley area abut small portions of the Forest proposed for nonmotorized recreation or wilderness in Alternatives 1, 2, 3, 3M and 4. Major portions of the Big Hole Mountains Subsection will have this problem in Alternative 6 where proposed wilderness adjoins developments in Swan Valley and southwest of Driggs. The Big Bend Ridge area near Ashton is proposed for nonmotorized management in Alternatives 5 and 6. This is inconsistent with development that is beginning to occur on private lands in this area.

Cumulative Effects - The distribution and number of wintering deer and elk on the Forest depends on winter severity. The elk and deer winter range areas on the Forest are the upper elevation limits for these ranges. Generally, more winter range acres exist at lower elevations on BLM, State and private lands and a higher proportion of deer and elk winter at these lower elevations during most winters.

As a result, subdivision and loss of agricultural lands adjacent to the Forest and increasing pressure on winter range may trigger reductions in herd size over the long term. National Forest winter ranges cannot compensate for the loss of winter range acres at lower elevations on adjacent lands. If big game populations outstrip winter range capacity, winter range on the Forest could become degraded. The greatest impacts to the Forest from adjacent land uses are expected to result from conversion of agricultural lands to housing and businesses. Agricultural lands provide some habitat for a variety of species and much of this habitat could be lost as development continues. Development may also create significant impacts on the Forest by increasing recreation pressures.

PHYSICAL ELEMENTS

Soils and Geology

Indicators

- 1 Scheduled Timber Harvest (ASQ) - acres disturbed
- 2 Roads and Trails - acres removed from productive land base
- 3 Miles of roads transecting soiltypes having mass stability concerns
- 4 Area of Forest open for cross-country motorized summer use
- 5 Acres placed back into productive land base
- 6 Soil Disturbance - range management
- 7 Soil Disturbance - dispersed recreation

Consequences Common to All Alternatives - Soil disturbances related to developed recreation sites, unmanaged dispersed (including OHV) recreation, concentrated developed areas (e.g. electronic sites, administrative sites, etc.), potential acres severely burned through prescribed fires within the sagebrush/grass and forested ecosystem and fuelwood harvest would be similar under all alternatives.

Soil disturbance would continue to occur across approximately 350 acres within developed recreation sites and special use recreation sites. Soil disturbance would mainly be the result of maintenance or reconstruction activities, vehicles and foot traffic in and between facilities. Such activities would have an effect on the soil hydrologic function (e.g. through compaction and/or puddling) and site productivity (e.g. erosion).

Soil disturbance from unmanaged dispersed recreation and OHV use will be one of the main challenges to soil quality management. Demand for these uses will continue to escalate with corresponding concerns. It is difficult to project which of the alternatives would present more concerns to soil quality.

Soil disturbance would continue to occur across approximately 110 acres of concentrated developed areas. Soil disturbance would be the result of construction/reconstruction/maintenance activities and vehicular/foot traffic. Areas of disturbance would be susceptible to being eroded, with a subsequent loss in site productivity.

Severely burned conditions have the potential of occurring across 560 acres (five percent of the area), where prescribed fire is used within the mountain big sagebrush/grass ecosystem. If areas of severely burned conditions occur in larger patches (acre or more), these areas would be more susceptible to erosion and would require a longer recovery period, thus presenting a longer risk period.

Nonscheduled timber harvest could occur on unsuitable lands. Under all alternatives, approximately 10,000 acres (approximately 20 MMBF) could be harvested in the first decade. Timber removal on non-ASQ lands would be in response to other resource needs, for instance, to remove hazard trees from developed recreation areas, to improve visibility along roadways, wildlife needs, EM or PFC objectives, etc. Concerns to the soil resource would be similar to those expressed later on ASQ lands with the added concerns of a large number of these acres occurring on steep slopes (greater than 40 percent) and/or not being readily accessible. Additional mitigation measures and management requirements will be required on these acres to assure adherence to Regional soil quality objectives (project level).

Approximately 38 million board feet of personal use fuelwood would be removed during the first decade. Areas designated for personal use and commercial fuelwood gathering would be susceptible to reductions in soil quality through such detrimental disturbances as displacement, compaction, puddling and removal of large woody debris necessary for maintenance of long term site productivity (harder to enforce down woody debris requirements). The development of random skidding and access roads is also a concern within fuelwood areas since there is a tendency to drive up to each log or snag harvested.

Consequences Which Vary by Alternative (Refer to Table II-1)

Scheduled Timber Harvest (ASQ Lands) - Land surface disturbed by a variety of logging systems (tractor/cable) and cutting prescriptions (primarily shelterwood harvests) was evaluated. Under Alternative 6 no scheduled timber harvest would occur, thus no surface disturbance. Of the remaining alternatives, Alternative 5 would result in the least acres disturbed (approximately 1339) over the coming decade. Using Alternative 5 as a base, the remaining alternatives (in ascending order) would expose twice as much (Alternatives 3M and 4), three times as much (Alternatives 1 and 3), and four times as much (Alternative 2) the amount of bare soil as Alternative 5. Areas of bare soil could be either compacted, displaced or puddled or a combination of these detrimental conditions. These areas would be susceptible to erosion and subsequent loss in site productivity. Disturbed areas would be the result of timber harvesting practices such as skidding, skid trail networks, landings, etc. Ground-based harvesting techniques may approach or exceed the 15 percent soil disturbance threshold, but should be held to acceptable levels by adhering to the Soil Quality Standards and Guidelines (Forest and Regional). Large woody debris for long-term site productivity should be maintained by following the forestwide large woody debris requirements, which are habitat type specific.

Roads and Trails- Land removed from the productive land base due to existing and proposed roads would be least under Alternative 6 (5,478 acres). Using Alternative 6 as a basis for comparing the remaining alternatives, Alternative 5 would remove 2 percent more acres from the productive land base, Alternative 4 would remove 14 percent more, Alternative 3 would remove 37 percent more, Alternative 3M would remove 31 percent more, Alternative 2 would remove 57 percent more and Alternative 1 would remove 79 percent more than Alternative 6. Presently, there are 10,049 acres removed from the productive land base from roads and trails, which is higher than any of the proposed alternatives. These lands would be effectively removed from the Forest's total productive land base for the life of the road and trail and would be susceptible to erosion and subsequent sedimentation. A high percentage of these acres occur within the AIZ, thus having a short delivery distance to a stream channel. One objective under the watershed activity schedule is to inventory roads, trails, culverts, fords and stream crossings within the AIZ by the

year 2007 This inventory will identify problem areas and suggest remedial actions

Miles of roads transecting soil types having mass instability concerns is least under Alternatives 6 (356 miles, of which 42 miles occur on slopes over 40 percent) The highest number of miles crossing sensitive soil types occurs within Alternative 2 (three times the miles within Alternative 6, 13 percent of which occur on slopes over 40 percent) The remaining alternatives (1, 3, 3M, 4 and 5) have twice the miles of Alternative 6 and 14 percent of their miles occur on slopes greater than 40 percent These road segments would be susceptible to mass erosion (especially those slopes greater than 40 percent) and to being major sediment producers—depending on their drainage systems

Although Alternatives 1 and 2 allow the most access (open roads) and acres available to cross-country motorized summer use (53 percent and 42 percent of the Forest available), it is difficult to predict if dispersal of increasing numbers of recreationists would result in more or less damage to the soil resource Similarly, Alternatives 5 and 6 allow the least access (open roads) and acres available to cross-country motorized summer use (3 percent and 2 percent of the Forest available) It is difficult to predict whether concentrating recreationists into less area would result in more or less damage to the soil resource Administration, monitoring and enforcement would be key in limiting damage to the soil resource Alternatives 3, 3M and 4 are intermediary (in descending order) to the above alternatives with respect to access and area open to summer cross-country travel

Acres placed back into productivity (stabilized and revegetated) through road reclamation/obliteration would be highest under Alternative 6 (4,571 acres) and least under Alternative 1 (861 acres) Alternatives 2, 3, 3M, 4 and 5 would be intermediary, in ascending order, as to the number of acres placed back into production Obliterated roads would have a lower inherent site productivity than adjacent undisturbed sites but overall benefits from obliteration is beneficial to soil and watershed conditions.

Range - Soil disturbance (areas with inadequate ground cover having exposed soil or areas where soil conditions are in a downward trend, e.g. eroding) would be least under Alternatives 4, 5 and 6 Alternatives 2, 3 and 3M would be intermediary Soil disturbance would be highest under Alternative 1 These areas would be susceptible to erosion and decreasing site productivity

Dispersed Recreation - Land surface disturbance within areas managed for dispersed recreation would be potentially greatest under Alternatives 1, 5 and 6 because they have the fewest acres on which dispersed recreation sites would be more strictly managed Alternatives 2, 3, 3M and 4 would place more dispersed sites under management and potentially result in less soil damage. Foot traffic and vehicles would be the main source of soil disturbance resulting in compaction, displacement or puddling These areas would be susceptible to erosion and have lower productivity potentials than adjacent undisturbed areas Game retrieval during the hunting seasons has been dropped from consideration, except from Alternative 2 This will help in reducing damage to the soil resources when soils may be moist/wet and susceptible to damage, except in Alternative 2

Cumulative Effects - Based on the level of activities being projected within the various ecosystems, some cumulative impacts will be similar across all the alternatives The ecological cumulative impacts to soils are described in the Ecological Processes and Patterns section

Because all of the alternatives call for management that may not return certain ecosystems into their PFC, it is very important to mitigate, protect or intensively manage these ecosystems to achieve and maintain the DFC These ecosystems are susceptible to fires of higher intensity/severity

It is anticipated that some ground disturbing dispersed recreation activities may increase over the current situation by 40 percent over the next decade thus having the greatest potential increase in relation to other Forest uses Demands and potential conflicts by this group of users (e.g. motorized versus nonmotorized users) will continue to escalate in the future Potential cumulative impacts from this use could be very similar under all alternatives (e.g., compaction/displacement, loss of vegetation ground cover, increased erosion potential, rutting, rill/gully formation, etc.)

Management-Induced - Open roads and trails also have the potential to produce continued cumulative impacts on soil quality (erosion and sedimentation) and overall watershed values. As mentioned previously, of particular concern is the potential for mass erosion occurring along roads that pass through soils having mass instability concerns (especially on those where side slopes are greater than 40 percent). Greatest potential for cumulative impacts (negative) from roads and trails is under Alternative 1, continuing in descending order of impacts—2, 3, 3M, 4, 5 and 6.

During the next decade, Camas Creek (Watershed 025) is the only watershed scheduled to have timber harvesting (ASQ and non-ASQ) in all alternatives, except Alternative 6, that has 20 percent or more of the area in a hydrologically disturbed condition. Note non-ASQ timber harvesting could occur in Alternative 6 within watershed 025 (Camas Creek).

Overall, soil quality on the Forest should improve over the existing situation under all alternatives. Soil quality standards and guidelines have been established to help direct soil quality improvement, maintenance and/or enhancement within managed portions of the Forest. These standards and guidelines have been incorporated in the Revision.

Management-induced cumulative impacts (acres disturbed compared to total acres/alternative open for multiple use management) to the soil resource would be greatest under Alternatives 1 and 3M (6 percent), Alternatives 2, 3, 6 (5 percent) and Alternatives 4 and 5 (4 percent).

Scheduled activities within the Camas Creek watershed (watershed 025) will need to be well planned, administered and monitored to assure that channel stability is maintained.

Ecological cumulative impacts to the soil resource are very similar under all alternatives, especially within the sagebrush/grass and aspen ecosystems and within the Dry and Moist Douglas-fir, and Mid and Lower Elevation Subalpine Forest Fire Groups.

There is a risk to soil quality within unmanaged portions of the Forest as mentioned under the previous section entitled "Ecological Processes." Because all the alternatives manage these ecosystems outside of their historic mean fire intervals, plans need to be formulated to mitigate, protect or intensively manage these ecosystems/fire groups to maintain the DFCs. Because this has not yet been done, there is a risk within these ecosystems/fire groups of having adverse effects take place to the soil resource through the occurrence of fires of higher severity and intensity than what historically happened.

Air Quality

Indicator - Potential to exceed Idaho or Wyoming Ambient Air Quality Standards

Consequences Common to All Alternatives - Forest lands in all alternatives are Class II areas.

Consequences Which Vary by Alternative - Alternative 1 allows the most activities on forest lands, this would subject air quality to more degradation from management activities than the other alternatives. Alternative 6 allows the least activities on forest lands, thus would be less likely to cause air quality degradation from management activities. An exception to these consequences would be the effects on air quality caused by catastrophic wildfire.

Cumulative Effects - Severe wildfire would be the primary event that would cause air quality degradation. Although there is risk of severe wildfire with all the alternatives, the risks would be higher with alternatives which limit the use of management activities the most. Activities such as prescribed fire (natural and management-ignited), timber harvest, or other vegetation manipulation methods used to reduce fuel loadings and modify stand structure, could decrease the risks of deteriorating air quality caused by wildfires on the Forest. Short-duration smoke events that meets state smoke management guidelines during early or late seasons could reduce the visual and health impacts caused by high severity wildfire during high visitor use season.

Caves

Consequences Common to All Alternatives - Impacts on cave resources would be the same for all alternatives. These would result from normal recreational use of the caves. Obtaining management funding for cave inventories, nominations, etc. may be more limited under Alternatives 4-6 than in higher activity alternatives (1, 2, 3 and 3M).

Lands

Cumulative Effects - There would be no impacts on lands from any alternative. The following plans are incorporated in the Revision by reference. They are located in the lands section office on the Forest and are subject to yearly updating by the lands section:

- Land Adjustment Plan
- Right-of-Way Acquisition Plan

Minerals

Indicators

1 Area Open to Locatable and Mineral Material Entry

Consequences Common to All Alternatives - Under all alternatives mineral resources will be available for extraction. The Forest Oil and Gas Leasing EIS will make the availability decision (acres available for oil and gas leasing) and will be coordinated with the Revision.

Consequences Which Vary by Alternative - Access and availability of lands for exploration and development will vary by alternative as indicated by Table IV-3. Alternatives reflecting more developed recreation sites and facilities, more roadless areas which are to remain undeveloped and more acres recommended for wilderness designation than in Alternative 1 will reduce the availability of lands for mineral exploration and development. Alternatives 1 and 2, in which no additional lands are recommended for wilderness classification than currently exist, provides the most land available for mineral exploration and development. Alternative 6, which has the most acres recommended for wilderness, provides the least amount of land available for mineral exploration and development.

Cumulative Effects - Alternatives which limit development activities on the Forest will have a tendency to also limit the utilization of mineral resources by restricting access and availability of lands for mineral extraction. Conversely, alternatives which provide opportunities for development activities will also provide opportunities for the utilization of mineral resources. Thus, cumulative effects of development activities in the long-run is beneficial to the utilization of mineral resources.

	Alternative						
	1	2	3	3-M	4	5	6
Acres Open to Locatable and Mineral Material Entry	1,384	1,415	1,326	1,295	1,348	1,200	965

Historically, discovery of valuable minerals in economic quantities to warrant development and production have been relatively infrequent on the Forest when compared to other forests in the Intermountain Region.

The probability of mineral resource development is marginal given the current geologic knowledge of the Forest. The only current mineral activity of consequence is the extraction of travertine on the Palisades Ranger District. Before that, in the mid-to-late 1800s, the mining of lead in the western portion of the Forest was significant.

BIOLOGICAL ELEMENTS

Two parts make up the description of the Biological Component. They are Aquatic and Riparian, and Terrestrial Ecosystems (upland forested and upland nonforested). Key indicators are discussed first, with other indicators described subsequently.

AQUATIC AND RIPARIAN ECOSYSTEMS

Riparian

Key Indicator - Riparian acres not meeting DVC

Plant communities comprise individual species that reach maturity at different times during the growing season. Season of grazing use and timing of defoliation can both have an effect on favoring the growth and maintenance of certain species over others.

Consequences Common to All Alternatives - The utilization standards for herbaceous and woody vegetation, for all alternatives, represent maximum allowable use levels, regardless of what animal species uses the vegetation.

Consequences Which Vary by Alternative - Riparian utilization in Alternative 1 (no action) is expressed as a percentage of forage utilized and ranges between 30 and 65 percent for herbaceous vegetation (including nonriparian species) and 20 to 40 percent for browse, depending on the type of grazing system and range condition. Alternatives 2-6 express riparian forage utilization in terms of stubble height of herbaceous key riparian species on and away from the hydric greenline (HGL), express upland herbaceous forage utilization in terms of percent utilization of key plants and implement browse utilization standards in terms of percent utilization of current year's growth, of key species.

Alternatives 2, 3 and 3M implement a 4-inch stubble height for key herbaceous riparian plant species at the HGL and in the riparian area away from the HGL, either at the end of the grazing period or for all pastures grazed after September 1. Alternatives 2 and 3 have buffer widths ranging from 100 to 200 feet on each side of all fish-bearing streams, depending on the subsection. Alternative 3M has wider buffer widths which range from 150 to 300 feet on each side of all fish-bearing streams, depending on the subsection. For Alternatives 2, 3 and 3M, riparian browse utilization ranges from 25 to 35 percent for season-long grazing systems (depending on range condition) and 35 percent for rotation grazing systems (regardless of condition). Literature supports the prediction that Alternatives 2, 3 and 3M will provide for a moderate rate of recovery of degraded riparian and aquatic systems together with a moderately high level of fisheries habitat quality (Clary and Webster 1989). Alternatives 2 through 6 express upland herbaceous forage utilization in terms of percent utilization of key plants, and implement browse utilization standards in terms of percent utilization of current years growth of key species. Alternative 3M also implements additional guidelines for occupied native cutthroat trout streams. Briefly those guidelines improve a variety of habitat features (pool frequency, large woody debris, bank stability, width/depth ratio, etc.), based on the best available information, including INFISH.

Alternatives 4, 5 and 6 implement a 6-inch stubble height for key herbaceous riparian plant species at the HGL and in the riparian area away from the HGL, either at the end of the grazing period or for all pastures grazed after September 1 and have buffer widths ranging from 150 to 300 feet on each side of all fish

bearing streams, depending on the subsection. Also, for Alternatives 4, 5 and 6, riparian browse utilization ranges from 25 to 35 percent for season-long grazing systems (depending on range condition) and is 35 percent for rotation grazing systems (regardless of condition). The additional guidelines identified in Alternative 3M designed to improve cutthroat trout habitat only apply to that alternative and not to Alternatives 4, 5 or 6.

Riparian utilization and/or stubble height is measured for key species, which are defined as "forage species of sufficient abundance and palatability to justify its use as an indicator to the degree of use of associated species." The basic assumption is that when the key species are properly grazed, associated plant species will also be utilized properly. Utilization standards are designed based on proper use of plant species. Proper use is defined as "a degree of utilization of current year's growth which, if continued, will achieve management objectives (DVC, PFC, wildlife and fish objectives, etc.) and maintain or improve the long-term productivity of the site. Information by Blaisdell (Blaisdell, Murry, McArthur and Durant, 1982) indicates that stocking rates, season of use, range condition, kind of livestock and grazing intensity are important factors in determining proper utilization levels and that applying utilization or stubble height standards across the board may not achieve desired management objectives. Information from Rasmussen (1996) indicates that the "plants ability to recover from grazing will depend on the availability of meristematic tissue. If the grazing does not remove current meristematic tissue the plant will recover from the herbivory event and the long term productivity and competitiveness of the plant will not be affected." Regarding Rasmussen's approach, the degree of utilization and/or stubble height is not as important as perhaps the season of use on meristematic tissue and water availability after the grazing event. For example, 25 percent utilization on a key herbaceous plant can be detrimental if that use is continual and occurs at the wrong time (stem elongation, etc.), but 55 percent use on the same plant is not detrimental if the use occurs at a different time of the year (prior to stem elongation or after seed set, etc.) or if adequate water is available.

Under Alternative 1, riparian vegetation trends will show slow improvements in species composition from fine-rooted species like Kentucky bluegrass, to coarse-rooted species like beaked sedge, on allotments with rotation grazing systems. Approximately 18,810 acres (68 percent) of the riparian vegetation will meet DVC, while 4,945 acres (18 percent) are predicted to move slowly toward DVC. Allotments with season-long grazing will tend to remain in their current condition (static), or as stream systems and water tables are lowered, the riparian communities will change to dryer upland species, lower seral riparian species or introduced and weedy species. Loss of habitat for riparian sensitive plant species is greatest in this alternative. Acres moving toward DVC will decrease from 5,338 acres (19 percent) to 4,945 acres (18 percent), while acres not meeting DVC will increase from 3,650 acres (13 percent) to 3,963 acres (14 percent) during the first decade (Table II-1, Process Paper J). Fish habitat conditions and bank stability would improve slowly to a moderate level, due to improved riparian vegetation conditions (definitions and measurement protocol from Quigley et al., 1989).

Alternatives 2, 3 and 3M increase the riparian acres meeting DVC from 68 to 72 percent, while 19 percent will move toward DVC with the 4-inch HGL stubble height grazing requirement. Streamside *Carex* species will increase along streambanks to better retain yearly sediments, increasing the habitat diversity, water-holding capabilities and hydrological conditions of the system. Sensitive plant habitats and biodiversity will increase moderately with these alternatives. Riparian acres not meeting DVC will decrease from 3,650 to 2,476 acres (9 percent) during the first decade (Table II-1). This would result in a moderate rate of recovery and moderately high level of fisheries habitat quality due to improved riparian vegetation and streambank conditions (Process Paper J).

Alternatives 4, 5 and 6 increase the riparian acres meeting DVC from 68 to 76 percent, while 18 percent will move toward DVC, with the 6-inch HGL stubble height grazing requirements. Increased vegetation cover will hold greater amounts of sediment, accelerating changes over those in Alternatives 2, 3 and 3M. These alternatives also have the greatest potential to improve riparian sensitive plant habitats and improve biodiversity by increasing habitat diversity. Riparian acres not meeting DVC will decrease from 3,650 to 1,744 acres (6 percent) during the first decade (Table II-1). This would result in a rapid rate of

recovery of degraded habitats and a high level of fisheries habitat quality due to improved riparian vegetation and streambank conditions (Process Paper J)

Alternative 1 will have 3,963 acres (14 percent), Alternatives 2, 3 and 3M will have 2,476 acres (9 percent) and Alternatives 4, 5 and 6 will have 1,744 acres (6 percent) of the riparian vegetation in undesirable, shallow rooted species. Plant communities with a high percentage of shallow rooted species increase the risk of flood events lowering stream channels, increasing bank-cutting, changing stream gradients and changing riparian communities to upland communities with lowering of water tables

Alternatives 2, 3, 3M, 4, 5 and 6 will all show an increase in *Carex* complexes along stream edges that have a greater chance of trapping and improving the vegetation diversity of the riparian areas

Water

Indicators

- 1 Acres impacted by developed recreational sites in the AIZ as defined by the buffers described in prescription 2 8 3
- 2 Number of stream crossings
- 3 Acres roaded in the AIZ
- 4 Acres of timber harvest in headwaters
- 5 Miles of native cutthroat trout stream with at least 6-inch HGL (Hydric Greenline) stubble height remaining at the end of the grazing period (Table II-1)
- 6 Miles of fish-bearing stream habitat with at least 4-inch HGL stubble height remaining at the end of the grazing period (Table II-1)

Consequences Common to All Alternatives - Land disturbance and impacts to riparian areas will take place under all alternatives, the magnitude of these effects will vary by alternative. Closure of roads and trails within the AIZ would create new sediment sources due to ground disturbance under all alternatives. This would be a short-term impact to riparian areas and water bodies, lasting approximately three years (until the disturbed sites were stabilized). These closures would, however, provide a long-term benefit to aquatic and riparian resources once they became effective (i.e., when the vegetation was established). If road prisms are not removed where they exist in floodplains, even with road closure, floodplain and stream functions could be adversely affected by the confinement presented by these features.

There is no difference between alternatives in the amount of water diverted from streams on Forest lands by private parties, for use under special use permits. There will also be no difference in the amount of water (consumptive uses) claimed for Forest purposes through the Snake River Basin Adjudication - no new uses after 1987 are claimed. There may be a difference between alternatives in the amount of water under application and license for consumptive use (e.g., for livestock watering), but the differences should be small. Compliance with legal requirements, such as meeting State water quality standards, will not differ between alternatives.

Acres affected by developed recreational sites and special use permit recreation sites within the AIZ would vary little by alternative. All alternatives would have approximately 1,100 acres of disturbance associated with these sites within the AIZ. Impacts from dispersed recreation are discussed in the recreation section.

Consequences Which Vary by Alternative

Direct Impact - See Table II-1. Direct impacts to streams and riparian areas on Forest lands are of three general types:

- 1 Change in riparian soil, vegetation and streambank characteristics,
- 2 Direct in-channel alteration,

3 Change in the amount of sediment delivered to streams and therefore the load that the stream must transport

Change in Riparian Soils, Vegetation and Streambanks - Damage of riparian soils by compaction, displacement, rutting or puddling can reduce riparian soil productivity through changes in infiltration characteristics and a reduction in the ability of soils to support desirable riparian vegetation. Changes in the composition of riparian vegetation communities and loss of plant vigor result from such adverse impacts to soils, as well as from direct impacts from overuse by wildlife, livestock or people. Refer to the key indicator discussion under Aquatic and Riparian Ecosystems.

Direct In-Channel Alteration - These actions include putting a structure into a stream and changing channel hydraulics or changing some aspect of the stream's geometry (e.g., increasing its gradient) by mechanical alteration.

Potential for direct impacts associated with road crossings would vary by alternative. The greatest potential would exist under Alternative 1, followed by 2, 3M, 3, 4, 5 and 6 in decreasing order. Alternative 6 has approximately 1,000 fewer crossings than Alternative 3M. This could be a tangible difference forestwide, even between consecutive alternatives (e.g., Alternative 2 has about 300 fewer crossings than Alternative 1).

Change in Sediment Delivery and Load - Natural events, such as high spring runoff, may lead to both increased sediment delivery to streams and increased erosive energy to move the sediment. Roads are major sources of sediment, especially when they are near streams or cross them. Since forest roads contribute an estimated 85-90 percent of the sediment reaching streams in disturbed forest land (Burroughs 1990), the amount of roads within the AIZ and number of stream crossings are used as indicators of sediment delivered to streams.

Many roads and trails located within the AIZ would be closed in all alternatives. Acres of roads within the AIZ steadily decreases from a high of 954 acres under Alternative 1 to a low of 474 acres under Alternative 6. Alternative 3M has 787 acres. Such a decrease in roads within the AIZ means a proportional decrease in the potential for sediment delivery to streams, for delivery of other pollutants and for detrimental impacts to riparian areas (note that AIZ widths vary between some alternatives). The influence of road prisms would still exist if they were not removed. Differences in impacts from road crossings would be the same as discussed under section 2, above (direct in-channel alteration). An inventory of roads will determine where there are problems and provide recommendations to reduce impacts to acceptable levels.

Cumulative Effects

Hydrologic Effects - Manipulation of vegetation has the potential to alter streamflow regimes. Researchers have shown that creation of large openings, especially in small (i.e., headwater) watersheds allows for increased snow accumulation and more exposure to the sun. This results in higher peak flows that occur earlier than under preexisting conditions, having the potential to deliver more sediment to streams and destabilize channels (Cheng 1989, Alexander and Watkins 1977). The increase in sediment delivery due to changes in peak flows cannot be calculated nor estimated.

The highest potential for cumulative impacts from vegetation manipulation in headwater areas would exist under Alternative 2. Alternatives 1 and 3 have the next highest potential. 3M, 4 and 5 have the lowest, for alternatives having vegetation manipulation. There would be no significant impact under Alternative 6. From a watershed perspective, watersheds 10 (Buffalo River) and 12 (Warm River) appear to have potential for adverse cumulative impacts under all alternatives due to past activities. No created openings are planned in these watersheds. These watersheds have approximately 30 percent of their headwaters in a hydrologically disturbed state for the decade, having stands that have already been manipulated and which would still be unrecovered by the end of the planning decade.

- 2 specific watersheds -

Although it is unlikely that any of the proposed alternatives would threaten the population viability of native cutthroat trout over the planning period, differences in rate of recovery of degraded habitats and overall habitat quality would result from implementation of various alternatives. Alternatives 1, 2 and 3 would protect the fewest acres within AIZs and would allow the greatest amount of potentially harmful activities associated with livestock grazing, timber harvest, riparian recreational use and roads and trails as displayed in Table II-1. Fisheries habitat quality, including that for native cutthroat trout, would be the lowest under Alternative 1. Alternatives 1, 2 and 3 would result in a slow rate of recovery of degraded habitats, reduced water quality and less habitat quality. Refer to Table II-1 for a quantitative view of riparian habitat change. Since Alternatives 4, 5 and 6 would emphasize more protection of AIZs, they would result in a rapid rate of recovery of degraded habitats and the highest levels of water quality and fish habitat quality. Alternative 3M would result in a moderate rate of recovery of degraded habitats and intermediate levels of water quality and fish habitat quality. All alternatives would meet State water quality standards.

Nearly all of the environmental consequences described for each alternative are cumulative in the sense that they reflect the environmental and management impacts of an accumulation of management actions that would occur under each alternative and that have occurred in the past. Many of these impacts have occurred over the last 100 years, some would cease with implementation of certain alternatives while others would continue over the planning period (10 to 15 years).

Wildlife Associated with Aquatic and Riparian Ecosystems

The effects of implementing the alternatives are displayed in terms of consequences for bald eagle, trumpeter swan nesting, spotted frog, common loon, and harlequin duck habitats.

Bald Eagle Nesting Habitat

Consequences Common to All Alternatives - At this time, we do not have much information about wintering habitat and migration habitat. This lack of information has not been detrimental to the growth of the bald eagle population as previously explained in Chapter III. However, the Revised Forest Plan establishes an objective to identify bald eagle wintering and migration habitat and to identify appropriate management needs for this habitat when it is identified. Table IV-4 displays an overview of the consequences of each alternative for this management indicator species.

Management Indicator	Existing	1	2	3	3M	4	5	6
Bald Eagle Habitat 1/ # of Nest Sites on Forest # of Territories on Forest	17 26	17 26	17 26	17 26	17 26	17 26	17 26	17 26
Trumpeter Swan Habitat	Forestwide Goals, Standards and Guidelines protect all nesting areas in all alternatives							
Spotted Frog Habitat (disturbance)	Most	Most	Mod	Mod	Mod	Least	Least	Least
Common Loon Habitat	Monitoring and Habitat Evaluation to be done in all alternatives							
Harlequin Duck Habitat	Forestwide Goals, Standards and Guidelines protect all nesting areas in all alternatives							
1/ Forestwide Goals, Standards and Guidelines protect all territories in all alternatives								

Cumulative Effects - Bald eagle nest zones and primary use areas occur on adjacent National Forest, BLM, state and private lands. Along the South Fork of the Snake River, the "Snake River Activities/

Operations Plan" was approved by BLM and the Forest Service in 1991. Bald eagle habitat management was a key component of that Plan.

Management actions of other agencies, such as management of fishing and fish populations by State agencies, management of river flows by the Bureau of Reclamation and southeast Idaho irrigators, may have positive or negative effects on the bald eagle population.

As previously presented in Chapter III, the bald eagle population on the Forest, as well as throughout the GYA, has increased to levels above the objectives in the Pacific States Bald Eagle Recovery Plan (USDI Fish and Wildlife Service 1986).

Human presence and activities have occurred and will continue to occur within and adjacent to bald eagle territories on the Forest. As long as humans are present, there will be probable occurrences of short-term displacement. However, every bald eagle territory which has become established on the Forest since the first recorded bald eagle nest in 1975 has been maintained. Proposed management direction will maintain suitable habitat on Forest lands for all existing bald eagle nesting territories and any new territories which may become established. In areas without territories, management prescriptions will maintain suitable habitat conditions for perching, foraging and potential future nest sites.

Trumpeter Swan Nesting Habitat

Consequences Common to All Alternatives - Refer to Table IV-4

Cumulative Effects - Many of the lakes and ponds historically used by trumpeter swans are naturally filling in with sediment and are becoming too shallow for swan use. Active management will be needed to help maintain suitable water depths for swans or the lakes and ponds will not be usable.

Spotted Frog Habitat

Consequences Which Vary by Alternative - Five AIZ management prescriptions have been developed for the seven alternatives. We evaluated how each alternative may affect spotted frog habitat as follows. Also, Table IV-4 displays an overview of the consequences of each alternative for this and the other four management indicator species.

Influence of Buffer Widths - Bartelt and Peterson (1993) noted that spotted frogs were always within 2 meters of water, none left riparian habitats, almost all were associated with ponds until September when they left the ponds for nearby streams, and ponds within 50 meters of permanent streams were an important combination of habitat characteristics. Based on this, the different buffer widths in each of the management prescriptions all appear to be adequate.

Some literature indicates that spotted frogs may move considerable distances after breeding, in these cases, the movements would be farther than any of the buffer widths in the management prescriptions. In these cases, we doubt there is much of a measurable difference in effect due to different buffer widths.

Timber Harvesting/Management - There is no data in the literature to suggest that spotted frogs are dependent upon a particular forested vegetation condition. Therefore, there is no difference between the alternatives in terms of effects from changes in forest vegetation due to timber harvesting. Concern has been expressed about timber harvesting changing humidity and temperature conditions. However, spotted frogs are found in nonforested riparian and wetland habitats, which have different humidity and temperature conditions than forested habitats. Therefore, we are not able to state that changes in humidity and temperature caused by timber harvesting would be detrimental. However, there may be a disturbance effect from the presence of human activity associated with timber harvesting. Therefore, Alternatives 1 and 2 which allow scheduled timber harvesting in the AIZs may have site-specific, short-term impacts on spotted frog populations and habitat.

Livestock Grazing - A recent conservation assessment for spotted frogs (Gomez 1994) listed concerns about possible threats to spotted frogs and habitat from livestock or grazing (Concerns included such things as reduced vegetation in riparian areas, potential increases in water temperature, trampling, etc) However, no documented studies were cited in support for these concerns

In studies done on the Forest, Clark et al (1993 and 1994 plus errata page) reported there appeared to be no significant relationship between spotted frog occurrence and evidence of grazing They stressed however, that no controlled study was performed investigating the effects of grazing on spotted frogs and therefore appropriate caution should be exercised when evaluating the importance of the results

Using an assumption that less grazing activity may result in potentially less effect on spotted frog habitat, Alternatives 4, 5 and 6 will have the least amount of potential disturbance, Alternatives 2, 3 and 3M will have moderate amounts of potential disturbance, and Alternative 1 the most amount of potential disturbance

Recreation and Other Activities - Using an assumption that less recreation activity and other human activities in spotted frog habitat may result in less potential effects on their habitat, Alternatives 4, 5 and 6 will have the least amount of potential disturbance, Alternatives 2, 3 and 3M will have moderate amounts of potential disturbance, and Alternative 1 the most amount of potential disturbance

Riparian Habitat Condition and Trend - In Alternative 1, 86 percent of the riparian acres are meeting DVC or will be improving toward DVC In Alternatives 2, 3 and 3M, 90 percent of the riparian acres are meeting DVC or will be improving toward DVC In Alternatives 4, 5 and 6, 93 percent of the riparian acres are meeting DVC or will be improving toward DVC

Cumulative Effects - All alternatives are expected to maintain the current spotted frog distribution on the Forest General habitat conditions are expected to improve with all alternatives, with the most improvement occurring in Alternatives 4, 5 and 6

Common Loon Habitat

Consequences Common to All Alternatives - The Forest has an objective to evaluate the potential to provide and maintain suitable breeding habitat for common loons at the sites mentioned in Chapter III If this evaluation proves that these sites are suitable breeding habitat for common loons, the Forest is to develop common loon management plans for these sites Current habitat conditions will be perpetuated at these sites in all alternatives.

Consequences Which Vary by Alternative - Table IV-4 displays an overview of the consequences of each alternative for this and the other four management indicator species

Harlequin Duck Habitat

Consequences Common to All Alternatives - There is a forestwide guideline to avoid establishing new trails, new roads or new recreation facilities within 300 feet of any stream reach with documented harlequin duck breeding activity There is no scheduled timber harvesting adjacent to any of the streams with documented breeding activity Livestock grazing, existing recreation activity (existing trails, recreation facilities, dispersed use, etc) and other human activities are not measurably different among the alternatives for the sites with documented reproduction Existing habitat conditions will be maintained in all alternatives Table IV-4 displays an overview of the consequences of each alternative for this specie

TERRESTRIAL ECOSYSTEMS

Upland Forested Ecosystems

Indicators - Acres and percent change in age classes of forested community types

Consequences Which Vary by Alternative - Table IV-5 shows the percent change mature forest with timber harvest for each subsection, by alternative. Changes in the mature forest acres do not necessarily reflect a change to a lower age class. The range of management methods, from clearcutting to thinning,

Table IV-5 Change in Percent of Mature Age Class Forest Due to Scheduled Timber Harvest Over the Coming Decade							
	Lemhi/ Medicine Lodge	Centen- nials	Island Park/ Madison- Pitchstone	Teton Range	Big Hole Mtns	Caribou Range Mtns	Forest Total
Current							
% Mature	90	79	62	97	95	99	79.6
Total Forested Acres	103,887	225,012	466,489	92,182	227,216	122,495	1,237,281
Alternative 1							
Harvest Acres	0	12,880	11,160	1,440	1,810	1,090	28,380
% Harvest 1/ % Mature	0 90	6 73	2 60	<2 95	<1 94	<1 98	2.3 77.3
Alternative 2							
Harvest Acres	210	14,905	12,815	1,670	2,230	1,250	33,080
% Harvest 1/ % Mature	<1 90	<7 72	2 60	<1 95	<1 94	1 98	2.7 76.9
Alternative 3							
Harvest Acres	180	12,520	10,820	1,400	1,790	1,070	27,780
% Harvest 1/ % Mature	<1 90	6 73	2 60	<1 97	<1 94	1 98	2.2 77.4
Alternative 3-M							
Harvest Acres	0	9,230	8,130	1,030	1,270	860	20,520
% Harvest 1/ % Mature	0 90	4 75	<2 61	<1 97	<1 95	<1 98	1.7 77.6
Alternative 4							
Harvest Acres	0	8,790	4,180	960	1,120	420	15,470
% Harvest 1/ % Mature	0 90	4 75	<1 61	<1 97	<1 95	<1 98	1.2 78.4
Alternative 5							
Harvest Acres	0	6,865	685	440	1,010	0	9,000
% Harvest 1/ % Mature	0 90	3 76	<1 62	<1 96	<1 95	0 99	<0.1 78.9
Alternative 6							
Harvest Acres	0	0	0	0	0	0	0
% Harvest 1/ % Mature	0 90	0 79	0 62	0 97	0 95	0 99	0 79.6
1/ The percent change from a mature age class, undisturbed forest, to an early age class or mature forest with previous harvest							

use of prescribed fire, will create a variety of changes in the vegetation composition in the mature forest. Changes will range from conversion to grass/forb communities with seedlings, to open stands of mature trees with different understory species, resulting from different light and moisture conditions.

Alternatives 1 through 5 have various harvest rates in each of the subsections. Changes in the mature stands range from 0 percent to a maximum of 6.6 percent in these alternatives, which is not a significant change of mature forests in any of the subsections. Forests in the mature age class will continue to dominate the landscapes in all alternatives.

Management for white bark pine is possible in all alternatives, but timber harvest is limited in BMUs, Alternatives 5 and 6, and in wilderness. Fire as a tool is available in all alternatives. Aspen volume was removed from the ASQ, therefore, management levels for all alternatives are insignificant in changing the age classes in aspen. Stands will continue to change to coniferous forest types, as

Douglas-fir and subalpine fir trees increase and dominate the aspen stands. Disease and insects common within mature age classes of aspen will accelerate the change to coniferous forest types.

Forestwide mature forest community types will continue to dominate the landscapes. Aspen stands for all alternatives will continue to be converted to coniferous forests as Douglas-fir and subalpine fir increase within the aspen stands. Aspen across the forest will decrease as a component of the landscape, which decreases the total biodiversity of the landscape. Aspen stands provide natural wildfire buffers that change the fire rates and intensities across the landscape. Loss of aspen stands to conifers creates larger continuous stands that can have high fire intensities that increase the severity of wildfire on the landscape.

Coniferous forests will continue to mature, increasing biomass, canopy cover, and fuel loading within the stands. The understory will change to shade-tolerant species and also decrease in the number of species as the forest habitat becomes more uniform. As mature conifer forests continue along current trends, insects and disease will increase, creating areas of dead trees and greater fuel loads, increasing the risk of large and intense wildfire. Open areas created by dead trees will provide sites for early seral species to establish and will increase the habitat and species diversity within large stands. Absence of periodic low impact fires will put most of the mature forest in jeopardy of stand-replacing fires over large areas due to fuel loading.

Coniferous forest species, especially Douglas-fir, will continue to encroach into sagebrush/grass, mahogany, grass/forb meadows, riparian, and mountain brush communities throughout the forest. Conversion of herbaceous and shrub communities decreases the biodiversity and habitat diversity of the mid-elevation and high elevation areas of the Forest. As forests mature, water requirements also increase, which decrease water availability to wet meadows and riparian areas.

Whitebark pine stands will continue to decline across the Forest. Regeneration in most stands is low due to encroachment of other coniferous species and lack of fire.

TES and Biodiversity

Indicator - Plant species

Consequences Common to All Alternatives - Potential for loss of individuals or populations and suitable habitat for Ute ladies'-tresses *Spiranthes diluvialis* (threatened species) and Payson's milkvetch *Astragalus paysonii* (sensitive species) are the same for all Alternatives. Fire is thought to be an important part of Payson's milkvetch life cycle, as it inhabits lodgepole pine and lodgepole pine/Douglas-fir mixed forests in the seedling to pole age classes, and in disturbed areas and openings in mature age classes (Fertig et al. 1993).

Potential for loss of individual TES plants, populations or habitat is dependent on site-specific projects and land uses, and is equal for all alternatives. As per direction and policy, no loss of TES populations will be allowed.

Upland Nonforested Ecosystems

Indicators - Acres (and percent) meeting DVC

Consequences Common to All Alternatives - From 11,000 to 21,000 acres of sagebrush/grass community type are planned to be burned, sprayed (500 acres) or rotobeat (1,300 acres) to meet management objectives over the coming decade. Management objectives will be tied to meeting DVC, documented in site specific analysis. As a result of treating these sites, sagebrush canopy cover will be reduced and desirable herbaceous vegetation will be increased resulting in a change in ecological status from high mid/late seral stages to early/mid seral stages. To achieve the 11,000 acre burning goal, an additional 10,000 acres (21,000 acres total) may be partially burned. The 11,000 acres scheduled for burning would be predominately in late-seral stage sagebrush with canopy cover greater than 30 percent. Some acres of mid-seral stage sagebrush, within the 11,000 acres, with canopy cover of 15-30 percent could be burned depending on project design. The 10,000 acres of partially burned areas are assumed to be converted from mid/late-seral to early/mid seral stage. Partially burned areas are those areas that are, 1) outside the main portion of the project where the fire is of low intensity or 2) outside the main portion of the project where the fire pattern creates a mosaic resulting in unburned areas. Treatment of the 11,000 to 21,000 acres of sagebrush/grass community type represents 4 to 8 percent of the acres that will move towards meeting DVCs over the next decade.

Consequences Which Vary by Alternative - For Alternatives 2, 3 and 3M upland forage utilization ranges from 35 percent for ranges in unsatisfactory condition, to 45 percent for ranges in satisfactory condition in season-long grazing. For rotation grazing systems, the utilization ranges from 45 percent for ranges in unsatisfactory condition to 55 percent for ranges in satisfactory condition. Browse utilization for Alternatives 2, 3 and 3M ranges from 25 to 35 percent for season-long grazing systems, depending on range condition, and is 35 percent for rotation grazing systems regardless of condition.

For Alternatives 4, 5 and 6 upland forage utilization ranges from 35 percent for ranges in unsatisfactory condition, to 45 percent for ranges in satisfactory condition in season-long grazing. For rotation grazing systems the utilization ranges from 45 percent for ranges in unsatisfactory condition to 55 percent for ranges in satisfactory condition. Browse utilization for Alternatives 4, 5 and 6 ranges from 25 to 35 percent for season long grazing systems depending on range condition, and is 35 percent for rotation grazing systems regardless of condition.

Compared to the existing situation, all alternatives close an additional 95,409 acres to grazing. Alternatives 3M and 4 phase-out grazing on another 125,853 acres and Alternatives 5 and 6 immediately close the same acres identified in Alternatives 3M and 4 (Process Paper L). These acres that will be closed will show improvements in vegetation composition in the upland communities faster than those with grazing.

Under Alternative 1, upland vegetation trends will show slow improvements in species composition from species of lower seral status to species of higher seral status. Approximately 1,065,748 (78 percent) acres will meet DVC, 162,193 (12 percent) acres will move toward DVC, and 129,531 (10 percent) acres will not meet DVC by the end of the first decade.

Compared to the existing situation, Alternatives 2, 3 and 3M increase the upland acres meeting DVC from 76 to 80 percent. Approximately 1,083,263 acres (80 percent) will meet DVC, 160,615 acres (12 percent) will move toward DVC, and 113,594 acres (8 percent) will not meet DVC by the end of the first decade.

Compared to the existing situation, Alternatives 4, 5 and 6 increase the upland acres meeting DVC from 76 to 82 percent. Approximately 1,105,894 acres (82 percent) will meet DVC, 156,105 acres (11 percent) will move toward DVC, and 95,473 acres (7 percent) will not meet DVC by the end of the first decade.

Cumulative Effects - A predominance of acres in high-seral and mid-seral stages will continue to dominate the landscapes under all alternatives. As shrub cover increases, productivity and biodiversity will decrease and potential for wildfires will increase. Lack of fire has decreased habitat potential for plant species that prefer early seral stage habitats such as *Penstemon lemhiensis* a sensitive species.

Canopy cover over 15 percent in sagebrush significantly impacts herbaceous species productivity and ability to reestablish over time. About 65 percent of the Forest's range land is currently in late-seral stage due primarily to lack of fire in these communities. Resting or eliminating grazing will not show significant improvements over time in understory herbaceous species when high canopies of sagebrush occur (Winward 1991). These communities increase the risk of large wildfires that are of higher intensity and severity than was historically present under 12-40 year fire cycles. These unnaturally hot fires could alter subsequent plant diversity by destroying existing soil seed banks, burning deeper into crowns of bunchgrasses and perennial forbs (and subsequently killing these plants) and changing the physiology of the soils by changing soil conditions and productivity.

Upland and riparian communities will continue to decrease with encroachment of coniferous forest species. Mahogany stands are all in the high-seral stage and are becoming decadent due to lack of fire and an increase in Douglas-fir establishment. Increases of spruce and subalpine fir along mid- and high-elevation riparian areas has decreased willow and other shade-intolerant riparian species within the riparian zone and increased the susceptibility of these sites to erosion.

Noxious Weeds

Consequences Common to All Alternatives - The effects of noxious weed control are disclosed in the 1987 Targhee National Forest Noxious Weed EA and Decision Notice. The effects of Alternative 2 - Integrated Pest Management (Selected Alternative) disclosed in Chapter IV, Environmental Consequences, of the 1987 EA, are also incorporated by reference into this analysis. Regardless of which alternative is selected for the Revised Plan, the amount of noxious weed infested acres treated yearly does not change. The Forest has an active annual program to control the spread of noxious weeds.

Wildlife Associated with Terrestrial Ecosystems

Indicator - Elk Vulnerability (EV)

Consequences Which Vary by Alternative - Table IV-7 displays the percent of the Forest which meets the EV threshold levels of the State Fish and Game Departments.

The primary effect over which the Forest Service has control in this EV analysis is the density of open motorized roads (OMR) and trails and the amount of area open to cross-country OHV travel. Since Alternative 1 has the highest density of OMR and the most area open to cross-country OHV travel, this alternative has the highest EV and the potential for a higher proportion of the bulls to be harvested, thus the lowest percentage of the Forest meeting State EV thresholds. Since Alternatives 5 and 6 have the lowest density of OMR and trails and the least area open to cross-country OHV travel, these alternatives have the lowest EV and the potential for the lowest proportion of the bulls to be harvested, thus the highest percentage of the Forest meeting State EV thresholds.

In Alternative 2, within certain management prescriptions which comprise 58.5 percent of the Forest, use of all-terrain vehicles (ATVs) is permitted cross-country and on restricted roads and trails during the big game hunting season for retrieval of legally harvested big game animals. Before hunters can use ATVs to

Table IV-7 Consequences of Alternatives for Terrestrial Ecosystems-Wildlife Management Indicators Species and Habitats								
Management Indicator	Existing	1	2	3	3M	4	5	6
Elk Vulnerability % of Forest meeting State Fish and Game thresholds 2/	48	62	76	83	89	89	95	95
Elk Habitat Effectiveness 1/	0.57	0.60	0.61	0.63	0.64	0.66	0.69	0.70
Elk and Deer Winter Range								
Total Acres	313,825	313,825	313,825	313,825	313,825	313,825	313,825	313,825
% of acres meeting DVC	78	81	82	82	82	84	84	84
% of acres moving toward DVC	13	11	11	11	11	10	10	10
% of acres not improving	9	8	7	7	7	6	6	6
% of acres capable of being used for cross-country snowmachine use	38	38	38	38	38	38	38	38
% of acres closed to cross-country snowmachine use	20	100	100	100	100	100	100	100
Gray Wolf	Protected as a nonessential experimental population in all alternatives							
Primary Cavity Nesting Habitat 3/ All Primary Cavity Nesters Four Large Species	0.61 0.47	0.61 0.47	0.61 0.47	0.61 0.47	0.61 0.47	0.61 0.47	0.61 0.47	0.61 0.47
Forest Owl Habitat (Acres) 4/ Percent of All Forested Acres	997,500 79	959,100 76	956,300 76	959,700 76	967,000 77	972,000 77	978,500 78	987,500 78
Furbearer Habitat (Acres) 4/ Percent of All Forested Acres	997,500 79	959,100 76	956,300 76	959,700 76	967,000 77	972,000 77	978,500 78	987,500 78
Goshawk Habitat	Forestwide S&Gs provide the same protection in all alternatives							
Red Squirrel Habitat (Acres) 5/ Percent of All Forested Acres	927,700 80	914,600 79	911,800 79	915,200 79	922,400 80	927,500 80	933,900 81	942,900 82
Peregrine Falcon Habitat	Forestwide S&Gs provide the same protection in all alternatives							
<p>1/ Elk habitat effectiveness is based on open motorized road and trail densities during the spring, summer and fall season, and hiding cover. A perfect rating would be 1.0, which would require no motorized access and 50 to 60 percent hiding cover. The numbers in the table are a weighted average for the entire Forest based on watershed analysis.</p> <p>2/ Elk vulnerability is based on motorized access density during the general elk hunting season and hunter-day densities. The numbers in the table are the percent of the Forest meeting elk vulnerability threshold levels set by the State Fish and Game Departments.</p> <p>3/ The numbers in the table are an index of biological potential for primary cavity nesting species. An index of 1.0 would mean that enough snags of the right sizes exist on every forested acre of the Forest to meet 100 percent of the habitat requirements for all primary cavity nesting species. The four large species are Williamson's sapsucker, northern flicker, hairy woodpecker, and rednapped sapsucker.</p> <p>4/ These are acres of mature and older forested habitat.</p> <p>5/ These are conifer acres with trees old enough to bear cones. Cone-bearing ages were defined as pole, mature and older size classes and age classes.</p>								

do this, certain conditions must be complied with, such as obtaining a permit from a Ranger District office. There has been no research or monitoring on how this provision might effect EV. There is concern from some agencies and individuals that this provision might result in higher EV.

Cumulative Effects - All roads and trails receiving motorized use and cross-country motorized use, are incorporated into the EV analysis. Hunter-day densities were provided by the State Fish and Game Departments. If hunter-day densities change in the future, due to changes in hunting seasons, motorized access restrictions or human populations, then this analysis will need to be updated.

Elk Habitat Effectiveness (EHE)

Consequences Which Vary by Alternative - Table IV-7 displays how EHE changes on a forestwide basis for each of the alternatives

The primary factor in EHE analysis is the density of OMR and trails. Since Alternative 1 has the highest density of OMR and trails, it has the lowest EHE value. Since Alternative 6 has the lowest density of OMR and trails, it has the highest EHE value.

A lesser factor in EHE analysis is the amount of hiding cover. In all alternatives, the amount of hiding cover improves slightly as new seedlings grow into sapling stands in previously logged areas of the Forest. The amount of timber harvesting proposed in all alternatives is less than the number of acres growing into better hiding cover.

The overall effect from improving EHE (which ranges from .60 in Alternative 1 to .70 in Alternative 6) is a probable wider distribution of elk into areas previously underutilized because these areas had high motorized access densities and densities are now reduced. Improving EHE does not mean elk populations will increase.

Cumulative Effects - All roads and trails receiving motorized use are incorporated into EHE analysis. All previous timber harvesting, plus all future proposed timber harvesting are incorporated in EHE analysis.

Effects of Motorized Use on Trails

In the analysis of EV and EHE, we treated the effects of motorized use on trails as being equal to the effects of motorized use on roads. In public comments to the DEIS and while working on the FEIS, some questioned the scientific basis for treating motorized use on trails as equal to motorized use on roads. The following provides a brief overview documenting the work done to obtain information about the effects of motorized use on trails.

The Forest had a series of elk workshops with the state Fish and Game agencies to work on analysis steps for EHE and EV for the final Revised Plan. According to Dr. L. Jack Lyon from the Intermountain Forest and Range Experiment Station, there is no research on the effects of motorized use on trails, but intuitively elk should respond to motorized use on trails the same as motorized use on roads. Based on that statement, motorized use on trails has been equated to motorized use on roads for the elk habitat effectiveness and elk vulnerability analysis.

At the public access meeting of January 5, 1994, Dr. Lyon provided a written response to questions from the public about motorized access. He stated that there has been no reported research on the effects of trails. At this public access meeting, alternative views were presented from the public. Marty Morache presented the most extensive alternative view that motorized trails do not have as much effect on elk as roads.

Idaho Department of Parks and Recreation cited the 1987-1988 Idaho Rifle Elk Hunting Study which documented that only one percent of hunters use trail bikes to hunt (during 1987-88). The implied question is, should we equate motorized trails which provide access for one percent of the hunters equal to motorized trails which provide access for 99 percent of the hunters in EV analysis? We do not know of any study conducted since 1987-88 which documents if a higher percentage of hunters are using trail bikes to hunt in 1996.

At the request of the Interagency Grizzly Bear Committee, a task force was created to establish standardized definitions for roads and trails and standardized methods to measure densities for roads and trails. In the final report (titled the "Interagency Grizzly Bear Committee Task Force Report - July 1994"), trails and roads are treated equally in determining motorized access density.

Recent work is in progress on the development of "Draft Interagency Guidelines for Managing Elk Habitats and Populations on USFS Lands in Central Idaho " In these guidelines, trails are given one-tenth the effect of roads Personnel on the Nez Perce N F have stated several qualifiers the guidelines are still draft, there is no research supporting that trails be given one-tenth the effect of roads, and, that biologists working on the draft guidelines agreed on the one-tenth criteria based on fewer number of vehicles on trails and lower sound levels (Steve Blair, personal communication, July 9, 1996)

At this time, there is no scientifically controlled research study on the effects of motorized use on trails To obtain an understanding of how much EV and EHE analysis would change if trails were not treated equally with roads, we analyzed EV and EHE for the existing condition and alternative 3M by giving motorized use on trails one-tenth the effect of motorized use on roads The results of this analysis are as follows

EV - existing condition, 55 percent of the Forest meets State Fish and Game thresholds
EV - alternative 3M, 91 percent of the Forest meets State Fish and Game thresholds
EHE - existing condition, 0 62
EHE - alternative 3M, 0 67

Comparing these results with those in Table IV-7 show that EV changes seven percent for the existing condition and two percentage points for Alternative 3M EHE changes five percentage points for the existing condition and three percentage points for Alternative 3M

These changes are small because

- 1) Motorized trails only account for 23 percent of the total motorized road and trail miles on the Forest When cross-country motorized use is also figured in for the EV analysis, then motorized trail miles only account for about ten percent of the total motorized access
- 2) The trail system is not equally distributed across the Forest and in those drainages where most of the motorized trails occur, the trail densities are generally low, which means they have less effect in the EV and EHE analysis
- 3) Motorized access on trails is only one factor in the EV and EHE analysis, the other factors such as hunter densities for EV and cover for EHE also contribute to the analysis

Elk and Deer Winter Range

Consequences Common to All Alternatives - The feed ground in Rainey Creek will remain in all alternatives

All elk and deer winter range areas mapped on Map 24 will be closed to cross-country snowmachine use in all alternatives (Table IV-7)

Consequences Which Vary by Alternative - The amount of winter range acres meeting DVC increases from existing levels as follows three percentage points in Alternative 1, four percentage points in Alternatives 2, 3 and 3M, six percentage points in Alternatives 4, 5 and 6 (Table IV-7)

The majority of the deer and elk that summer on the Forest do not winter on the Forest The number of deer and elk wintering on Forest winter ranges depends on the severity of the winter As far as we know, no alternative would decrease the suitability of winter ranges on the Forest for deer and elk from existing habitat conditions Improvements in the number of acres meeting DVCs and increased restrictions on cross-country snowmachine use will result in improved winter range conditions for deer and elk, but populations may not increase over existing levels

Cumulative Effects - Development on private lands is a concern as it can adversely affect areas historically used by wintering deer and elk

Grizzly Bear Habitat

Consequences Common to All Alternatives (within the BMUs) -

- 1 Acres within designated wilderness remains the same in all alternatives
- 2 The number of cattle allotments remains the same in all alternatives

Consequences Which Vary by Alternative (within BMUs) -

Key Indicator - Open Road and Open Motorized Trail Route Density (OROMTRD)

Tables IV-8 - IV-12 present an overview of future OROMTRD and other habitat conditions for the Forest portion of each of the BMUs for each of the alternatives. Other indicators shown in Tables IV-8 - IV-12 include

- 1 Winter Cross-Country Snowmachine Use
- 2 Total Motorized Access Route Density (TMARD)
- 3 Cross-country OHV
- 4 Forest Acres in Core Areas
- 5 Livestock Grazing
- 6 Timber Harvest

Winter Cross-Country Snowmachine Use - Snowmachine use is primarily a concern because of the potential to displace bears before they hibernate or after they emerge from their dens in the spring. We are not aware of specific problems or incidents occurring on the Forest, but the alternatives do prescribe different cross-country snowmachine use dates as follows in an effort to be sensitive to potential future effects.

Henry's Lake BMU, Subunit 1 - There are no cross-country snowmachine use restrictions in Alternatives 1, 2 and 3. In Alternative 3M, cross-country snowmachine use is permitted beginning on the Thanksgiving Day holiday and will be allowed until June 1, site-specific restrictions on winter recreation activity (such as area closures, timing restrictions, etc.) will be imposed to resolve human-grizzly bear conflicts. About 85 percent of the BMU has cross-country snowmachine use dates of December 15 to April 1 in Alternatives 4, 5 and 6.

Henry's Lake BMU, Subunit 2 - About 46 percent of the BMU has cross-country snowmachine use dates of December 15 to April 1 in Alternative 1. There are no cross-country snowmachine use restrictions in Alternative 2. In Alternative 3M, cross-country snowmachine use is permitted beginning on the Thanksgiving Day holiday and will be allowed until June 1, site-specific restrictions on winter recreation activity (such as area closures, timing restrictions, etc.) will be imposed to resolve human-grizzly bear conflicts. In Alternatives 3, 4, 5 and 6, an additional 50 percent of the BMU has cross-country snowmachine use dates of December 15 to April 1.

Plateau BMU, Subunits 1 and 2 - About 8 percent of the BMU has cross-country snowmachine use dates of December 1 to June 1 in Alternative 1. There are no cross-country snowmachine restrictions in Alternative 2. About 20 percent of the BMU has cross-country snowmachine use dates of December 15 to April 1 in Alternative 3. In Alternative 3M, cross-country snowmachine use is permitted beginning on the Thanksgiving Day holiday and will be allowed until June 1, site-specific restrictions on winter recreation activity (such as area closures, timing restrictions, etc.) will be imposed to resolve human-grizzly bear conflicts. In Alternatives 4, 5 and 6, all of the BMU has cross-country snowmachine use dates of December 15 to April 1.

Bechler/Teton BMU - About 34 percent of the BMU is closed to all snowmachine use in all alternatives in the Winegar Hole and Jediah Smith Wilderness Areas. Outside of the wilderness, the alternatives vary as follows. In Alternatives 1 and 2, there are no cross-country snowmachine use restrictions. In Alterna-

tive 3 an additional three percent of the BMU has cross-country snowmachine use dates of December 15 to April 1. In Alternative 3M, cross-country snowmachine use is permitted beginning on the Thanksgiving Day holiday and will be allowed until June 1, site-specific restrictions on winter recreation activity (such as area closures, timing restrictions, etc.) will be imposed to resolve human-grizzly bear conflicts. In Alternatives 4, 5 and 6, an additional 56 percent of the BMU has cross-country snowmachine use dates of December 15 to April 1.

Cumulative Effects - The only available tool that evaluates the cumulative effects of changing levels of human activities and changing habitat conditions is the grizzly bear cumulative effects model (CEM). The CEM was used to provide insight on the relative changes in habitat quality between the alternatives. Table IV-8 through IV-12 show CEM outputs for the alternatives. The CEM is still being validated and at this time, no conclusions can be made concerning grizzly bear populations or distributions based on CEM outputs.

At this time, no definitive statement can be made for a "threshold" number for TMARD, OROMTRD, amount of core area, timber harvesting, livestock grazing, snowmachine use or CEM outputs, in order to achieve a certain number of grizzly bears using a specific area. Analysis on female home ranges is currently being done by the Interagency Grizzly Bear Study Team, which may help define threshold levels in the future. Generally, the lower the TMARD and OROMTRD, the higher amount of core area, the lower the recreation use and the higher HE/HV CEM output, the better the habitat conditions are for grizzly bears.

Predicting future grizzly bear distribution and abundance by alternative is difficult. Based on data we have compiled from 1959 to the present, we offer the following general assessment for each BMU, subunit:

Henry's Lake BMU, Subunit 1 - This area has had the lowest documented grizzly bear sightings of any subunit on the Forest but it has the highest habitat value of any subunit. There has not been a verified sighting of a sow with cubs from 1959 to present. Even with nine active domestic sheep allotments, there have not been grizzly bear/livestock incidents. This subunit is positioned farther west than any other subunit in the GYA and contains the highest recreation use associated with Henry's Lake Flat. Even though there is a general trend of improving habitat conditions on the Forest from Alternative 1 to Alternative 6, we expect grizzly bear use to remain at low levels, similar to what has occurred in the past, in all alternatives.

Henry's Lake BMU, Subunit 2 - Compared to other subunits on the Forest, this subunit has had the second highest number of grizzly bear sightings and it has the second highest habitat value of any subunit. This subunit has been and currently is, occupied by a sow with cubs. This subunit is immediately adjacent to other occupied BMUs in the GYA. Even though there is a general trend of improving habitat conditions on the Forest from Alternative 1 through Alternative 6, we expect grizzly bear use to be similar to what has occurred in the past in all alternatives. We do not expect a measurable difference in grizzly bear use among the alternatives.

Plateau BMU, Subunit 1 - Compared to other subunits on the Forest, this subunit has had the second lowest number of grizzly bear sightings and it has the lowest habitat value of any subunit. Two sows with cubs have been documented from 1959 to the present. In the last two decades, the Forest portion has had what is considered high open road densities and high human activity, especially timber management activity. But the Yellowstone National Park portion has had very little human activity and still grizzly bear use has been low in that portion of the subunit. Generally, there is a trend of improving habitat condition on the Forest from Alternative 1 to Alternative 6. Because this subunit is adjacent to other occupied BMUs in the GYA, we expect that as habitat conditions improve, there is potential for increased grizzly bear use. We use the term potential because of historic low use of this subunit, even in the Yellowstone National Park portion where little human activity has occurred.

Plateau BMU, Subunit 2 - Compared to other subunits on the Forest, this subunit has had the third lowest number of grizzly bear sightings and it has the second lowest habitat value of any subunit. Until 1994, we had no records that confirm sightings of sows with cubs in this subunit. In 1994, one sow with cubs was observed one time near the southern boundary of the subunit, since 1994, no sows with cubs have been documented. In the last two decades, the Forest portion has had what is considered high open road densities and high human activity, especially timber management activity. But the Yellowstone National Park portion has had very little human activity and still grizzly bear use has been low in that portion of the subunit. Generally, there is a trend of improving habitat condition on the Forest from Alternative 1 to Alternative 6. Because this subunit is adjacent to other occupied BMUs in the GYA, we expect that as habitat conditions improve, there is potential for increased grizzly bear use. We use the term potential because of historic low use of this subunit, even in the Yellowstone National Park portion where little human activity has occurred.

Bechler/Teton BMU - Compared to other subunits on the Forest, this subunit has had the highest number of grizzly bear sightings and it has the third highest habitat value of any subunit. This subunit has been and currently is occupied by a sow with cubs. This subunit is immediately adjacent to other occupied BMUs in the GYA. There is a general trend of improving habitat condition on the Forest from Alternative 1 to Alternative 6. Because this subunit is adjacent to other occupied BMUs in the GYA, we expect that as habitat conditions improve, there is potential for increased grizzly bear use. We use the term potential because of historic high use of this subunit and we may not be able to measure more use when compared to the historic high use.

Since 1984, there have been no grizzly bear mortalities on the Forest. We do not expect any inherent differences among the alternatives in relation to grizzly bear mortalities. If grizzly bear use increases in the future due to improved habitat conditions, there may be potential for increased human/grizzly bear conflicts.

Linkage Zone Assessments - The Grizzly Bear Recovery Plan identified the need to assess the potential for linkage zones between the various grizzly bear ecosystems. The Yellowstone Grizzly Bear Ecosystem is about 240 air miles from the Selway-Bitterroot Grizzly Bear Ecosystem (USDI Fish and Wildlife Service 1993). Currently, very little is known about the potential for linkage zones. In order to adequately assess the capacity for linkage, the USFWS initiated a five year process to assess the linkage potential between the various ecosystems. This process will be led by the USFWS in cooperation with the States, provinces and various land management agencies. At the completion of the five year evaluation effort, a report will be available to the IGBC on the potential for linkage between existing ecosystems. This report will be the basis for future actions regarding the linkage zone question. Linkage zones are desirable for recovery, but are not essential for delisting at this time. The studies are in progress and no results are available.

The Grizzly Bear Recovery Plan states that future land management activities within potential linkage zones may be critical to maintaining their utility as linkage zones. It is essential that existing options for carnivore movement between existing ecosystems be maintained while the evaluation of linkage zones is underway. Management strategies that limit human-induced mortality and address the access management will facilitate the maintenance of the potential of these zones during the evaluation period. On public lands, management prescriptions similar to big game summer range prescriptions that address access management would likely conserve any existing potential of these areas for linkage until completion of the evaluation process (USDI Fish and Wildlife Service 1993). Access management was a key issue addressed in all alternatives considered in the Forest Plan Revision.

For the Yellowstone Grizzly Bear Ecosystem, the Recovery Plan states the following:

The Yellowstone grizzly bear population is the only one of five grizzly bear populations that is completely isolated from populations in other U.S. ecosystems and Canada. The population has approximately 300 bears. The population's small size and isolation make it vulnerable to the

detrimental effects of the loss of genetic diversity and to environmental and demographic stochasticity. Connectivity between the Yellowstone Grizzly Bear Ecosystem and other grizzly ecosystems is not likely to be realized in the near future because of the distance to other ecosystems and the intervening human development and alteration of landscape. Therefore, the recovery plan recommends that one grizzly be placed into the ecosystem from an outside population every ten years as an effort to maintain the genetic health of the population (USDI Fish and Wildlife Service 1993).

Gray Wolf

Consequences Common to All Alternatives - Application of the forestwide standards and guidelines is expected to allow wolf pairs to establish dens on the Forest if they choose to do so and to receive the protection of the nonessential experimental population rule (USDI Fish and Wildlife Service 1994b).

Primary Cavity Nesting Habitat

An overall biological potential for the primary cavity nesting species as a group was analyzed for each alternative. In addition, a biological potential analysis was done for four of the species which require larger size snags (red-naped sapsucker, Williamson's sapsucker, hairy woodpecker and northern flicker). These biological potential analyses are based on existing snag densities and projected changes in snag densities due to management activities as specified in the management prescriptions.

Consequences Common to All Alternatives - All of the management prescriptions which allow scheduled timber and fuelwood harvesting (with the exception of management prescription 5.2.2) require the retention of snags and green replacement trees. The snag and green replacement tree requirements vary in these management prescriptions, ranging from > 40 percent of biological potential to 100 percent of biological potential for primary cavity nesters.

In addition to the management prescriptions which allow scheduled timber harvesting, snag and green replacement trees requirements are also contained in other motorized management prescriptions where fuelwood harvesting could be permitted based on the presence of roads for access and management prescription direction which allows fuelwood harvesting. The snag and green replacement tree requirements vary in these management prescriptions, ranging from > 40 percent of biological potential to 100 percent of biological potential.

There are no snag and green replacement tree requirements in the management prescriptions which are nonmotorized, wilderness, wilderness study areas, proposed wilderness, research natural areas, wild/scenic/recreational rivers or special management areas. In these management prescriptions, timber harvesting is not scheduled and primary cavity nesting habitat will evolve with natural processes.

There are no snag and green replacement tree requirements in the recreation and concentrated development management prescriptions. In these management prescriptions, public safety and protection of facilities is the paramount importance, therefore snags and other hazard trees are generally removed from these sites. The total acres in these sites is less than one-half of one percent of the total acres on the Forest.

Table IV-7 displays the biological potential for the primary cavity nesting species for each alternative on a Forestwide basis. (Process Paper D displays the biological potential on a watershed basis for each alternative.) In all alternatives, the biological potential for all primary cavity nesting species is 0.61 and the biological potential for the larger cavity nesting species is 0.47. As a result of the snag and green replacement tree requirements in the management prescriptions, there is no measurable difference in biological potential for primary cavity nesting species between the alternatives due to scheduled timber harvest activities.

Cumulative Effects - The analysis for future biological potential does not include possible future effects of natural disturbances. Future natural disturbances may have a greater effect on the biological potential for primary cavity nesting species habitat than vegetation management activities proposed for each alternative. Generally, natural disturbances such as fire, insects and disease create additional snags in the short term.

Forest Owl Habitat

Consequences Common to All Alternatives - Proposed management activities are not expected to change habitat conditions for these species regardless of the alternative.

Flammulated Owl - All known nest sites and any new nest sites found in the future, whether or not they are active, will be protected in all alternatives.

Boreal Owl and Great Gray Owl - All known nest sites and any new nest sites found in the future, whether or not they are active, will be protected in all alternatives. Within home ranges around all nest sites, > 40 percent of the forested acres will be maintained in late seral stages.

Furbearer Habitat

Furbearers include the American marten, fisher, lynx and wolverine. These species require mature, late seral and old growth forest habitats for some or all of their habitat requirements. Snags and down woody debris are also important components of their habitat.

Consequences Common to All Alternatives - There is a Forestwide objective to identify potential wolverine natal den sites and to survey these potential sites to document wolverine presence.

Consequences Which Vary by Alternative - Table IV-7 displays how the quantity of late seral forest habitat is expected to change due to scheduled timber management activities in each alternative. The amount of late seral forest habitat changes by alternative according to the amount of timber harvesting proposed in that alternative. Alternative 1, 2 and 3 have the largest potential change in habitat (-3 percent) and Alternatives 5 and 6 the least potential change (-1 percent). The previous section on old growth and late seral forest provides additional information which is not repeated here. If furbearer populations are currently at habitat carrying capacity, then Alternatives 1, 2 and 3 would result in a three percentage point population decline, Alternatives 3M and 4 a two percentage point population decline, and Alternatives 5 and 6 a one percentage point population decline. All alternatives will contain suitable habitat in all principal watersheds on the Forest, thus maintaining well distributed populations.

Goshawk Habitat

Consequences Common to All Alternatives -

Nest Areas - A nest area of at least 200 acres in size is to be provided for all goshawk territories. These suitable nest areas are to be mature and older stands of trees, with numerous snags (80 to 100 percent biological potential for cavity nesting species). Any vegetation management within nest areas is to occur during the months of October to February. There are to be no new system roads.

Post-Fledging Family Area - This area is > 400 acres in size. A variety of forest seral stages can be present, but > 40 percent of the forested acres must be in mature and older size/age classes. Any created opening must be < 40 acres in size. Numerous snags are to be present (80 to 100 percent biological potential for cavity nesting species). Any vegetation management within this area is to occur during the months of October to February. There are to be no new system roads.

Foraging Area - This area is > 5,400 acres in size. A variety of forest seral stages can be present, but > 40 percent of the forested acres must be in mature and older size/age classes. Any created opening must

be < 40 acres in size. Numerous snags are to be present (> 60 percent biological potential for cavity nesting species). Vegetation management within this area can occur anytime during the year. Road densities are to be < the density required by the management prescription.

This management direction applies to all known territories and any new territories found in the future, whether or not they are active. The proposed management direction would maintain effective habitat and viable populations are expected to be sustained.

Red Squirrel Habitat

Consequences Which Vary by Alternative - Table IV-7 displays the acres of conifer cone-bearing habitat in each alternative. Alternatives 1, 2 and 3 result in a one percentage point decline of conifer cone bearing habitat, Alternatives 3M and 4 result in a less than one percentage point change, Alternatives 5 and 6 result in a one to two percentage point increase. The small changes in cone bearing habitat among the alternatives occurs as the result of some previously harvested acres approaching cone-bearing age during the decade. The number of acres coming of cone-bearing age is almost as large as the number of acres proposed for timber harvesting in any of the alternatives.

Peregrine Falcon Habitat

Consequences Common to All Alternatives - Forestwide Standards and Guidelines for peregrine falcon habitat apply in all alternatives. Suitable habitat will be maintained for all existing nesting pairs plus any new nesting pairs which may become established.

Bighorn Sheep

Consequences Common to All Alternatives - The following discussion is divided into four topics: 1) low elevational winter range, 2) disease, 3) genetic isolation, and 4) recreation.

Low Elevation Winter Ranges - Former low elevation winter ranges are not being used for a variety of factors, including permanent developments (highways, farms, towns, etc.), introductions of mountain goats and vegetation succession.

There has been no analysis about the feasibility of restoring use to these former low elevation winter ranges. Some of the winter ranges may be permanently lost due to permanent developments. It is our understanding that mountain goats use the same habitats, are more aggressive and will compete with bighorn sheep.

Many of the factors associated with this issue are not within the authority of the Forest Service to directly deal with (such as permanent developments on private lands and mountain goat populations). For these factors, the Revised Plan contains management direction to coordinate with other agencies in the management of bighorn sheep.

The Revised Plan contains management direction to develop a fire management plan for the entire westslope of the Tetons and to incorporate into the plan opportunities to improve bighorn sheep habitat.

Disease - In both fenced studies and free ranging herds, most contact between bighorn sheep and domestic sheep has resulted in pneumonia in bighorns and the deaths of all or most bighorns while domestic sheep remained healthy. Published research has shown that *Pasteurella haemolytica* (usually biotype A, serotype 2) is the major pathogen responsible for the death of bighorn sheep after contact with domestic sheep. DNA fingerprinting has proven the transfer of *Pasteurella* spp. between bighorn and domestic sheep under both controlled "experimental" and range conditions. The *Pasteurella* must be a "virulent" strain. Sometimes there have been contact between bighorns and domestic sheep without die-offs, reason - the domestic sheep did not have a virulent strain. No vaccine currently exists that will prevent

bighorn sheep from developing pneumonia after contact with virulent strains of *Pasteurella*. There is no way to test for virulent strains at the present time.

There are two times of year when contact between bighorns and domestic sheep are more likely to occur:

- 1) During the fall breeding season (November and December) when the younger rams are displaced by the older rams. The younger rams will often get involved with domestic ewes while looking for a mate.
- 2) During the spring when bighorn sheep and domestic sheep are using spring green up areas.

On the Westslope of the Tetons, 45,700 acres have previously been closed to domestic sheep grazing through annual plans of use and allotment management planning. These are the areas currently occupied by bighorn sheep. A bighorn sheep study is currently being conducted by GTNP. Several dead bighorn sheep have been sent to Dr. Beth Williams for necropsy. No *Pasteurella* from domestic sheep was found. Dr. Williams said the bighorns were very healthy. (Discussions with Dr. Beth Williams, Sept. 1996)

Domestic sheep are not grazed on the Westslope during the seasons when 'nose-to-nose' contact with bighorns is most likely to occur (the fall breeding season or the early spring).

Because of the acres currently closed to domestic sheep grazing and the fact that domestic sheep are not grazed during the seasons when contact is most likely to occur, we believe the probability for disease transfer is very low. To eventually reduce the probability for disease transfer to zero, the Revised Plan directs that all sheep grazing on the Westslope of the Tetons will be phased out on an opportunity basis. While the phase out is in progress, additional opportunities will be studied to adjust domestic sheep allotments to further reduce the probability of disease transfer.

In the South Beaverhead (Medicine Lodge) area, there are two vacant domestic sheep allotments adjacent to the currently occupied bighorn sheep areas. These two allotments will remain vacant until the necessary authorizations have been completed to convert them to cattle allotments.

There are three winter domestic sheep allotments adjacent to the currently occupied bighorn sheep areas. The Revised Plan directs that these winter allotments will be phased out on an opportunity basis.

Genetic Isolation - The Teton Range bighorn sheep population is among a small number of bighorn sheep populations that are endemic and have not been augmented with animals from other bighorn sheep populations (Teton Bighorn Sheep Working Group Report 1996). It has been suggested that these bighorn sheep have increased scientific value because of this fact (Teton Bighorn Sheep Working Group Report 1996).

Management of animal populations is the primary responsibility of State Fish and Game Agencies. The Revised Plan provides direction to coordinate with the State Fish and Game Agencies and the National Park Service on the management of bighorn sheep.

Recreation - Some publics have suggested that bighorn sheep may be avoiding some portions of suitable habitat because of recreation use. Also, Wyoming has maintained a small hunt on the Forest (no hunting of bighorns occurs in GTNP).

The Revised Plan directs the Forest to work with the Intermountain Forest and Range Experiment Station to develop and conduct a research study to assess the effects of recreational activity on bighorn sheep on the Westslope of the Tetons.

Recreational activities must be evaluated and coordinated between all of the agencies. This includes the permitting of hunting by the Wyoming Game and Fish Department. The Revised Plan directs the Forest to coordinate with other agencies on the management of bighorn sheep habitat and populations.

Neotropical Migratory Species

Consequences Common to All Alternatives - Hejl et al (1995) reviewed studies documenting differences in birds among natural stands of different ages. No common results for any one species nor obvious trends for any particular migrant group were found in the studies comparing natural stands of different ages.

Differences in Birds between Cut and Uncut Aspen Forests - In a review of aspen studies, the combined results are equivocal, therefore, no assessments can be made as to the effects of cutting aspen on any particular migrant group (Hejl et al 1995). Based on this information, natural disturbances and aspen treatments are not expected to result in measurable changes in bird species abundance among the alternatives.

Consequences Which Vary by Alternative - Hejl et al (1995) reviewed studies documenting the effects of silvicultural treatments (timber harvesting) on birds in conifer forests and old second growth forests and presented the following summaries:

Effects of Silvicultural Treatments on Birds in Conifer Forests - From community-wide studies, 26 species were less abundant in treated areas as compared to unlogged areas in general. In contrast, 15 species were generally more abundant in treated areas than in unlogged ones.

Old-growth and Old Second-growth - In a review of four studies which compared old-growth with old second-growth, 15 species were more abundant in old growth in at least one study, however, no species was consistently more abundant in old growth in all four studies that compared old-growth with old second-growth stands.

Since the forested acres proposed for silvicultural treatments during the first decade range between three percent in Alternatives 1, 2 and 3, two percent in Alternatives 3M and 4, and one percent in Alternative 5 and 6, the change in bird species abundance is expected to be very small among the alternatives. There is potential for 26 species to be less abundant on the one to three percent of the forested acres proposed for silvicultural treatments, and 15 species to be more abundant. Late seral forests will be distributed in all principal watersheds in all alternatives as displayed previously in Table IV-1.

We cannot offer managers as complete a synthesis as we would like. Too few studies have been conducted on the effects of silvicultural practices on birds in forests in the Rocky Mountains to make robust conclusions (Hejl et al 1995). Our results are limited in that they focus on short-term distributional changes as the result of two broad categories of timber harvesting (clearcutting and partial logging) lumped across conifer forests. The data indicate that many forest birds were less abundant in clearcuts than in uncut forests and species that frequent open forests or open habitats were more abundant in clearcuts than in uncut forests. Most permanent residents were less abundant after either kind of harvesting treatment, whereas about half of the migrant species were less abundant and half more abundant in harvested areas. The effects of partial cutting were less dramatic than those of clearcutting, these results may be partly due to the fact that partial cutting included many different kinds of harvesting treatments (Hejl et al 1995).

Additional information and discussion on neotropical migratory bird species is presented in Process Paper D.

Predator Control

Consequences Common to All Alternatives - The effects of predator control are disclosed in the 1996 APHIS-ADC Environmental Assessment for Predator Control in Southern Idaho, which incorporated the analysis of effects from the 1990 Targhee N.F. Predator Control EA and Decision Notice. The effects of Alternative 5 (selected alternative) disclosed in Chapter IV, Environmental Consequences, of the 1990 EA are also incorporated by reference into this analysis.

Unique Ecosystems

Research Natural Areas

Consequences Common to All Alternatives - Forestwide standards and guidelines apply in all alternatives plus site-specific direction identified in the Establishment Records for existing RNAs apply. To become established as an RNA, site-specific analysis at a later date will be conducted for proposed RNAs. Regardless of which alternative is selected, the number of proposed and existing RNAs does not change by alternative (Table III-21)

FOREST USE AND OCCUPATION

This component is described in four parts: Access Management, Wilderness, Recreation and Social and Economic. Under the first two parts, key indicators are discussed first, with subsequent discussion of other indicators. No key indicators are associated with the third and fourth parts.

ACCESS MANAGEMENT

Road and Trail System and Motorized Access

Consequences are presented in the winter and summer access sections which follow. In summary, winter motorized access will be maintained in most alternatives and summer motorized transportation system and access will be reduced in all alternatives.

Summer Access

Key Indicators

- 1 Miles of road open to summer motorized
- 2 Miles of trail open to summer motorized
- 3 Acres open to summer cross-country OHV

Consequences Common to All Alternatives - There will be some reduction from current levels in miles of road and trail open to motorized use in all alternatives. This would result in increased needs and costs for law enforcement and signing to manage the system of restricted roads and trails. Another consequence common to all alternatives is the routine reconstruction of roads and structures.

The forestwide guidelines concerning trail design, condition surveys and restricting OHV use on slopes 25-40 percent and greater should help meet the Revision goals of sustaining OHV opportunities and sustaining trails in good condition while minimizing effects to other resources.

Consequences Which Vary by Alternative - Table IV-13 shows a comparison of roads and trails by alternative that will be open to motorized use, restricted or reclaimed. Compared to existing conditions, changes in open roads and trails in the alternatives are as follows:

- open roads range from a decrease of 103 miles (5 percent) in Alternative 1 to a reduction of 757 miles (38 percent) in Alternative 6
- open trails range from a decrease of 201 miles (26 percent) in Alternative 1 to a reduction of 692 miles (90 percent) in Alternative 6

In the Selected Alternative (3M), most of the system roads proposed for reclaiming/obliteration, are located within the BMUs.

In most all cases, the system roads that have been identified to be reclaimed/obliterated are roads that are currently restricted and were originally constructed in conjunction with timber sales

Roads closed for resource management purposes limit opportunities for dispersed camping, berry-picking, sight-seeing and other activities that conventionally depend on road access. The amount of opportunities available with the various alternatives is varied, according to the programmed amount of new or existing road development and resource management activities, particularly timber harvesting

	Existing	1	2	3	3-M	4	5	6
Roads								
Miles - Open 1/	1,985	1,882	1,863	1,589	1,577	1,372	1,237	1,228
Miles - Seasonal Restrictions 2/	73	209	131	115	25	108	63	80
Miles - Yearlong Restrictions 3/	733	454	242	320	336	198	201	177
Miles - Reclaimed/Obliterated	NA*	246	555	767	853	1,113	1,290	1,306
Total Miles	2,791	2,791	2,791	2,791	2,791	2,791	2,791	2,791
Change in open miles from existing	-	-103	-122	-396	-408	-613	-748	-757
% change in open miles from existing	-	-5	-6	-20	-21	-31	-38	-38
Trails								
Miles - Open 1/	773	572	470	435	540	421	232	81
Miles - Restricted 4/	628	752	854	889	817	903	1,092	1242
Miles - Nonfunctional trails	NA	77	77	77	44	77	77	78
Total Miles	1,401	1,401	1,401	1,401	1,401	1,401	1,401	1,401
Change in open miles from existing	-	-201	-303	-338	-233	-352	-541	-692
% change in open miles from existing	-	-26	-39	-44	-30	-46	-70	-90
1/ Road and trail miles without restrictions on motorized use 2/ Road miles on which motorized use is restricted for only a portion of the spring/summer/fall seasons 3/ Road miles on which motorized use is restricted for the entire spring/summer/fall seasons 4/ Trail miles on which motorized use is restricted either for a portion of the spring/summer/fall seasons or yearlong (as in designated wilderness areas) * This table refers to present time. It does not take into account the 1,622 miles of roads that were reclaimed/obliterated between 1981 and 1993								

Acres open to cross-country OHV travel decrease significantly from present levels in all alternatives (Table II-1). The decrease from present levels ranges from approximately 166,000 acres (15 percent) in Alternative 1 to over 1 million acres (97 percent) in Alternative 6. However, it should be recognized that many of these acres are in terrain and vegetative cover which do not actually permit cross-country travel. So, the decrease in acreage may not be as significant as it appears.

Costs for signing designated routes, rehabilitation of old alignments, and providing law enforcement will increase significantly, especially for Alternatives 3 - 6. Alternative 3M would cost \$150-200 thousand each year to reconstruct 10-20 miles of existing motorized use trails. Trail reconstruction and maintenance costs will also be much higher to meet soil and water standards and guides and to accommodate the higher use levels with motorized and mechanized equipment.

Most foot and horse trails would not be affected by any of the alternatives. However, under the alternatives with more motorized restrictions there would be some benefit to the nonmotorized user in terms of relief from interaction with motorized users. Some of the impacts to trails, such as rutting or displacement of soils, being caused by OHV use would also be reduced.

Cumulative Effects - As acres and roads/trails open to motorized access decrease from Alternatives 1 through 6, the density of OHV users on designated routes will generally increase on the remaining open routes. In addition, some loop trails will be eliminated, along with current access to some of the more spectacular scenic vistas. The increased interaction may result in increased user or resource conflicts and additional resource impacts. This could have an overall effect of loss of enjoyment of the recreation activity for some people in some of the areas. In other areas, it may be possible to develop "play areas" that become favorites of those who like a "social experience" or who enjoy the spectator opportunity.

A secondary effect of decreasing motorized access areas would be reduction of hunting and fishing opportunities for those requiring motorized access. This might not be too significant except in Alternatives 5 and 6.

An additional effect of decreasing motorized access would be decreased trail maintenance. A good portion of our trail maintenance work is performed by motorized users and the state of Idaho's Trail Ranger program which uses trail bikes for its maintenance crew. Motorized users and trail maintenance funding from the State would naturally decline as restrictions on motorized access increase, unless some type of reconstruction program can be initiated to improve trails for motorized use.

Overall, it is questionable whether there will be enough designated routes and cross-country areas open to travel to meet the needs of increasing motorized access demand in any alternative, but especially in Alternatives 5 and 6. Much of the cross-country use that is presently occurring would be eliminated by Alternatives 3-6. Therefore, the actual and apparent loss of OHV access and recreation opportunities may be of concern to some OHV users.

Winter Access

Indicators

- 1 Acres open to winter cross-country snowmachines
- 2 Miles of groomed trails for snowmachines

Consequences Common to All Alternatives - Management direction such as establishing linear capacities for snowmachine trails, providing networks of groomed trails, providing winter users with educational information and signing about wildlife needs, and prohibiting snowmachines and other equipment from groomed cross-country ski trails, should minimize adverse consequences on users and wildlife.

Consequences Which Vary by Alternative - Acreage open to cross-country snowmachine use (Table II-1) is maintained or increased for Alternatives 1-3, decreases (119,000 acres) in Alternative 5 and significantly decreases (404,000 acres) in Alternative 6. These decreases are due to increases in winter range and recommended wilderness prescription allocations. In Alternative 3M, a large portion of the decrease is due to the new forestwide standard which closes all inventoried winter range to cross-country snowmachine travel.

Miles of planned, groomed or marked snowmachine trails could increase approximately 93 miles over current levels in Alternative 3M. This planned increase is based on analysis contained in the Greater Yellowstone Winter Visitor Use Management (GYWVUM) Assessment as summarized in the Winter Access Analysis (Appendix C). Alternative 3M would also provide direction to establish a few nonmotorized winter recreation activity areas with easy access for uses such as telemark skiers, snowshoers or snowboarders by the year 2000 in conformation with results anticipated from the GYWVUM Assessment. This would result in reduced user conflicts as such activities increase. Alternative 5 maintains existing levels of trails. Alternative 6 would result in a significant decrease in designated snowmachine routes from current levels. This decrease is due to increased wildlife winter range and recommended wilderness allocations.

Cumulative Effects - Winter recreation use opportunities would in large part be maintained in all alternatives. However, Alternatives 5 and 6 would have more restrictions on winter motorized use and therefore, some reduction in those opportunities and use would be possible. Potential effects on wintering wildlife would be minimal in all alternatives. The selected alternative 3M would increase the potential for snowmachining on marked and groomed trails if the counties could afford to provide the marking and grooming.

WILDERNESS AND RECREATION RESOURCES

The following topics present the effects and consequences of the alternatives on the various wilderness and recreation resources. Key alternative comparison indicators for these resources are displayed in Table II-1. Overall, total recreation use would not change much between alternatives, but the types of use probably would. The trend from Alternative 1 to 6 would be away from semi-primitive motorized (SPM) and roaded natural appearing (RNA) recreation opportunities to an increase in primitive (P) and semi-primitive nonmotorized (SPNM), although some semi-primitive motorized (SPM) opportunities would remain. This overall trend would be due to the reduction in motorized access and increase in recommended wilderness from Alternatives 4 - 6. Such a trend would also support a shift from currently evolving tourism/rural development to a slower developing, eco-tourism pattern.

Wilderness and Recommended Wilderness

Indicator - Acres of recommended wilderness

Other Indicator - Acres of management opportunity classes for the Jedediah Smith Wilderness

Consequences Common to All Alternatives - Designated wilderness and wilderness study acres remain the same in all alternatives. Quality and character of designated wilderness would not be degraded by any alternative. All action alternatives include a monitoring plan based on the Limits of Acceptable Change (LAC) process for the Jedediah Smith Wilderness. The Winegar Hole Wilderness will be managed according to the prescription direction. The Revision prescriptions and monitoring plan will become the wilderness management plan for each wilderness. These plans provide direction for management and monitoring of resource and social conditions to address any changes which may result. These plans would maintain wilderness resources and recreation opportunities at approximately current levels and conditions.

Consequences Which Vary by Alternative - Recommended Wilderness - The 1985 Forest Plan analysis of recommended wilderness and roadless areas was re-evaluated in response to public comments and documented in an update to the Roadless Areas Process Paper (Appendix B). The rationale for or against selection of areas for recommended wilderness in Alternative 3M has been added to this Process Paper update, along with the Rating of Wilderness Characteristics (Table IV-14). As this re-evaluation of recommended wilderness was completed, a decision was made to include a large part of the Diamond Peak Roadless area as recommended wilderness. This was done because the area rated second highest of all roadless areas on the Forest. The 33,000 acres in Diamond Peak and 13,000 acres of digitizing updates to Italian Peaks raised the total recommended wilderness acres for Alternative 3M from the 125,000 acres in the DEIS up to 171,000.

Table IV-14 Rating of Wilderness Characteristic Factors for Remaining Roadless Areas (based on Section 2 of individual narratives from the 1985 Supplement to the DEIS for the 1985 Forest Plan)						
Area Name	Area Number	Manageability & Boundaries	Influence on Natural Integrity	Opportunity for Solitude	Opportunity for Challenging Experience	Rating Score
Diamond Peak (88,689 ac)	15-601	moderate	low	high	high	11
Italian Peak (141,792 ac)	15-945	moderate	low	high	moderate	10
Garfield Mtn (43,439 ac)	15-961	high	moderate	moderate	low-mod	9
Mt. Jefferson (63,969 ac)	15-962	1/				0
Raynolds Pass (7,709 ac)	15-603	moderate	low	low	low	7
Lionhead (16,892 ac)	15-963	moderate	low	high	moderate	10
Two-top (6,983 ac)	15-604	moderate	high	moderate	low	6
Winegar addition (4,032 ac)	15-347	low	moderate	moderate	low	6
West Slope Tetons	15-610	2/				0
Garns Mtn (95,632 ac)	15-611	moderate	low	high	moderate	10
Palisades (174,862 ac)	15-613	moderate	low	high	high	12
Bald Mtn (17,037 ac)	15-614	low	moderate	low	low	5
Bear Creek (97,775 ac)	15-615	moderate	low	moderate	low	8
Poker Peak (19,577 ac)	15-616	high	low	low	low	8
Caribou City (11,769 ac)	15-161	low	low	moderate	moderate	8
Pole Creek (2,683 ac)	15-160	low	moderate	low	low	5

Rating Score note: Manageability and Opportunity columns are scored - low=1, mod =2, high=3. Influence on Natural Integrity column is scored - low=3, mod =2, high=1. A rating of 10 or better is considered sufficient for wilderness recommendation, except in Garn's Mtn where a decision was made to manage for motorized use in Alternative 3-M, rather than roadless. The score of 10 was selected as the "break-point" because it represents the quality level of the areas previously recommended in the current Forest Plan, with the exception of the Winegar Hole addition, which had broad public support.

1/ This area was released for multiple use mgmt by decision of 1990 FEIS by BLM

2/ This area was released for multiple use mgmt by the 1984 Wyo Wilderness Act

With the exception of Alternative 2 which has no recommended wilderness, the acreage of recommended wilderness increases from Alternative 1 to Alternative 6, with the largest increases in Alternatives 5 and 6 (Table II-1). Motorized OHV travel would be impacted by Alternatives 3-6 and significant forestwide reductions in summer, cross-country OHV travel would result from Alternatives 5 and 6 to be consistent with the 1-3 prescription access table. In addition, the High Mountain Heliski operation which is dependent almost entirely on the Palisades Roadless Area could be eliminated by Alternatives 3 - 6 if wilderness designation resulted from recommendations of the Plan Revision. This heliski operation was seriously impacted in 1984 when the Wyoming Wilderness Act shut the skiing operation out of their main permit area. There would be little or no area left open to support this operation if designation occurred in the Palisades with no exception to allow continuance. This could eliminate a unique recreational opportunity for over 450 skiers annually. Considerable snowmachine activity and groomed snowmobile trails and play areas in Alternatives 5 and 6 could also be eliminated in the Garns Mountain and Caribou areas if wilderness designation occurred in these areas as recommended.

Existing Designated Wilderness - The main difference in designated wilderness would be in the Opportunity Class I-III allocations (Table IV-15) Opportunity Class I, II and III (see Plan Glossary and Jedediah Smith Wilderness Process Paper) areas are represented by prescriptions 1 1 6, 1 1 7 and 1 1 8 respectively. Alternative 1 contains prescriptions to match the current management situation. Alternatives 2-6 contain a variety of applications of the new prescriptions based on the LAC opportunity classes developed by the Jedediah Smith Project Team as documented in a process paper on file in the Supervisor's Office. These Opportunity Classes involve levels of recreation, research and maintenance and potential resulting changes in resource or social impacts. Generally, Alternatives 2 and 3 would have the highest social interaction effects among recreationists and the greatest chance for disturbance of wildlife. Alternatives 3M and 4 would have less chance of social interaction or wildlife disturbance impacts. Alternatives 5 and 6 would have the least chance of user conflicts or impacts to the wilderness resources or values, since these two alternatives do not contain any Class III (highest recreation level) areas.

Cumulative Effects - Alternative 1 has the highest probability of potential adverse impacts to wilderness character over time. This is because it lacks a management and monitoring process to measure change in wilderness values. All other alternatives should have little cumulative impact or secondary effects, since the LAC monitoring process should allow adverse interactions or impacts to be noted and a management response applied to appropriately deal with problems if they arise. Likewise, designation of wilderness in any alternative would have little effect on timber harvest. However, potential for effects on harvest would be greatest in Alternatives 5 and 6 which have the largest amount of recommended wilderness.

Mgmt Rx	Opportunity Class	Alternative (Thousand Acres)						
		1	2	3	3-M	4	5	6
1 1 1	NA 2/	40	0	0	0	0	0	0
1 1 2	NA 2/	11	0	0	0	0	0	0
1 1 3	NA 2/	32	0	0	0	0	0	0
1 1 4	NA 2/	25	0	0	0	0	0	0
1 1 5	NA 2/	27	0	0	0	0	0	0
1 1 6	I	0	83	83	102	102	115	115
1 1 7	II	0	39	39	20	20	19	19
1 1 8	III	0	13	13	13	13	0	0

1/ Opportunity Class - Class I is lowest recreation use level, and Class III is the highest
 2/ Prescriptions 1 1 1 - 1 1 5 are for the Current Forest Plan, which does not use LAC/Opportunity Class

Roadless Areas

Indicators - Acres of roadless

Consequences Which Vary by Alternative - The acres of roadless in Table II-1 have not changed from the DEIS. However, approximately 1,500 acres of roadless area in the Moody Creek area has been changed to non-roadless protecting prescription in the Final Plan as compared to the DEIS and Draft Plan. This change represents less than two-tenths of one percent of the inventoried roadless acres. The acres shown in Table II-1 reflect those protected by prescriptions which would prevent adverse impacts to wilderness potential. The reason that Alternative 3M is approximately 70 M acres less than existing condition, is that the prescriptions in Alternative 3M would not provide complete protection of roadless character. As shown

in Table II-1, the acres of roadless area protected by prescriptions would decrease slightly from Alternative 1 to Alternative 2 and then increase again through Alternative 6. Alternative 6 would have the highest amount, which approximates the existing inventory. Roadless areas receive the highest level of management protection in Alternative 6 because of the recommended wilderness (1.3 prescription) allocation, which increases significantly between Alternatives 1 and 6 and because of lower motorized road and trail density standards. Alternative 2 is an exception, in that it has no recommended wilderness acres in it. As a result, cross-country summer OHV travel opportunities become significantly reduced between Alternatives 2 and 6. Table II-1 shows another example of the increasing restriction to OHV activity within the indicator entitled "acres roadless closed to summer OHV." This acreage increases from 243,000 acres in Alternative 1 to 378,000 acres in Alternative 5 and takes a sharp rise to 614,000 acres in Alternative 6. This pattern is similar to and verifies the recommended wilderness indicator discussed previously.

Alternative 3M allows scheduled timber harvest within or near the Caribou City and Bear Creek Roadless areas adjacent to portions of those roadless areas on the Caribou N.F. Therefore, project-specific planning for any harvest in these areas of the Forest will likely have to address the existing settlement agreement issues on the Caribou N.F. if harvest is proposed prior to the year 2000.

Cumulative Effects - It should be noted that the Summer Transportation maps show some roads in roadless areas. This is considered acceptable since these are service level D roads that are not maintained for travel by standard passenger vehicles. Potential effects from timber harvest and roading would be highest under Alternative 2, with approximately 6,360 acres of roadless area possibly impacted during the next decade, compared to 71,600 projected in the 1985 Forest Plan. However, this represents potential impact of only one percent or less to the inventoried roadless acres. This potential impact declines to 4,970 acres in Alternative 3, 3,030 acres in Alternative 1, 2,990 acres in Alternative 4, to 2,910 acres in Alternative 3M, to 1,530 acres in Alternative 5 and no acres in Alternative 6.

Wild, Scenic and Recreational Rivers

Consequences Common to All Alternatives - The eligibility of these rivers is not affected by the alternatives and all of the outstanding resource values will be protected by management prescriptions until such time as suitability studies are completed. Suitability studies need to be completed for all of these segments. This would need to be done on a priority basis for approximately one-third of the streams at a time, starting with those in the South Fork-Snake River Basin because of a current cooperative agreement with the State of Idaho. These studies would be done in coordination with the State of Idaho's studies and legislative recommendations. The remaining streams would probably be done in two additional studies - one for those in the Henry's Fork basin and a second for those in the Teton River basin and probably in that order of priority. The values represented by State of Idaho Water Resources designations for the Henry's and South Forks will be protected by the proposed Wild, Scenic and Recreation classification prescriptions and the forestwide direction to protect native cutthroat trout watersheds.

Consequences Which Vary by Alternative - Alternative 3M has deleted from eligibility the 3.5 miles for McCoy Creek which were shown as tentatively eligible pending a joint study with the Caribou N.F. That study was done in July 1996 and the findings were documented in a study report which has been added to the Wild, Scenic and Recreational Rivers Eligibility Determination Process Paper R. Other changes in the Final Plan include changing one-half of a mile of the Henry's Fork at Upper Mesa Falls from a proposed classification of Wild to Scenic. This was done because of the large amount of developments and public use within this section.

Visual Resources

Indicator - Visual Quality Objectives (VQO)—Acres by VQO Class and associated ranges of VQO

Consequences Which Vary by Alternative - With the exception of Alternative 2, the alternatives generally trend toward larger allocations of VQO's for Preservation, Retention and Partial Retention going from

Alternative 1 to Alternative 6 (Table II-1)

It should be noted that the VQO data in Table II-1 is mostly displayed as a range of VQO, such as retention to partial retention. This was necessary because the alternative prescriptions are described as a range, rather than with a single VQO. Therefore, the analysis could not be done in a comparative manner to the existing VQOs shown in Chapter III.

Alternatives 1-3 could result in some reduction in visual quality in areas of additional intensive timber harvest activity where VQOs of Modification and Maximum Modification are higher than in Alternatives 3M - 6. Alternatives 5 and 6 would tend to maintain and could improve existing visual quality except in areas of management needs. For example, there are areas along major travel routes and use areas where greater restrictions on timber harvesting might prevent maintaining existing natural or created openings for scenic vistas over extended time periods. Such restrictions could preclude enhancement of some landscapes in thick monotonous timber stands.

Developed Recreation

Consequences Common to All Alternatives - Consequences will basically be the same for all alternatives because developed recreation facility construction and reconstruction will be about the same in all alternatives. This will include heavy maintenance and some reconstruction of recreation facilities, but little new site development. However, there may be some tendency for higher demand for developed recreation facilities in Alternatives 1-2, with decreasing demand in Alternatives 3-6. Demand for facilities in all alternatives will eventually become greater than supply. Therefore, development opportunities on private or other lands will increase.

Consequences Which Vary by Alternative - Generally, the higher the overall development and management activity levels, the higher the recreation use potential and associated development. This is due to user response to higher amounts of available opportunities and road and trail access. In Alternatives 1-2, there would be continuing diversity of opportunities with considerable motorized access. As the alternatives (3-6) increase in motorized restrictions for wildlife protection the need for developed facilities may decline somewhat. However, it is possible that the need for development of facilities such as trailheads to access wilderness, rivers, etc. may increase over time even in these lower-scale development alternatives. This increase might offset the projected decline in amount of developed facilities.

Cumulative Effects - As the alternatives become more restrictive in terms of motorized access and opportunity (i.e., Alternatives 3-6), there would likely be some displacement of recreationists from areas now being used. This could place a heavier burden on existing developed facilities and create a need for new ones in a more concentrated geographic area. Furthermore, as recreation demand continues to increase, displacement and crowding could have a negative effect on recreation and social experiences. Additional displacement from adjacent heavy use areas such as Yellowstone National Park could further increase these effects.

Dispersed Recreation

Indicators - Acres allocated to dispersed camping prescription

Consequences Common to All Alternatives - Approximately the same number of road-accessed, dispersed campsites (293) would continue to be used in all alternatives. The number of sites would probably stay the same, because existing sites that would become unavailable due to new management allocations would simply be relocated to sites in other adjacent areas. Approximately one-third of these are heavy-use sites used by large groups (35+) during most days of the summer.

Consequences Which Vary by Alternative - In the mapping of alternatives, a varying number of heavy-use dispersed campsites was allocated to the 4/3 dispersed campsite management prescription. Alternative

1 was given the least allocation for heavy-use dispersed sites (Table II-1) because very little management of dispersed sites is being done at present. Alternatives 2-4 have the most acres allocated (approximately 2,800 each) and Alternatives 5-6 were designed with 1,500 acres each of dispersed site prescription (Prescription 4.3) because the latter two are intended as less management intensive alternatives. The intent of this prescription allocation was to recognize the heavy public interest in these sites for camping and to place a management emphasis on maintaining them while also maintaining soil resources and aquatic and riparian habitat. Provided funding for monitoring and management of these sites is available, alternatives with the highest acreage allocation should provide a better chance of maintaining recreation settings and opportunities, reducing or minimizing impacts to soils and vegetation, and maintaining or improving aquatic habitat. This is because restrictions on use of open fires, tents and hardening of sites, etc. could be put into effect to reduce impacts to vegetation and soils in or near aquatic zones.

Summer-use trail mileage of nonmotorized system trails would increase across all alternatives. This is due to restrictions for wildlife, watershed and recommended wilderness.

Cumulative Effects - It is possible in Alternatives 1-3 that some existing, dispersed camping sites and trails would need to be moved or closed to resolve conflicts with wildlife or aquatic management standards and guidelines. In Alternatives 3M through 6, displacement or closure of such areas would be more likely to occur because there is less access and because aquatic buffer restrictions are greater. This could have an adverse impact on recreation experiences, due to having to add more facilities elsewhere or due to crowding/congestion in smaller geographic areas. This could result in a need for increased monitoring, law enforcement and management costs to prevent unacceptable impacts to soil, vegetation, aquatic or wildlife resources.

Outfitters and Guides

Consequences Which Vary by Alternative - The number of new outfitter and guide permits issued would probably be less in Alternatives 3M - 6 than in 1-3. Overall activity and amount of outfitted use would also be less in Alternatives 3M - 6. The type of activities outfitted in Alternatives 3M - 6 would be more related to backcountry, nonmotorized uses, due to increased restrictions on motorized and mechanized equipment in roadless, recommended wilderness and designated wilderness areas.

Cumulative Effects - Cumulative impacts would be higher in Alternatives 1-3 than in 3M - 6 due to the higher demand for and access to recreation opportunities.

Special Uses (Recreation)

Consequences Common to All Alternatives - Requests for special use permits for activities such as special events (e.g., races, group activities, etc.) and outfitting and guiding will likely increase gradually for all alternatives. At some point of saturation, the permitted activities would reach a plateau and level off.

Consequences Which Vary by Alternative - The trend for special uses in response to alternatives would be similar to that for developed sites. In Alternatives 1-3, there would be more increase in demand for special events and motorized access permits such as guided snowmachine or OHV trips. However, in Alternatives 4-6, the trend would be more towards undeveloped, backcountry experiences such as mountain biking, backpacking, horsepacking, hunting and similar opportunities. The number of new special use permits would probably be less in Alternatives 3M - 6 than in 1-3 and overall recreation use under permitted activities would also be less.

Cumulative Effects - Cumulative impacts of actual recreational use would likely be higher in Alternatives 1-3 than in Alternatives 3M - 6, but those impacts would tend to be in the more easily accessed areas and closer to existing developed areas or special interest roads, trails or attractions. In Alternative 3M - 6, the additional cumulative impacts of recreation use would tend to be in more undeveloped, backcountry areas.

with a more primitive experience level. These, too, could have a measurable effect on wildlife, etc

SOCIAL AND ECONOMIC EFFECTS

Indicators - The indicators used are jobs, personal income, employee compensation, payments to local governments (from both the 25 % Fund and the Payments in Lieu of Taxes program), the Forest budget, population characteristics, land use patterns, effects on American Indians and civil rights concerns. The factors are all discussed under the larger categories of lifestyles, attitudes-beliefs-values and social organization. Background information on these indicators is contained in Chapter III and in the AMS

Consequences Common to All Alternatives

Population Characteristics - As discussed in Chapter III, the area is experiencing significant population increases. This rate of increase is not expected to be significantly affected by any of the alternatives.

The proportion of the area's population which is interested in the Forest for its recreational uses is expected to increase as recreational use continues to grow. The proportion of the area's population which is interested in the Forest for timber and livestock production is expected to decline.

Increasing development of private property located within the Forest or along its boundaries speaks to the desirability many people identify in having the Forest as a neighbor. That increased development and its associated contributions to the local tax bases are expected to continue regardless of which alternative is selected. Contractions in the local economy associated with a reduced level of timber harvest have already largely occurred. The mills in St. Anthony and Rexburg closed in 1992 and 1995 respectively. Most of the equipment has long since been disposed of. Reductions in the tax base associated with these closures occurred prior to the actions associated with the Forest Plan Revision.

Increasing development may jeopardize traditional uses of private land like livestock grazing. It may simply not make good sense economically for an individual to run livestock on land ripe for real estate development.

The permanence of the Forest does in itself provide a certain attraction for those considering relocating a family or business. Private property can be managed many different ways while the Forest will "always" be managed as a National Forest.

Land Use Patterns - Lands adjacent to and within the Forest are increasingly passing from traditional uses like ranching to new uses like subdivisions. Forest management has to consider these new neighbors when deciding how best to manage Forest resources with particular attention being devoted to fire protection, visual quality and recreation opportunity. This challenge can be expected to continue to increase under all alternatives as the human population of the area increases.

Some newcomers to the area have deviated from long-held local custom by closing off access through their property to Forest lands. Their focus on having a Forest in a more natural condition has also been at odds with those who see the Forest as being a resource to be used. These sorts of conflicts can be expected to continue, if not worsen, under all the alternatives due to continuing in-migration.

American Indians - Input from the Shoshone-Bannock tribes indicates their strong concern for continuing the viability and abundance of plants, fish and wildlife on the Forest for the use of their members consistent with their treaty rights (Shoshone-Bannock 1992 a-b). Some of that input has focused on project-specific needs like providing designated routes for motorized access during the tribes' hunting season. The tribes have also commented on their need to have the public and the Forest Service respect their rights to practice their native religion. All the alternatives are structured so as to afford tribal members the

rights guaranteed them by treaty

Heritage Resources - No significant differences in alternatives would likely exist. However, there would be more risk of disturbance of sites in Alternatives 1-3M than in 4-6. This risk is proportional to the incidence of ground-disturbing activities, as is the likelihood of discovering new heritage resource sites during project-specific site surveys.

Lifestyles - The overall level of recreational use is expected to continue to increase along with its associated income and employment opportunities. Increased recreation use means more people from outside the immediate local area visiting, spending money and in some cases investing in local property. The overall increase in recreation is expected to occur regardless of which alternative is selected. A certain percentage of the people visiting Yellowstone National Park can be expected to visit Forest attractions like Mesa Falls, for instance.

As Yellowstone and GTNPs become more crowded the Forest can also expect to accommodate more of the resulting spillover traffic. For instance, because snowmachining in Yellowstone National Park is reaching saturation levels, the Forest is expected to receive more of that traffic—regardless of which alternative is selected.

The area also provides opportunities for further development of recreational activities. The recently opened Grizzly Bear Theme Park just outside Yellowstone's boundaries is an example of the kind of development which might occur regardless of which alternative is selected for the Revision.

All the alternatives provide for a ceiling of 20 MMBF per decade for material harvested outside the ASQ and fuelwood categories. This material may be logged, if appropriate, to meet ecosystem objectives. Any employment associated with this activity would be the same for all the alternatives.

Civil Rights - No civil rights effects associated with the alternatives have been identified. The contraction in the local timber industry (which has largely already occurred) is not expected to have disproportionate effects on women or minority groups. No civil rights effects have been identified as varying across the alternatives.

It is possible that with reduced budgets it will be more difficult for the Forest to achieve its affirmative action objectives. Some have speculated that reductions in the Forest budget might disproportionately affect women and minorities. The recent downsizing which occurred on the Forest did not have that effect. Future downsizing efforts are not expected to have disproportionately negative effects on women or minorities.

Consequences Which Vary by Alternatives

American Indians - Tribal members use the Forest in many different ways. Some of these uses are identical to those of the general population and are described elsewhere herein. Other interests may be unique to tribal members. For instance, gathering Forest products is an important part of the culture of some tribal members. Those who rely on open roads or motorized trails to access favorite spots may have to find alternative sites if motorized access is restricted. It is also possible that closing motorized access to some areas may effectively deny access to the physically challenged.

Discussions with the tribes to-date have not revealed a preference for more or less roading per se. Concerns have been voiced about closing roads during the tribes hunting season—something that needs to be addressed on a continuing, site-specific basis. In general though, as the alternatives reduce the amount of roads and trails available for motorized use, the time and effort involved in hunting is expected to increase. That also applies to other tribal activities which require access to the land. Reducing motorized use may improve the suitability of the land for vision quest and various other cultural activities.

Each alternative maintains large areas of the Forest in both motorized and nonmotorized use but it is unclear whether one alternative meets overall Tribal needs better than another

The Forest recognizes the rights afforded the tribes by treaty and by law as outlined in Chapter III of this document. All the alternatives comply with these requirements

Lifestyles - Under Alternative 1 the reduced timber harvests of the recent past (1992-1995) would increase slightly. This would mean that more of those people whose livelihoods depend on timber harvesting would retain those jobs and the associated income. Because access to fuelwood is frequently aided by timber harvests, people might find it a little easier to get fuelwood for home use

Those whose livelihoods are affected by the availability of Forest forage for domestic livestock would not expect to see their use of that resource significantly change in terms of overall use. Area livestock producers would however, have to invest more resources into the improvement of range allotments without necessarily seeing any increased use of available forage

In terms of the way the Forest looks, people are likely to be generally pleased as young trees continue to reestablish in the large clearcuts of the Caldera and Plateau areas near Yellowstone National Park

People's reliance on the Forest as a recreation resource rather than as a provider of timber or livestock forage will continue. Area schools and roads will be receiving less money from Forest activities that generate receipts through the 25 percent Fund. However, PILT are expected to rise sharply as shown in Table IV-16, for all alternatives because of recent legislative changes. The budget for the Forest (and its associated local expenditures for payroll and supplies) is shown in Table IV-17

What Table IV-16 and IV-17 show in their entirety is that the Forest's primary effect on the local economy derives from the recreational activity it provides. No alternative is expected to significantly change the overall level of use — though usage is expected to shift over the landscape and by type. Clark county stands apart in many respects because of its very small population. It is the most rural of the counties in the APFEI. It struggles to provide the services people normally expect to see a county government provide. It has been hit hard recently by reductions in Forest 25 percent Fund payments which have not been made up by increased PILT. Projections are however, that scheduled increases in PILT will more than make up for past reductions in 25% Fund payments

Attitudes, Beliefs, Values - Many people believe the Forest should be used to produce timber products in conjunction with other Forest uses. Alternative 1 allocates a similar amount of land to intensive timber production as the existing Forest Plan. It increases timber harvests from the levels of the recent (1992-1995) past

The Forest will be stepping up its enforcement efforts to ensure that roads and trails closed to motorized traffic are not used by motorized vehicles. Even though in Alternative 1 these efforts are focused on enforcing existing motorized use restrictions, many people will see them as increased efforts to restrict motorized access. Others who see the Forest as being currently over-loaded are not likely to accept Alternative 1's substantial reductions in motorized use through increased enforcement, more effective closures or an improved public involvement program

There is great skepticism as to whether the road closures can be effectively implemented without the support of the local citizenry. The likelihood exists that there will be an increased level of conflicts between Forest Service personnel working to effectively close roads and trails and those who have grown accustomed to using them

The motorized access situation is particularly troublesome in that for a number of years, roaded access on the Forest was continually increasing—largely as a consequence of logging activity. People had come to expect more and more motorized access. In recent years, that access has been decreasing in order to

provide better habitat for wildlife. Restricting motorized access can adversely or beneficially affect how people pursue their customs and traditions. Closing a route to motorized access may deny one family access to a traditional wood-gathering site, for instance—while at the same time, another family may gain a mountain bike trail.

Alternative 1 would likely not be acceptable to those whose belief systems are more tuned to nonconsumptive use of the Forest. That is due in large part to the fact that in the past, Alternative 1 called for scheduling timber harvests at such high levels that they could not be continued into the future. Thus, the frame of reference people have for logging on the Forest is that areas entered for logging are logged very heavily — not harvested at rates that are sustainable. As formulated, Alternative 1 discontinues the practice of logging at levels that cannot be continued into the future. It is unlikely though, that those whose value systems were offended by Alternative 1's high harvest rates of the past could come to accept this alternative even without the high harvest levels.

COUNTY	Recent Levels (1992 - 1996)	Average Annual Figures for Decade 1 for Each Alternative							
		1	2	3	3M	4	5	6	
BONNEVILLE									
Total PILT	\$398	\$708	\$700	\$704	\$710	\$715	\$720	\$727	
Targhee-Related 25% Fund	40	47	52	46	39	32	25	15	
Total	438	755	752	750	749	747	745	742	
CLARK									
Total PILT	39	66	66	66	66	66	66	66	
Targhee-Related 25% Fund	82	96	106	94	78	66	51	31	
Total	121	162	172	160	144	132	117	97	
FREMONT									
Total PILT	264	499	488	501	518	531	546	568	
Targhee-Related 25% Fund	120	140	155	137	96	96	75	45	
Total	384	639	643	638	627	627	621	613	
JEFFERSON									
Total PILT	142	227	227	227	227	227	227	227	
Targhee-Related 25% Fund	0	0	0	0	0	0	0	0	
Total	142	227	227	227	227	227	227	227	
MADISON									
Total PILT	37	66	66	66	68	68	70	71	
Targhee-Related 25% Fund	9	10	11	10	8	7	5	3	
Total	47	76	77	76	76	75	75	74	
TETON									
Total PILT	53	98	96	98	101	103	106	109	
Targhee-Related 25% Fund	20	23	25	22	18	16	12	7	
Total	73	121	121	120	119	119	118	116	
APFEL									
Total PILT	933	1,664	1,643	1,662	1,690	1,710	1,735	1,768	
Targhee-Related 25% Fund	272	316	349	309	257	217	168	101	
Total	1,205	1,980	1,992	1,971	1,947	1,927	1,903	1,869	

Columns may not total due to rounding

* PILT are a function of a given county's population, the area within it which is administered by the Forest Service, Bureau of Land Management, National Park Service, Bureau of Reclamation, Army, Fish and Wildlife Service, and Army Corps of Engineers, a schedule of payments, the last of whose changes occurs in 1999, payments received from other federal programs, the rate of inflation, and the level of funding. PILT figures shown in this table use the schedule of payments for 1999-on, the 25 % Fund payments shown, and funding at 72.852% (the average of the 77.373% funded in 1995 and the 68.330% funded in 1996). The figures shown do not reflect any increase for inflation, which is a factor in the calculations.

Big game hunting and in particular elk hunting, is a major event on the Forest. Participants eagerly await the season's arrival. The success they have enjoyed in recent years would be expected to continue with the selection of Alternative 1, although with continuing growth in the previously clearcut areas and more effective road closures, hunter success may be more difficult to achieve.

Sense of Control, Sense of Self-Sufficiency - The recent (1992-1995) reduced timber harvest rates would be increased only slightly in Alternative 1. During the recent reduced harvest period, businesses that could not get raw material from other timber sources either closed down or continued operations at reduced levels. Employees of those affected businesses had to find other jobs or relocate. These recent harvest reductions occurred because the Forest could not generate the timber harvests projected in the existing Forest Plan and comply with the full body of existing laws, regulations and Forest Plan direction itself. Projected decreases in fuelwood offerings are primarily associated with a recognition that the many restrictions on Forest fuelwood gathering have combined to make it less attractive for consumers.

People whose primary interest in the Forest is on nonconsumptive use would likely have a mixed response to the Forest's management under Alternative 1. Many of the Forest's watersheds that were previously heavily logged would be left largely undisturbed in Alternative 1 — including much of the area in the highly visible US Highway 20 corridor used by so many people heading into Yellowstone National Park. The timber harvest would, however, be moved into other areas to which a different set of recreationists might object.

Local governments receive payments associated with the Forest from the 25 percent Fund, which remits to local governments 25 percent of Forest gross receipts, and from the PILT program, which bases payments to local counties on their population, their area in certain federal ownerships, their receipts from other federal sources, a schedule of payments, the Consumer Price Index and the level of funding. Area counties receive substantially more from the latter program than from the former. It is expected to increase sharply in the coming decade, as shown in Table IV-16. Payments from the 25 percent Fund are expected to change as shown in Table IV-16. Money from these funds help compensate the local governments for expenses they incur relative to the federally-owned lands within their jurisdiction.

Social Organization, Community Cohesion - Selecting the Continue the Forest Plan Alternative (Alternative 1) would likely have no perceptible effect on community cohesion.

Social Organization, Community Stability - People involved in the timber industry and its related industries would likely see only minimal increases in jobs. More jobs will become available in the sectors serving recreationists. The livestock industry would see little change other than the need to invest more money into permitted use areas. For some who are operating on the margin, that could be the difference between maintaining an operation and getting out of the business, but overall use of the Forest forage resource by livestock is expected to change very little. Those trends have been in place in the local area for some time. They will continue under Alternative 1.

Economic Efficiency - The primary measure of economic efficiency used in the analysis is Present Net Value (PNV), i.e., "The difference between the discounted value (benefits) of all outputs to which monetary values or established market prices are assigned and the total discounted costs of managing the planning area (36 CFR 219.3)."

Dollar values were identified for recreation, timber, livestock grazing and water. Included in the analysis are all costs of managing the Forest, including firefighting, law enforcement and monitoring.

As shown in Table IV-17, the range of the PNVs is quite small. The predominant reason for this small range is that recreation and water benefits, which comprise the great bulk of dollar-valued benefits, are not expected to vary by alternative. Changes in recreation use may occur, such as concentration of use in smaller areas or movement of recreationists from one type of recreation to another. The overall level of recreation is expected to be the same for all alternatives. Likewise, no changes in water flows from the

Forest are anticipated by alternative Changes in benefits thus derive from changes in the range and timber programs

Variations in costs do occur across the alternatives and over time These are associated with different levels of timber harvest, increasing road restrictions and law enforcement and increasing costs of firefighting

Lifestyles - The numbering scheme of these alternatives stretches from 2 to 6 As the numbers assigned to the alternatives increase the alternatives move generally toward

- Fewer opportunities to make a living off the Forest by producing timber products or raising livestock
- Restricting those management activities which leave lasting visual reminders
- Increasing the possibility of lasting visual reminders due to unmanaged occurrences like wildfires
- Reduced incidence of livestock grazing
- Fewer roads and trails
- Fewer roads and trails open to motorized use
- Less cross-country motorized use
- More nonmotorized recreation opportunities
- Greater protection of wildlife habitat
- More recommended wilderness
- Less need for reforestation
- Faster watershed improvement

Timber-related employment would be expected to vary directly and proportionally to the projected ASQ

Reductions in domestic livestock grazing are significant in Alternatives 4, 5 and 6 The economic viability of grazing operations is likely to diminish as restrictions are placed on the allotments to improve resource conditions

Aesthetically, those desiring a more natural appearing landscape will see the heavily logged areas of the Forest coming back in new growth in all the alternatives The alternatives with higher levels of ASQ will harvest larger amounts of timber in other less-logged or nonlogged watersheds around the Forest Those areas will show the effects of humans working on the land, building roads, removing timber and establishing new timber stands in direct proportion to the amount of ASQ

Those alternatives with fewer miles of road and trail open for motorized use (as shown in Chapter II) would likely see increased concentrations of motorized trail use on the miles remaining open, lower increases in recreation dependent on motorized use, increases in nonmotorized recreation, or some combination thereof The way people recreate on the Forest will definitely change People will not have the same type of hunting experience in every alternative Opportunities for solitary experiences on the Forest will change as well

Attitudes, Beliefs, Values - The numbering scheme of these alternatives stretches from 2 to 6 Alternative 3M was substantially modified based on public input between the Draft and this Final document It provides many exceptions to the following generalization As the numbers assigned to the alternatives increase, the alternatives move generally toward

- Greater accommodation of those who feel the Forest's resources should be left to change without human intervention
- Less accommodation of those who feel the Forest's resources should be used for the benefit of humans
- Greater trust that developments which occur without human intervention will benefit the ecosystem

Table IV-17 Summary of Forest Economic Effects on the Area of Primary Economic Influence (APFEI)

	Recent Levels	Average Annual Figures for Decade 1 for Each Alternative (Dollar figures are expressed as million dollars)						
		1	2	3	3M	4	5	6
Targhee-Related JOBS 2/								
Livestock	102	103	99	99	99	93	86	86
Recreation	2,032	2,136	2,136	2,136	2,136	2,136	2,136	2,136
Timber (ASQ-based)	52	66	77	64	48	36	21	0
Total	2,186	2,305	2,312	2,299	2,283	2,268	2,243	2,222
Targhee-Related EMPLOYEE COMPENSATION 3/								
Livestock	\$10	\$10	\$09	\$09	\$09	\$09	\$08	\$08
Recreation	393	413	413	413	413	413	413	413
Timber (ASQ)	11	14	16	14	10	08	04	0
Total	414	437	438	436	432	430	425	421
Targhee-Related PROPERTY INCOME 3/								
Livestock	\$19	\$19	\$18	\$18	\$18	\$17	\$16	\$16
Recreation	251	264	264	264	264	264	264	264
Timber (ASQ)	09	11	13	11	08	06	04	0
Total	279	294	295	293	290	287	284	280
Total APFEI TRANSFER PAYMENTS 4/								
Bonneville	\$195.8	\$284.1	\$284.1	\$284.1	\$284.1	\$284.1	\$284.1	\$284.1
Clark	2.1	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Fremont	31.9	43.6	43.6	43.6	43.6	43.6	43.6	43.6
Jefferson	38.8	55.5	55.5	55.5	55.5	55.5	55.5	55.5
Madison	35.7	52.8	52.8	52.8	52.8	52.8	52.8	52.8
Teton	9.1	12.8	12.8	12.8	12.8	12.8	12.8	12.8
APFEI	313.5	451.8	451.8	451.8	451.8	451.8	451.8	451.8
Total APFEI Payments in Lieu of Taxes	\$0.93	\$1.66	\$1.64	\$1.66	\$1.69	\$1.71	\$1.74	\$1.77
Targhee-related 25% Fund Payments	0.27	0.32	0.35	0.31	0.26	0.22	0.17	0.10
TOTAL	1.21	1.98	1.99	1.97	1.95	1.93	1.90	1.87
Forest Expenditures		\$12.3	\$12.6	\$12.7	\$13.5	\$12.3	\$12.2	\$10.3
Forest Expenditures Plus Other								
Federal Costs		13.6	13.9	14.1	14.9	13.8	13.8	11.4
Present Value of Benefits (PVB) 5/	NA	\$2,857	\$2,885	\$2,851	\$2,792	\$2,759	\$2,709	\$2,595
Present Value of Costs (PVC) 5/	NA	369	403	410	427	396	397	380
Present Net Value (PNV) 5/	NA	2,461	2,482	2,440	2,366	2,363	2,313	2,215
Cash Receipts 6/	\$1.2	\$1.4	\$1.6	\$1.4	\$1.2	\$1	\$0.8	\$0.4
Payments-in-Kind 6/	0	0	0	0	0	0	0	0

Columns may not sum to totals due to rounding

1/ Recent levels for livestock are 1991-1993, recreation 1994-1996, and timber 1992-1995. Transfer payments are 1994. Payments to local governments are 1992-1996. Forest budget is 1992-1996. Dollar figures are not adjusted for inflation.

2/ Source: IMPLAN model. Full and part-time employment, seasonal and yearlong.

3/ Source: IMPLAN model. 1992 dollar terms. Employee Compensation comprises wages and salaries plus the value of benefits and any contributions to social security and pension funds by the employer and the employees. Property Income comprises Proprietary Income (the income of sole proprietorships), Indirect Business Taxes (sales excise and value-added taxes, and customs duties), and Other Property Income (dividend interest and rental income). USDA Forest Service, 1993. Micro IMPLAN User's Guide. Carol Tyler, Susan Winter, Greg Alvard, Eric Siverts. Land Management Planning Systems Group, Fort Collins, CO.

4/ Income payments to persons for which no current services are performed. These are payments by government and business to individuals and nonprofit institutions. Generally, they are paid in monetary form; major exceptions are food stamps and medical vendor payments. Government transfer payments to nonprofit institutions exclude payments for work under research and development contracts. Source: Regional Economic Information System (REIS) 1989-1994, Bureau of Economics Analysis, as maintained by the University of Virginia website: <http://www.lib.virginia.edu/socsci/reis/reis1.html>. Decade 1 estimates were developed by regressing a year 2002 figure from the REIS data for years 1984, 1989, 1993, and 1994.

5/ 150 year period of analysis, 4 percent discount rate, 1996 dollar terms.

6/ Nominal dollars. Average of 1994-1996 for recent levels. Payment-in-kind are purchaser road credits. Figures shown for the alternatives are in 1996 dollar terms.

Social Organization (Community Cohesion and Stability) - Any of the alternatives would create stress on the local social organization. The most stressful would likely be those alternatives near the extremes of the spectrum—1 and 2, 5 and 6—because they respond more clearly to the needs of one group rather than those of another. For instance, Alternatives 5 and 6 recognize the needs of those favoring increases in nonmotorized recreation and protection of wildlife habitat as being more important than the needs of those who favor motorized recreation use and timber harvest on the Forest.

In order for the local communities to come together in a positive manner, some sense of a new social order must emerge on the local scene that integrates the diverse views held on how the Forest should be managed. Otherwise the tensions and stresses associated with an un-networked leadership are likely to continue. The Forest can also work constructively in this area by maintaining its efforts in public involvement.

To the extent that new social order is not achieved, there will likely be progressively more vandalism and trespass associated with the alternatives as they decrease motorized access on the Forest.

Facilities

Consequences Common to All Alternatives - The individual facilities are not anticipated to have any major effects on environmental components beyond those existing today. The Forest may alter and repair such facilities as administrative sites and other structures on the land owned by the federal government, as necessary to carry out its mission. Any proposed facilities will be subject to environmental analysis to verify the need for the proposal, to review alternatives and to determine site-specific effects and mitigation measures as needed. Decisions on proposals will be based on separate environmental assessments or impact statements.

Non-Recreational Special Uses

Consequences Common to All Alternatives - There are approximately 204 existing special use permits, in addition to recreation special use permits on the Forest. Ditches, canals, fences, power plants, power-lines, telephone lines, fences, roads, electronic sites, communication sites and dams are all examples of these uses.

Any new proposed special use permits will be subject to environmental analysis to verify the need for the proposal, to review alternatives and to determine site-specific effects and mitigation measures as needed. Decisions on proposals will be based on separate environmental assessments or impact statements.

Consequences Which Vary by Alternative - Alternative 2 identifies two potential communication sites. One site is on the Island Park Ranger District, located on Two Top Mountain. The other is located on Palisades Ranger District on Big Elk Mountain. The other alternatives are unchanged.

PRODUCTION OF COMMODITY RESOURCES

Timber

Indicator - Volume Harvested, Allowable Sale Quantity (ASQ)

Other Indicators

- 1 Unscheduled Timber Harvested
- 2 Firewood/Product Volume
- 5 Harvest System
- 6 Timber Stand Improvement (TSI)
- 8 Suitable Timber Acres
- 6 Acres Harvested
- 7 Noninterchangeable Component (NIC)
- 8 Harvest Volume as a Percent of Long Term Sustained Yield
- 9 Supply and Demand for Wood Products
- 10 Reforestation

Consequences Common to All Alternatives

Unscheduled Timber Harvest - This is volume harvested from forested lands other than ASQ lands. All alternatives allow unscheduled timber harvesting for the following purposes

- Public safety,
- Visual quality,
- Long term maintenance of vegetation conditions,
- Commercial, personal use and camp firewood,
- Commercial and administrative post and pole cutting,
- Administrative use,
- Achieve mature growth standards,
- Meet specific recreation objectives,
- Attain desired vegetation characteristics,
- Improve wildlife habitat, and,
- Where needed to meet management prescription goals

The harvest volume allowed with unscheduled timber harvest for all alternatives is 20.0 MMBF for the decade. Treatments will occur to implement EM, meet various prescription direction, goals and objectives and follow forestwide standards and guidelines. Accomplishment of unscheduled timber harvest is not mandatory and requires site-specific NEPA analysis.

Firewood/Product Volume - All alternatives allow harvest of wood products other than ASQ volume. A goal of the Revision is to conduct an inventory for determining a sustainable level of firewood and then offer that level. A current estimate of volume (firewood and products) that would be available from the forest annually during this planning period (the first decade of revision implementation) is 3.8 MMBF. This compares to approximately 4.6 MMBF that was sold during Fiscal Year 95 and 6.3 MMBF which is a four-year average for the years of 1992-95.

All alternatives harvest less firewood and product volume compared to the levels associated with the past planning period. Demand for firewood is down, due to a decreased supply and the quality of offered material, over the past 4-5 years. The anticipated supply level is below the expected demand. This will result in more competition for sales and therefore, increased cost to purchasers. Demand for product volume (post and poles) is increasing within the planning area. There will be a decrease in availability of

personal use post and poles for farm and ranch use and a move toward competitive bids as demand will exceed supply. The supply of poles may be augmented by pre-commercial thinning material as thinning opportunities will increase during this planning period.

Harvest System - The ASQ acres for all alternatives will be harvested using even-aged silvicultural systems (clearcut, commercial thinning, seed tree, shelterwood and overstory removal) and uneven-aged systems (group selection, individual tree selection and commercial thinning). Specific direction regarding appropriate harvest systems for each species will be developed through silviculture prescriptions by certified silviculturists on a site-specific basis.

Timber Stand Improvement - All of the alternatives allow 19,500 acres of TSI to be accomplished during the decade.

Consequences Which Vary by Alternative - Table IV-18 displays the land classifications for the Forest

	ALT 1	ALT 2	ALT 3	ALT 3M	ALT 4	ALT 5	ALT 6
Non-Forest land (includes water)	681,079	681,079	681,079	681,079	681,079	681,079	681,079
Forest land	1,213,198	1,213,198	1,213,198	1,213,198	1,213,198	1,213,198	1,213,198
Forest land withdrawn from timber production	115,695	115,695	115,695	115,695	115,695	115,695	115,695
Forest land not capable of producing crops of industrial wood	84,458	84,458	84,458	84,458	84,458	84,458	84,458
Forest land physically unsuitable	309,945	309,945	309,945	309,945	309,945	309,945	309,945
Tentatively suitable Forest land	703,100	703,100	703,100	703,100	703,100	703,100	703,100
Forest land not appropriate for timber production	114,518	106,142	177,982	237,532	303,481	503,362	703,100
Unsuitable Forest land	624,616	616,240	688,080	747,630	813,579	1,013,460	1,213,198
Total suitable Forest land	588,582	596,958	525,118	465,568	399,619	199,738	0

Timber Prescription Areas - Table IV-19 displays the total number of acres within each alternative which are allocated to timber management activities. The display represents total acres within timber management prescription boundaries (includes forested and nonforested).

	Alt 1	Alt 2	Alt 3	Alt 3-M	Alt 4	Alt 5	Alt 6
Timber Prescription Ac	773,821	848,224	665,042	601,167	523,375	271,510	0

Suitable Timber Acres - All seven alternatives have different amounts of acres suited for timber management. Table IV-20 displays the numbers of acres of suitable timber available by alternative. Total tentatively suitable acres for the Forest are 703,100. The process used to determine total suitable acres is found in Process Paper C.

	Alt 1	Alt 2	Alt 3	Alt 3-M	Alt 4	Alt 5	Alt 6
Suitable Acres	588,582	596,958	525,118	465,568	399,619	199,738	0

Total suitable acres shown reflect tentatively suitable forest acres within the timber management prescription acres shown in Table IV-19. The difference between tentatively suitable acres (703,100) and those shown in Table IV-20, reflect specific constraints within the prescription mix in each alternative. The alternatives with the largest acreages of suitable forest land will have the most effect on forested vegetation.

Table IV-21 displays the current and projected future age class distribution on suitable lands if ASQ projections are met. Alternative 6 is not shown in the table. Alternative 6 has no suitable acres and proposes no scheduled harvest (ASQ), therefore, no change is anticipated during the decade from vegetation treatments.

Alternative 1			Alternative 3-M		
Age Class	Present	Future	Age Class	Present	Future
0-9 (years)	288,610	4,890	0-9 (years)	178,549	3,530
10-29	62,519	281,189	10-29	53,565	223,882
30-49	3,489	11,327	30-49	2,874	9,360
50-89	114,998	60,928	50-89	92,776	50,589
90-159	163,924	210,042	90-159	127,077	163,742
160 +	15,043	20,206	160 +	10,728	14,466
Alternative 2			Alternative 4		
Age Class	Present	Future	Age Class	Present	Future
0-9 (years)	236,942	5,710	0-9 (years)	151,864	1,664
10-29	61,527	288,576	10-29	41,961	186,870
30-49	3,304	11,212	30-49	1,734	7,604
50-89	115,405	61,138	50-89	79,665	42,704
90-159	165,244	210,639	90-159	114,806	147,889
160 +	14,536	19,683	160 +	9,590	12,888
Alternative 3			Alternative 5		
Age Class	Present	Future	Age Class	Present	Future
0-9 (years)	195,446	4,780	0-9 (years)	75,804	1,550
10-29	59,250	245,253	10-29	17,037	89,477
30-49	3,094	10,709	30-49	932	3,732
50-89	107,585	57,036	50-89	40,268	21,966
90-159	147,765	190,877	90-159	59,032	74,610
160 +	11,977	16,462	160 +	6,666	8,403

1/ Displays the current and future age class distribution of suitable acres for each alternative during the planning period. Changes between current and future are based on projected vegetation treatments (ASQ).

Acres Harvested - Table IV-22 displays harvest acres for each alternative. Harvest acres are determined by the number of suitable acres within management prescriptions that allow timber harvest activities. The differences between the acres shown below and the suitable acres shown above is due to specific con-

straints within each prescription area, past timber activities and that sustainability is based on a 150 year period of analysis rather than the first decade. Process Paper B provides information on the constraints used for this analysis.

	Alt 1	Alt 2	Alt 3	Alt 3-M	Alt 4	Alt 5	Alt 6
Harvest Acres (Yr)	2,838	3,308	2,778	2,052	1,547	900	0
Harvest Acres (Dec)	28,380	33,080	27,780	20,520	15,470	9,000	0
% of Total Forested Acres	2.3	2.7	2.3	1.7	1.3	0.1	0.0
% of Tentatively Suitable Acres	4.0	4.7	4.0	2.9	2.2	1.3	0.0
% of Alternative Suitable Acres	4.8	5.6	5.3	4.4	3.9	4.5	0.0
Mixed Conifer Harvest Acres	553	645	542	400	301	175	0
Spruce/Fir Harvest Acres	11	13	10	8	6	3	0
% Tractor Logging	98	98	98	98	98	98	0.0
% Cable Logging	2	2	2	2	2	2	0.0
Regeneration Harvest							
Clearcut	187	218	183	135	102	59	0
Shelterwood							
Prep Cut	0	0	0	0	0	0	0
Seed Cut	447	520	437	323	244	142	0
Removal Cut	302	353	295	218	164	96	0
Selection							
Group	507	591	497	367	277	161	0
Individual Tree	1,030	1,200	1,009	745	561	326	0
Intermediate Harvest							
Commercial Thinning	365	426					
Salvage/Sanitation	0	0	0	0	0	0	0
Timber Stand Imprvmt	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Reforestation	465	500	465	415	380	340	230

Alternative 2 harvests the most acres during the decade followed by 1, 3, 3M, 4 and 5. There are no ASQ harvest acres associated with Alternative 6. All alternatives harvest 2.7 percent or less of the total forested acres and 5.6 percent or less of total suitable acres over the next decade.

Harvest Volume - Harvest volume data is shown in Table IV-23. ASQ is the amount of timber volume that each alternative schedules to be harvested based on the number of suitable acres, average volume per acre and management direction within each prescription area.

	Alt 1	Alt 2	Alt 3	Alt 3-M	Alt 4	Alt 5	Alt 6
Annual (ASQ)	11,068	12,900	10,834	8,000	6,033	3,510	0
Decade (ASQ)	110,680	129,000	108,340	80,000	60,330	35,100	0
Average Vol/Ac	3,900	3,900	3,900	3,900	3,900	3,900	0
Doug Fir Volume	5,136	5,986	5,027	3,711	2,800	1,630	0
MX3 Volume	2,157	2,515	2,114	1,559	1,174	683	0
LPP Volume	1,903	2,219	1,864	1,376	1,037	605	0
MX Volume	1,829	2,129	1,790	1,322	998	581	0
SF Volume	43	51	39	32	22	11	0

Alternative 2 provides the most volume harvested during the decade, followed by Alternatives 1, 3, 3M, 4 and 5. Alternative 6 does not provide any ASQ harvest.

Volumes per acre are shown above in Table IV-23. The average volume per acre across the alternatives is about 3.9 MBF. During the previous planning period (1981 - 1990) the planned volume per acre averaged around 5.0 MBF and the actual sawtimber volume per acre was 6.2 MBF. The planned volume per acre is less than the previous planning period due to two wildlife constraints. One requires 20 logs per acre in each decomposition class be left on-site. These logs should be a minimum of 7-inch in diameter (average 9.5-inch in diameter) and be 20 feet long. This would equate to about 0.75-1.0 MBF per acre left on the ground if adequate down and woody material is not available. The second constraint requires leaving snags and snag recruitment trees. For a 100 percent biological potential at the high end, 10 snags per acre and 25 snag recruitment trees per acre (half in the 7.0-inch-9.9-inch diameter class) would have to be left. This would also equate to 0.65-1.25 MBF per acre being left standing.

Noninterchangeable Component (NIC) - Table IV-24 displays the number and percent of suitable acres by alternative that fall into a NIC. NIC acres are ASQ acres associated with forested slopes between 40-60 percent, specific prescriptions (5.3.2 - 5.3.5, 5.7, 5.8 and 5.9.2) and areas designated as roadless. This component indicates a portion of the ASQ which need not be substituted for from other areas or species types. Volume programmed from a NIC need not be replaced by volume from other NICs. Alternative 1 has the largest amount of NIC acres followed by Alternatives 3, 2, 3M, 4 and 5. Alternative 5 also has the least amount of suitable acres of any alternative with a scheduled timber harvest.

	Alt 1	Alt 2	Alt 3	Alt 3-M	Alt 4	Alt 5	Alt 6
NIC Acres (Total)	321,612	231,514	250,443	227,229	183,236	22,800	0
% of Suitable Acres	55	39	48	49	46	11	0
Acres Roadless	61,450	76,190	38,608	34,875	27,361	17,273	0
Acres 40-60% Slopes	8,029	8,684	7,348	6,498	6,500	4,754	0
Acres both roadless and 40 - 60% slopes	1,614	2,596	1,034	889	825	733	0
Acres Prescriptions	250,519	144,044	203,453	184,967	148,550	0	0

Table IV-25 displays the potential volume that could come from each NIC category

	Alt 1	Alt 2	Alt 3	Alt 3-M	Alt 4	Alt 5	Alt 6
NIC Volume (total)	38,446	63,063	45,856	32,000	18,969	5,967	0
% of ASQ	35	49	42	40	31	17	0
Roadless	11,817	24,804	19,383	11,349	11,661	5,616	0
%	30	40	42	35	62	94	0
Slopes 40-60%	1,090	1,291	1,084	780	601	351	0
%	1	20	3	3	3	6	0
Prescriptions	26,520	25,350	25,389	19,851	6,708	0	0
%	69	40	55	62	35	0	0

Table IV-26 displays which of the 16 Roadless Areas have the potential to be entered during the decade by alternative for ASQ harvest. Alternative 2 enters the most and Alternative 6 does not enter any

Roadless Area Name	1	2	3	3M	4	5	6
Diamond Peak							
Italian Peak		X	X				
Garfield Mtn	X	X	X	X	X	X	
Mt. Jefferson	X	X	X	X	X	X	
Reynolds Pass	X	X					
Lionhead		X					
Two-top	X	X					
Winegar addition		X					
West Slope Tetons	X	X	X	X	X	X	
Garns Mtn		X	X	X	X	X	
Palisades							
Bald Mtn							
Bear Creek		X	X	X	X		
Poker Peak							
Caribou City		X	X	X	X		
Pole Creek	X	X	X	X	X		

Long Term Sustained Yield Capacity (LTSYC) - LTSYC is the highest uniform wood yield from lands being managed for timber production that may be sustained, under a specified management intensity, consistent with multiple use objectives. Table IV-27 displays the LTSYC on an annual basis for each alternative. LTSYC generally shown in MCF (thousand cubic feet) is also displayed in MBF (thousand board feet) (estimate) terms for ease in comparing the alternatives.

	Alt 1	Alt 2	Alt 3	Alt 3-M	Alt 4	Alt 5	Alt 6
LTSYC (MCF/Yr)	6,181	6,269	5,513	4,889	4,196	2,097	NA
LTSYC (MBF/Yr)	25,997	25,632	22,868	20,275	17,403	8,693	NA
Proposed ASQ Harvest Volume as % of LTSYC	43	50	47	39	35	40	NA

LTSYC indicates the amount of volume that is produced annually from the suited acres shown for each alternative in the long term. This includes growth from all trees and does not necessarily mean total merchantable volume that is available for harvest. By law, harvest levels cannot exceed LTSYC. Alternative 2 comes the closest to meeting its LTSYC but only utilizes 50 percent in decade 1, about one half the annual growth predicted in the long term. Alternative 2 is followed by Alternatives 3, 1, 5, 3M and 4 respectively.

Supply and Demand - Chapter III displays information on the current supply for sawtimber and wood products and the predicted demand from operators in our area. Table IV-28 displays how the volume available from each alternative meets the demand.

	Alt 1	Alt 2	Alt 3	Alt 3-M	Alt 4	Alt 5	Alt 6
% Present Demand	42	47	41	33	28	20	11
% Survival Level	48	54	47	38	33	24	12

Present demand is for 35.7 MMBF of wood products. Alternative 1 provides 11.07 MMBF sawtimber and 3.8 MMBF of firewood products for a total of 14.87 MMBF or 42 percent of demand. Alternative 2 provides the most volume in terms of past supply and present demand but falls well short of historical levels provided by the Forest. Even during recent years (1991 - 1994) the Forest provided 54.4 percent of the volume available to the local demand area. Under Alternative 2, the Forest will supply about 47 percent of the volume available to the local market. Following Alternative 2, Alternatives 1, 3, 3M, 4, 5 and 6 provide decreasing amounts. Survival level is the minimum level of timber demand, from all operations, necessary to meet the needs of timber industry and personal use.

Future Harvest Levels - Table IV-29 displays future levels of harvest. It is assumed that management direction will remain the same for 150 years.

Decade	Alt 1	Alt 2	Alt 3	Alt 3-M	Alt 4	Alt 5	Alt 6
2	10,076	17,472	8,989	7,970	6,841	3,419	0
3	10,136	17,723	9,043	8,018	6,882	3,440	0
4	10,121	18,677	9,029	8,005	6,871	3,434	0
5	10,205	18,960	9,105	8,072	6,929	3,463	0
10	25,290	25,634	22,563	20,004	17,403	8,582	0
15	25,632	25,868	22,868	20,275	17,403	8,698	0

Reforestation - Table IV-30 displays the level of reforestation activities expected during the planning period and will be a mixture of artificial and natural regeneration. The amount of each will depend on the species harvested, harvest system used and suitability for natural regeneration during the planning period. This will be determined through site-specific analysis.

	Alt 1	Alt 2	Alt 3	Alt 3-M	Alt 4	Alt 5	Alt 6
Acres of Reforestation	4,650	5,000	4,650	4,150	3,800	340	230

Cumulative Effects

Silvicultural Systems - Even-aged management systems will continue to be used resulting in even-aged stands. Uneven-aged systems will also be used, but will have very little cumulative effect on forest succession as the seral stage generally does not change when these systems are used.

The type of silvicultural system applied has a bearing on the environmental effects. The systems are selected to achieve the objectives for an area, consistent with site-specific conditions.

Even-aged systems - The even-aged system of clearcutting, shelterwood and seed tree cutting affect the vegetation by creating earlier seral stages. This favors seral tree species (generally lodgepole pine, aspen and Douglas-fir) for the habitat type in which the cutting occurred.

Clearcutting removes all the merchantable vegetation at one time and requires the starting of a new stand by either natural regeneration or by planting seedlings. The new stand is generally established within 3 years of harvesting.

The shelterwood harvesting system also moves the vegetation to earlier seral stages. This system removes 60-70 percent of the vegetation at the first harvest, but leaves mature trees for shelter. Shelter trees moderate the environmental effects in comparison to clearcutting. Shelter trees provide shade that reduces soil temperature 10 to 30 degrees Fahrenheit and soil moisture is retained longer. Both conditions increase survival rates of the seedlings produced from the seed of shelter trees or of planted trees. When the new seedlings are two to eight feet tall, the overwood harvest is made, that is the shelter trees are removed leaving a new stand in the brush/seedling stage of succession.

Uneven-aged systems - The uneven-aged systems (group and individual tree selection, including salvage) do not generally change the seral stage over a large area. The individual tree selection system will not change the seral stage but may more quickly cause the stand to reach climax conditions, by favoring climax tree species and reducing the amount of the seral species. The group selection (openings of one-fourth to two acres) will create sufficient light and growing space to obtain regeneration of the seral species. Uneven aged systems have the least effect on the composition of the forested vegetation.

Even-aged management appears to include the most efficient and silviculturally correct cutting system for the lodgepole pine type. Uneven-aged systems appear to be the most efficient and silviculturally correct cutting system for spruce-fir types. However, during project analysis, the different silvicultural cutting systems will be reviewed to determine which systems best meet the silvicultural requirements of the tree species and site conditions of individual stands.

The harvesting of fuelwood will not substantially affect the forested vegetation. Fuelwood activities generally remove only the dead material (standing or down), thinning materials from beneath the crown canopy and slash from commercial timber harvests. This type of activity does not move stands forward or backwards in succession.

Intermediate cutting methods - Intermediate cutting methods such as thinning from above or below will be used throughout all timber types, intermediate cuts will be used to manage stand densities.

Fuelwood - The recent levels of fuelwood availability will continue to decrease due to the low number of acres treated under any alternative. Requirements for more down and woody vegetation and maintaining snags within harvest units will also reduce available fuelwood material offered in slash piles. Use of aspen for firewood material could increase due to the increased aspen acreage that is available for treatment.

Fire - The hazard from wildfire on the suited lands should remain about the same as in the past as the acres available to harvest, once harvested, will not reduce the composition of the mature component significantly. The hazard on the unsuitable lands should remain constant or slightly increase as the stands continue to mature and no activities are initiated to reduce fuel loading.

Insects and Disease - Insects and disease will continue to be present in both the suited and unsuitable lands. Vegetation management activities planned during this period will decrease in amount on the suited acres, but even a 2 percent or less reduction in mature stands provides some benefit in reducing insects and disease problems. On the unsuitable lands, insect and disease could build up to epidemic proportions.

Growth on the managed stands would increase with management intensity. As more lands are developed, total growth would increase. Growth on the unsuitable lands would remain constant or decrease as the stands increase in age and are past culmination in the later seral stages.

Livestock Grazing

Indicators -

- 1 Amount of permitted AUMs and livestock
- 2 Number of grazing permittees and permits
- 3 Amount of acres open to grazing
- 4 Number of allotments open to grazing
- 5 Acres of Range Management Prescription 6 1 (a-b)

Consequences Common to All Alternatives - For Alternatives 1 through 6, three vacant sheep allotments (1,483 AUMs) on the Island Park Ranger District and four vacant sheep allotments (2,830 AUMs) on the Ashton Ranger District will be closed to sheep and cattle grazing to better manage grizzly bear habitat, one vacant sheep allotment (585 AUMs) and one vacant sheep permit (540 AUMs) on the Dubois Ranger District and another vacant sheep allotment (750 AUMs) on the Palisades Ranger District will be closed to sheep and cattle grazing to improve watershed and soils conditions (Process Paper L). This reduction of 6,188 sheep AUMs reduces the number of open sheep allotments from 78 to 69 and closes 95,409 acres to grazing of domestic livestock. Since these allotments/permit are currently vacant, this reduction in a real sense has already occurred. Presently, based on 1993 data, the numbers of livestock actually using the forest are 20,362 cattle for 84,212 AUMs and 54,478 sheep for 44,006 AUMs. The reasons for the

difference between actual and permitted use are 1) the grazing capacities (livestock numbers and AUMs) for the vacant sheep allotments are counted as permitted because they are open allotments that are available for grazing, but because of resource concerns have not been grazed the last eight to ten years, and 2) livestock numbers and AUMs annually fluctuate because of market trends, changes in ranching operations, annual forage availability based on climate and weather conditions and implementation of changes in an AOP and/or AMP

For Alternatives 1 through 6 and the existing situation, all reconstruction of existing range improvements and all proposed new improvements will be needed equally. These improvements are needed to 1) arrest deteriorated range conditions and improve rangeland health, 2) maintain or implement improved grazing systems and AMPs and 3) mitigate site-specific situations identified in previously completed NEPA documents. All proposed new nonstructural improvements (burns, spray, rotobeat, seedings, etc.) and noxious weed control will be implemented to improve ecological conditions by meeting management objectives such as DVC and PFC. No increase in AUMs or livestock carrying capacity is anticipated from nonstructural range improvements.

There are 15 vacant sheep (S&G) allotments and no vacant cattle (C&H) allotments on the forest. As previously mentioned, nine vacant sheep allotments and one vacant sheep permit, for a total of 6,188 AUMs, will be immediately closed to cattle and sheep grazing when the Record Of Decision is signed. The remaining six vacant sheep allotments (4,206 AUMs) will remain open to grazing to be used by either permanent or swing sheep permittees (Table III-40). Two of these sheep allotments are on the Island Park Ranger District (Blue Creek and Hotel Creek) and are phase-out allotments (see Alternative 3M discussion and Process Papers L and N).

Depending on specific management prescription application, which varies by alternative, all permittees will be required to comply with the OROMTRD standards on their allotments (Process Paper N). Most grazing allotments are in more than one management prescription area.

Consequences Which Vary by Alternative - Unless otherwise specified, all environmental consequences are calculated to occur by the end of the first decade. The effects of implementation on indicators for all alternatives are shown in Table IV-30.

With the existing Forest Plan (Alternative 1), livestock management (grazing) systems are utilized to maintain or improve forage outputs for livestock and wildlife and to protect and improve watershed conditions. Direction is not given to sustain livestock use at any specified level. The direction is to "Obtain optimum use of all suitable grazing lands on the Forest consistent with other resource needs." Information about this direction and how well the existing Forest Plan met objectives can be found in the Range Section of the AMS.

Riparian utilization in Alternative 1 is expressed as a percentage of forage utilized and ranges between 30 and 65 percent for herbaceous vegetation and 20 to 40 percent for browse, depending on the type of grazing system and range condition. There is a 100 foot buffer zone on each side of all perennial streams.

Range Management Prescription 6.1 (a-b) provides two options. Category (a) allows motorized cross country travel with no open road density while Category (b) allows no motorized cross country travel and has an open road density of less than or equal to 2.0 miles/square mile. Presently, with the existing situation, unless otherwise shown as closed, all areas/roads/trails on the forest are open for motorized cross country travel with no road density restrictions.

Compared to the existing situation, Alternative 1 implements Range Management Prescription 6.1 (a-b) on 204,197 acres (202,701 acres in Category (a) and 1,496 acres in Category (b)) and maintains the existing number of grazing permits, permittees, sheep numbers and cattle allotments open to grazing. Compared to the existing situation, Alternative 1 projects a slight increase (one percent) in cattle numbers and cattle AUMs (1,201 AUMs) and reduces the number of sheep AUMs by 612. As previously mentioned, a 6,188 AUM reduction in sheep grazing has already occurred.

Alternatives 2-6 express riparian forage utilization in terms of stubble height of key species on and away from the HGL and have wider buffer zones than Alternative 1 or the existing situation. With Alternatives 2-6, livestock management (grazing) systems are utilized to maintain or improve forage outputs for livestock and wildlife and to protect and improve watershed conditions. The amount of protection varies among alternatives. Direction is not given to sustain livestock use at any specified level.

Alternative 2 implements an AIZ Prescription which provides for a 4-inch stubble height of key plant species at the HGL for all riparian areas either at the end of the grazing period or for all pastures grazed after September 1. Alternative 2 has buffer widths ranging from 100 feet to 200 feet on each side of all fish bearing streams, depending on the subsection. Compared to the existing situation, Alternative 2 implements Range Management Prescription 6.1 (a-b) on 193,403 acres (96,969 acres in (a) and 96,434 acres in (b)) and maintains the existing number of grazing permits, permittees and cattle allotments open to grazing.

Indicator	Existing	1	2	3	3-M	4	5	6
AUMs 5/ Sheep Cattle	55,295 93,480	48,495 94,681	48,195 90,341	48,195 90,156	1/ 48,195 90,156	1/ 47,596 82,217	4/ 39,140 82,217	4/ 39,096 82,217
Livestock 5/ Sheep Cattle	71,985 22,066	61,985 21,266	61,585 20,016	61,585 20,016	61,585 20,016	61,585 18,216	44,045 18,216	44,045 18,216
Permittees Sheep Cattle	33 142	33 142	33 142	33 142	22 142	22 132	22 132	22 132
Permits Sheep Cattle	76 201	76 201	76 201	76 201	60 201	60 187	60 187	60 187
Acres Open 3/ Closed 3/	1,466 401	1,371 496	1,371 496	1,371 496	1,371 496	1,371 496	1,245 622	1,245 622
Allotments 2/ Sheep Cattle	78 76	69 76	69 76	69 76	69 76	69 76	53 76	53 76
Acres Rx 6.1 "a" 3/ "b" 3/	0 0	202.7 1.5	97.0 96.4	97.0 95.6	0 157.4	0 171.2	0 32.2	0 17.5
1/ Phase out of sheep allotments/AUMs in bighorn sheep and grizzly bear habitat is expected to be completed within 30 years. No reductions associated with the phase-out are anticipated over the coming decade. 2/ Allotments open to grazing. 3/ Millions of acres. 4/ These figures reflect the immediate closure of sheep allotments/AUMs in bighorn sheep and grizzly bear habitat. 5/ Based on 1993 Forest Service Range Management Information System (FRAMIS) data.								

The grazing period is defined as the period of time livestock are using a specified pasture or unit within a grazing allotment, as identified in the yearly AOP or the AMP. The end of the grazing period will not coincide with the end of the permitted season, unless that pasture or unit is grazed last. The grazing period for a pasture or unit is shorter and not equal to the grazing season because there is usually more than one unit or pasture per allotment. The permitted season for the allotment is shown on the permit, the

grazing period for pastures or units is shown in the AOP

Compared to the existing situation, Alternative 2 projects additional reductions of sheep and cattle numbers and AUMs (Table IV-30). Alternative 2 will also require grazing permittees to comply with OROMTRD restrictions on an additional 96,434 acres (Category (b) portion of the 193,403 acres). As a result of providing improved riparian management, reductions in livestock AUMs are projected. Forestwide, a three percent reduction in cattle AUMs can be expected with implementation of Alternative 2. Most of the livestock reductions will occur on the Dubois Ranger District with reductions of 300 sheep AUMs and 4,224 (11 percent) cattle AUMs.

Alternative 3 is the same as Alternative 2, except for two items: 1) a slight reduction in cattle AUMs (185 AUM difference) and 2) the number of acres in Range Management Prescription 6.1.b (850 less acres in Alternative 3).

Alternative 3M, like Alternatives 2 and 3, implements the AIZ Prescription which provides for a 4-inch HGL stubble height for all riparian areas either at the end of the grazing period or for all pastures grazed after September 1. However, Alternative 3M has wider buffer widths than Alternatives 2 or 3, which range from 150 feet to 300 feet on each side of all fish-bearing streams, depending on the subsection.

For cattle numbers, AUMs, permittees, permits and allotments, Alternative 3M has the same effects as Alternative 3.

Compared to the existing situation, Alternative 3M implements a phase-out of sheep grazing on an opportunity basis to better manage grizzly bear and big horn sheep habitat on 16 open sheep allotments and one grazing permit on the Dubois, Island Park and Teton Basin Ranger Districts (Process Papers L and N). This phase-out will reduce sheep grazing by an additional 8,456 active AUMs. The reduction sustained as a result of grizzly bear habitat amounts to 3,964 AUMs on nine allotments, the reduction associated with bighorn sheep habitat amounts to 2,660 AUMs on five allotments and one permit and the reduction associated with both bighorn and grizzly bear habitat is 1,832 AUMs on two allotments. The phase-out not only reduces the sheep grazing on the allotments, but closes them to grazing as well, including cattle. As a result, an additional 125,853 acres would be closed on an opportunity basis (Process Papers L and N). As explained in Process Paper N, the allotments would be closed after all sheep are gone from the subsection.

Because of additional resource concerns, another 599 AUM reduction in sheep AUMs is anticipated with Alternative 3M. This reduction is not associated with the phase-out of sheep grazing.

Compared to the existing situation, Alternative 3M implements Range Management Prescription 6.1(a-b) on 157,385 acres. All of which is in category b which allows no motorized cross country travel and has an open road density of less than or equal to 2.0 miles/square mile. It also has the same effects on cattle grazing activities as Alternative 3.

Compared to the existing situation, Alternatives 4, 5 and 6 will achieve the best riparian and upland vegetation conditions in the shortest amount of time while still maintaining livestock production (Process Paper J), but will result in additional reductions of cattle AUMs. It is estimated that implementation of Alternatives 4, 5, or 6 will reduce cattle AUMs 12 percent (11,263 AUMs) forestwide. Alternative 4 implements the AIZ Prescription which provides for a 6-inch stubble height for riparian forage utilization at the end of the grazing period or for all pastures grazed after September 1 and has buffer widths ranging from 150 feet to 300 feet on each side of all fish-bearing streams, depending on the subsection. The most significant reductions in cattle AUMs will occur on the Dubois, Palisades, Teton Basin and Ashton Ranger Districts with projected reductions of 7,986 AUMs (22 percent), 1,770 AUMs (10 percent), 486 AUMs (8 percent) and 925 AUMs (6 percent) respectively.

Alternative 4 also implements the same phase-out of sheep grazing on the same allotments/acres for the same reasons as Alternative 3M and has the same consequences for the Dubois, Island Park and Teton Basin Ranger districts

Compared to the existing situation, Alternative 4 implements Range Management Prescription 6 1 b on 171,222 acres, all of which is in Category (b) which allows no motorized cross country travel and has an open road density of less than or equal to 2 0 miles/square mile

Alternative 5 is somewhat similar to Alternative 4, except for two items Alternative 5 does not allow sheep grazing in critical Grizzly Bear or bighorn sheep habitat As a result, all sheep grazing (nine allotments) on the Island Park Ranger District and four to five sheep allotments on the Teton Basin Ranger District and two winter allotments and one winter permit on the Dubois Ranger District will be immediately closed to sheep grazing rather than phased-out Alternative 5 implements Range Management Prescription 6 1 (b) on 32,186 acres

Except for a 44 AUM reduction in sheep AUMs on the Dubois Ranger District and the acres of Range Management Prescription 6 1, Alternative 6 is identical to Alternative 5 Alternative 6 implements Prescription 6 1 (b) on 17,484 acres

Cumulative Effects - Because ranching operations and allotment conditions vary across the forest, it is difficult to determine how each individual allotment or permittee will respond to implementation of the standards, guidelines and prescriptions associated with each alternative For example, a change in AUMs can be the result of changes in the number of livestock, permitted season or a combination of both As demonstrated by past situations the loss of AUMs can sometimes be mitigated while improvement in other resources such as fish and wildlife habitat and other noncommodity indicators occur

Forestwide, Alternative 1 will increase cattle AUMs and maintain the sheep AUMs presently in use on the Forest However, on a Forestwide scale, Alternative 1 will not meet the objectives

Compared to the existing situation Forestwide, the implementation of Alternatives 2, 3 or 3M are not likely to significantly or adversely affect the majority of livestock grazing permittees with grazing privileges on the Forest, except for cattle permittees on the Dubois Ranger District Improved riparian conditions as a result of implementation of a 4-inch stubble height along the HGL in the AIZ, is the main reason for the expected reduction in cattle AUMs across the Forest

Compared to the existing conditions, implementation of Alternatives 4, 5 or 6 will significantly affect livestock permittees on all Ranger Districts Because of improved riparian conditions resulting from implementation of the 6-inch stubble height standard along the HGL, Alternatives 4, 5 and 6 will have the most impact to cattle permittees, especially those on the Dubois and Palisades Ranger Districts Improved grizzly bear and bighorn sheep habitat resulting from the immediate closure of some sheep allotments in Alternatives 5 and 6 will have the most impact to sheep permittees, especially those on the Island Park, Teton Basin and to a lesser extent, Dubois Ranger District

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Irreversible commitment of resources refers to a decision that disturbs or reduces a nonrenewable resource or a renewable resource to the point that renewal can only occur over a long period of time and/or at a great expense Examples are minerals extraction, loss of cultural resources and construction of major roads or hydroelectric projects

Irretrievable commitment of resources refers to lost production or use of renewable resources due to land use decisions This represents the opportunities foregone for the period of time that the resource is unavailable

Mineral extraction activities will require site-specific environmental analysis that explores the extent and consequences of irreversible commitments. To lessen the irreversible commitment of resources, it is the Forest manager's job to provide mitigation that will minimize adverse environmental impacts.

The Forest has about 2,791 miles of open or restricted roads. Table IV-12 shows what will happen to that figure over the coming decade. Open and restricted road miles may be regarded as being effectively withdrawn from vegetation production. Roads reclaimed or obliterated may be regarded as beginning to regain their capability to produce vegetation.

There would be some irreversible losses to soil hydrologic function and site productivity in areas where management activities are directed. Adherence to soil quality standards and guidelines, which are designed to reduce adverse impacts to an acceptable level, should allow soils to recover their natural properties for resiliency (e.g., soil organic matter in both surface and subsoil layers, available water holding capacity, etc.).

Road construction, timber harvest, grazing, dispersed recreation and motorized recreation OHV use have the highest likelihood of producing irreversible damage to the soil resource. Wildfires within the cool, dry Douglas-fir forests, moist Douglas-fir forest and mid and lower elevation subalpine forests, where one or more fire cycles has elapsed due to fire suppression, might result in fires having a higher severity and intensity, resulting in irreversible losses (e.g., changes in the soils' chemical and physical properties or in the development of hydrophobic layers with subsequent increased overland flows and accelerated erosion) to the soil resource.

The portions of the inventoried roadless areas that are developed by roading and timber harvest will be lost for future wilderness consideration. Estimated acres that would be developed at some point during the next 150 years range from 0 acres in Alternative 6 to 63,600 acres in Alternative 2. Activities that are not scheduled by the Revision or are unforeseen, such as those external to the Forest Service (mining, power transmission lines), may also be regarded as an irreversible or irretrievable commitment of resources. See Table II-1 for a summary of wilderness and undeveloped acreage by alternative.

Adverse Environmental Effects that Cannot be Avoided - Adverse effects on some components of the environment cannot be avoided by actions proposed under the alternatives. Actions to benefit one component may have at least temporary adverse effects on another. A broad range of alternatives have been formulated, each with its own resource or environmental emphasis. Alternatives include management standards and guidelines, along with mitigation measures, to avoid or reduce adverse environmental effects. Monitoring will be used to measure how effective the standards and mitigation measures are in reducing adverse effects.

Some of the adverse effects that cannot be avoided in all alternatives include the following:

- Forest management activities frequently result in impacts upon the visual resource. These changes in the landscape, although usually temporary, are often objectionable to some observers.
- A short-term increase in fire hazard will occur due to waste material, limbs and tops left on the ground during and following timber harvest operations.
- A long-term increase in fire hazard will occur because actions are not being taken to reduce fuel loadings which are judged to be in excess of those which existed in the past.
- Intermittent and localized decrease in air quality may result due to dust from road construction, road maintenance and use, and due to smoke from wildfires, prescribed burns and campfires.

- Short-term localized increases in soil erosion, vegetation degradation and stream sedimentation may occur due to land-disturbing activities
- Elimination of small areas from vegetation production will occur due to construction of permanent physical developments
- Potential for additional conflicts between recreation use and other land use activities will increase in some alternatives
- Temporary disturbance of wildlife and their habitat conditions in localized areas may result from increased human activity and changed vegetation conditions
- Energy will be used to manage and provide goods and services
- Increased soil compaction may occur on activity sites such as timber harvest areas and recreation areas

Many of these adverse effects are temporary, occurring during the site-specific activity, or transitional as forest vegetation progresses through seral stages

Short-term Uses of the Human Environment and the Maintenance of Long-term Productivity - Short-term uses are those that generally occur on a yearly basis, such as livestock grazing or recreation site irrigation as a use of water. Long-term productivity refers to the capability of the land to provide for future generations. The quality of life for future generations is determined by the capability of the land to maintain its productivity.

Alternatives that have the greatest amount of timber harvest activity will result in the most short-term and continuing activity that may have an effect on the long-term productivity. Alternative 2 has the most potential for long-term effects, while Alternative 6 has the least. Other alternatives present middle range effects.

The loss of N F grazing privileges can cumulatively affect the stability of traditional values and income opportunities of the local rural areas. For example, if a local permittee loses a grazing privilege that accounts for 35 percent of the time needed to sustain livestock production for the overall ranching operation, then loss of the permit needs to be made up elsewhere. The purchase of additional hay or feed, reducing the base livestock herd or acquiring pasture elsewhere are ways this loss can be mitigated. If the 35 percent cannot be made up and the base herd is reduced to a level where it is no longer profitable or the costs for additional hay or pasture are too expensive or not available, then the ranch or portions of the ranch could be sold. Ranches and farms sold in this region have typically been sold for housing units or subdivisions. The loss of open space (ranch and farm land) that often also provides quality wildlife habitat, is an irreversible and irretrievable commitment of resources, resulting in direct adverse effects to such things as wildlife and fish habitat, aesthetics and the economic and social environment.

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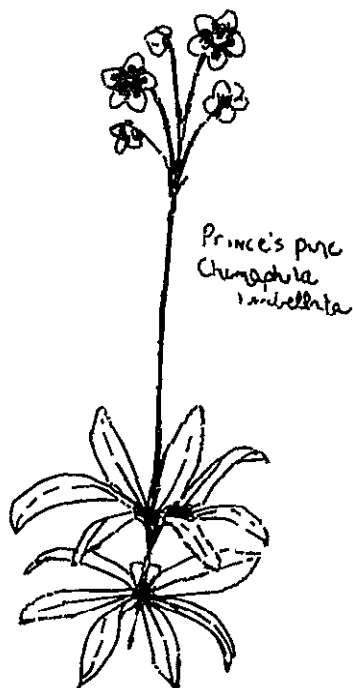
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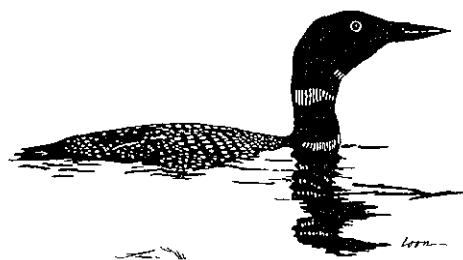


Appendix

**Appendix A. Response to Public Comments
(Separate Document)**

**Appendix B. Update to The Roadless Areas
Process Paper For Wilderness Recommenda-
tion Rationale**

Appendix C. Summer And Winter Access



United States
Department of
Agriculture

Forest Service

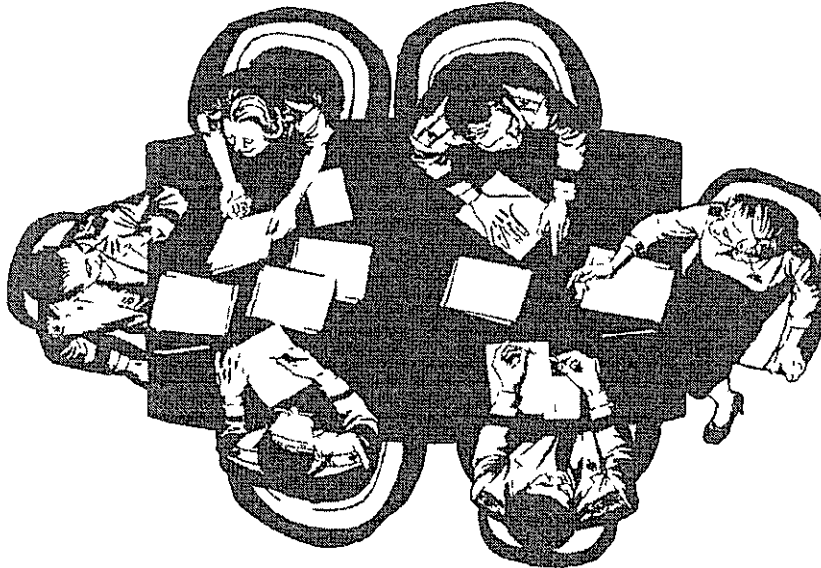
Intermountain
Region

Targhee
National
Forest



Appendix A Response To Public Comments

Targhee National Forest
1997 Revised Forest Plan



This Appendix A to the FEIS is a separate document because of its large size

APPENDIX B

UPDATE TO THE ROADLESS AREAS PROCESS PAPER FOR WILDERNESS RECOMMENDATION RATIONALE

The following text is provided as an update of the Roadless Process Paper. This narrative rationale for/against proposing each of the 16 remaining roadless areas as recommended wilderness in the Revised Forest Plan (Alternative 3M) is based on the ratings shown in Table IV-14 as shown in Chapter IV of the FEIS.

Italian Peak—This area was recommended for wilderness consideration for the following reasons:

The area has moderate manageability potential, low impacts to natural integrity, and high opportunity for solitude. It also has a high degree of opportunity for challenging experiences. Topography, vegetation, rock formations, and size of the area enhance the opportunity for primitive recreation. This area is recommended in the current Forest Plan and is adjacent to a recommended area on the Beaverhead National Forest. The total area recommended on both forests would be approximately 62,000 acres, which would be a fairly good wilderness package, although on the small end of the scale. The southern boundary for this area has been adjusted slightly from that displayed in the DEIS in an effort to match the boundary in our current Travel Plan Map. This line was selected for ease in boundary management and to select the area with the least impact potential from roads and motorized activity. There has been widespread public support for this area.

Diamond Peak—A portion (33,000 acres) of this area shown in the DEIS in Rx's 2.2, 3.1.1a, and 3.2c north of Pass Cr is recommended and has been changed in the FEIS to Rx 1.3 accordingly, for the following reasons:

The area is contiguous with 06-601 on the Salmon-Challis National Forest, and the Challis Forest Plan and EIS contains an analysis and recommendation that the entire area NOT be recommended as wilderness. However, because of the area's large size (166,639 acres), natural integrity, high opportunities for solitude and challenging experience, and considerable public comments, it should be considered for proposed wilderness contingent on additional analysis by the original lead forest (Salmon-Challis). We have contacted the Salmon-Challis Forest and requested they conduct additional analysis on this area as their Plan is revised. The final decision on recommendation for consideration as wilderness will be made based on that Forest's plan.

Garfield Mountain—This area was not recommended for wilderness consideration for the following reasons:

This area has moderate impacts to natural integrity by physical developments for mining and grazing. The area is also very linear and narrow in shape, and is almost divided by two roads in the middle of its configuration. *Opportunity for a challenging, remote, backcountry experience is low to moderate.* Public interest in previous years as well as in public comments on the DEIS is very low. There are no significant biodiversity features within this area that would warrant special consideration.

Mt Jefferson—This area was not recommended for wilderness consideration for the following reasons

This area was studied and released for multiple use management in 1990 by an Environmental Impact Statement prepared by the BLM. Boundaries of the area would be difficult to manage, and administration would have to be by three different federal agencies due to landownership. Influence on natural integrity is high due to mining and roads. Opportunity for solitude is low and opportunity for challenging experience would only be moderate. This area does not score at a level equal to other previously recommended wilderness on the Forest, and there is more public comment against recommendation than for it in response to the DEIS. Most of the public comment on this area is in support of designation as a wildlife migration corridor. Therefore, we are not recommending it again for wilderness consideration in this Plan Revision.

Raynolds Pass—This area was not recommended for wilderness consideration for the following reasons

This area is very small and adjacent to the moderately developed area surrounding Henrys Lake. Although boundary management would be fairly easy, the amount of disturbance to natural integrity is very high due to primitive roads. Opportunity for solitude and a challenging experience are low. This area rates very low on the rating table, and there was no public comment supporting recommendation. Biodiversity is relatively minor in this area.

Lionhead—This area was recommended for wilderness consideration for the following reasons

Boundaries are fairly well defined and management would be compatible with adjacent lands. Influence on natural integrity is low. Opportunity for solitude and a challenging experience are high and moderate respectively. This area was recommended in the current Forest Plan. It is contiguous to an area on the Gallatin National Forest to the north and its wilderness potential is thus increased. This area also contains significant biodiversity features. The area receives significant snowmachine and ATV use, and to accommodate this use, we have excluded a small roaded area along the eastern boundary from the recommended wilderness.

Two-Top—This area was not recommended for wilderness consideration for the following reasons

Boundaries are fairly well defined. The area is very small, and a primitive road through the middle of the area, vegetation manipulation, and mining activities interrupt the natural integrity. Opportunity for solitude is moderate, but opportunity for challenging experience is low. There were no public comments in response to the Plan Revision DEIS that indicated support for recommendation. This area rated relatively low in the wilderness characteristics table and has received little support from the public for recommendation.

Winegar Addition—This area was recommended for wilderness consideration for the following reasons

Although this area is less than 5,000 acres, it is adjacent to the existing Winegar Hole Wilderness. This area was recommended for consideration in the existing Forest Plan, but since it is in Idaho, it was not included in the Wyoming Wilderness Bill which designated Winegar Hole. Quality of wilderness characteristics is only low to moderate, but the addition of this area has had considerable public support, because it would "round out" the existing designated wilderness.

West Slope Tetons—This area was not recommended for wilderness consideration for the following reasons

Much of this area was included in the original recommendation for wilderness designation, and was not selected by the Congress. Therefore, we do not propose to revisit that decision (Wyoming Wilderness Act of 1984) which released the area for multiple use management. Very few public comments were received in favor of recommending this area as wilderness in our Revised Plan.

Garns Mountain—This area was not recommended for wilderness considerations for the following reason

Garns Mountain Roadless Area has little development of any type that would impact the natural integrity of the area for wilderness considerations. This area is a fairly large block of land with moderately easy defined boundaries. Opportunity for challenge is moderate with some steep and remote terrain, but also considerable amounts of much easier terrain. This area is currently used for motorized and non-motorized travel and is considered important by all user groups for recreational access. Opportunity for solitude is high if motorized use is removed. However, our Plan Revision proposes to designate this area for motorized use on trails, and to improve the trails in this area to provide a significant system of high quality that will meet public demand. Support and opposition are often very vocal concerning this area's recommendation for wilderness. There are no significant biodiversity features within this area that warrant special consideration, although there are areas within the roadless area which have high value resources.

Palisades—A portion of this area was recommended for wilderness considerations for the following reason

Palisades Roadless area has no development of any type that would impact the natural integrity of the area for wilderness considerations. This area is a fairly large block of land with moderately easy defined boundaries. Opportunity for solitude and challenge is high in most of the area with steep and remote terrain. Most of this area is currently closed to motorized travel. Where motorized travel is allowed, terrain restricts travel to designated routes. Public interest has been fairly strong for this area to be included into wilderness although some opposition has also been voiced. There are significant biodiversity features within this area that warrant special considerations. Furthermore, all oil and gas leases (which were the reason for not recommending this area in our current Forest Plan) have been terminated and there are no current leases or applications on file.

Only approximately 2/3 of the Idaho portion of this roadless area was recommended. This was due in part to the decision to continue to allow the motorcycle and snowmachine use in the area from Rainey Creek North. In addition, the difficulty in boundary identification and management would be reduced by using the Rainey/Palisades Cr. Ridge.

Bald Mountain—This area was not recommended for wilderness considerations for the following reason

Bald Mountain Roadless area is moderately developed with fence and adjacent road development that may impact the natural integrity of the area for wilderness considerations. This area is moderately small in size with boundary identification being difficult to define.

Opportunity for solitude and challenge is low to moderate for most of the area. This area is currently used for multiple use travel and is considered important by all user groups for recreational access. Public interest has been low for this area to be recommended as wilderness. There are no significant biodiversity features within this area that warrant special considerations.

Bear Creek—This area was not recommended for wilderness considerations for the following reason

Bear Creek Roadless area, although undeveloped, does have evidence of human influence through fence, trail and adjacent road development that may impact the natural integrity of the area for wilderness considerations. This area is moderately large tract of land but has many roads which have been “cherry stemmed” into the center of the roadless area. Boundaries will be moderately difficult to define although distinct boundaries could be established. Opportunity for challenge is low for most of the area. Opportunity for solitude is moderate. This area is currently used for multiple use travel and is considered important by all user groups for recreational access. Public interest has been low for this area to be included into wilderness. There are no significant biodiversity features within this area that warrant special considerations.

Poker Peak—This area was not recommended for wilderness considerations for the following reason

Poker Peak Roadless area is developed with fence and adjacent road development that may slightly impact the natural integrity of the area for wilderness considerations. This area is moderately small in size with boundary identification being fairly easy to determine. Opportunity for solitude and challenge is low for most of the area. Much of this area is currently closed to motorized travel. The remaining portion is used by OHVs during the hunting season. Public interest has been low for this area to be included into wilderness. There are no significant biodiversity features within this area that warrant special considerations.

Caribou City—This area was not recommended for wilderness considerations for the following reason:

Caribou City Roadless area has no development that should impact the natural integrity of the area for wilderness considerations. This area on the Targhee NF is moderately small in size with boundary identification being difficult to define, however, added to the portion on the Caribou NF, the area is a fairly large tract of land. Opportunity for solitude and challenge is moderate for most of the area. This area is currently used for multiple use travel and is considered important by all user groups for recreational access. Public interest has been low for this area to be included into wilderness. There are no significant biodiversity features within this area that warrant special considerations.

Pole Creek—This area was not recommended for wilderness considerations for the following reason

Pole Creek Roadless area is moderately developed with fence and adjacent road development that may impact the natural integrity of the area for wilderness considerations. This area is moderately small in size with boundary identification being difficult to define. Part of this roadless area is located on the Caribou NF. Combining both areas still shows this area to be very small in size and very linear in shape. Opportunity for solitude and challenge is low for this area. This area is currently used for multiple use travel, but not considered important to the public need. Public interest has been low for this area to be included into wilderness. There are no significant biodiversity features within this area that warrant special considerations.

APPENDIX C

SUMMER AND WINTER ACCESS

SUMMER ACCESS ANALYSIS PROCESS

The Forest Service is authorized and required by law to plan, develop, manage and maintain a system of roads and trails to serve National Forest resources and uses. The legal basis and specific authorities for regulation of motorized vehicle use on the National Forest are found in the Code of Regulations at 36CFR Part 295. After World War II, four-wheel drive vehicles became available to the public. More recently, other varieties of off-highway vehicles have become popular, such as the motorized trail bike, three, and four-wheel drive All Terrain Vehicles (ATV) and trucks. The development and popularity of these vehicles, and their effects on public lands, has had a significant role in the establishment of motorized use regulations.

One objective of national forest management is to be no more restrictive on road or trail vehicle use than is necessary to sustain and protect the natural resources. Since wildlife habitat and effects of motorized use on other resources (water quality, soils, riparian, etc.) are extremely variable across the Forest, the restrictions on vehicles vary from place to place. In some locations, yearlong closure or even obliteration of roads occurs, while in others, seasonal restrictions are effective in protecting resources. Topography, vegetation, soils, public support, and other factors also influence the extent and duration of road and trail restrictions.

As part of the plan revision process, a number of issues about roads and access were raised by the public, the Forest Service and other Federal, State, and local agencies. Following is a summary of these issues:

- What roads and trails are required for management of the Targhee National Forest?
- Should roads be built, where, and to what standard?
- What roads will be kept open and what roads will be closed?
- What parts of the forest will be open to off highway vehicles?
- What road densities are appropriate?
- What areas should have restricted motorized access in order to reduce impacts to forest resources?
- How should closed roads be maintained?
- What are the appropriate ways to close a road (gates, barriers, signs, what is the best time frame, etc.)
- How can the forest guarantee right-of-way to the forest where private lands block access?
- How should access to private lands within the forest be provided for landowners?
- What is the funding situation for enforcement, monitoring, and administration of forest roads?

A major objective of forest plan revision efforts is to resolve conflict by finding integrated, compatible management methods and prescriptions that allow public use of roads and trails to occur in a way that can best meet the needs of the resources and the recreating public. This report documents the process forest resource professionals used in analyzing current conditions and developing a travel management plan.

that would be compatible with other resource objectives, such as protecting soils, water quality, riparian habitat, wildlife habitat, or other forest resources

A forest team was established in 1991 to analyze motorized access on the Forest. District Travel Plan maps that show the official transportation system of roads and trails, the kind of authorized use permitted on each road or trail (motorized, nonmotorized), and open and closed areas for cross-country motorized use were used in the analysis. After an initial review the Forest was asked to complete additional analysis, since some members of the public felt the District Travel Plan maps did not accurately represent the transportation system that currently exists on the Forest.

The team considered two methods to address these additional concerns. The first method involved a survey during the 1992 fall hunting season in cooperation with Wyoming and Idaho Fish and Game departments. A District person and a Fish and Game Conservation Officer were assigned to monitor Forest system roads in designated areas to determine if motorized use was occurring on roads that were gated and closed. After some initial monitoring, the survey was dropped, because the agencies felt survey data collected was not adequate to quantify motorized use in a way that would be meaningful for Elk Habitat or Elk Vulnerability Models.

The second method was developed in an effort to match the analysis scale the Forest used to determine Elk Habitat Effectiveness modeling. Elk Habitat Effectiveness (EHE) modeling was designed using the 38 principal watersheds on the Forest. Forest personnel, Idaho Department of Fish and Game (IDFG) and Wyoming Game and Fish Department (WGF) agreed to separately analyze those portions of watersheds that were split by the State line. New criteria were identified for analyzing motorized roads and trail density.

The objective of this analysis was to accurately capture the total miles of roads and trails being used by motorized vehicles. Ranger District personnel and local state Fish and Game officers inventoried each watershed using the following criteria:

1. Accurately describe and quantify the existing situation for motorized use on roads, trails, open ridges, etc. during the spring-summer-fall season.
2. Principal watersheds will be used as the basis for the analysis and will include all roads and trails within each of the watersheds and within the outer boundary of the Forest. This includes all system roads and trails, all "ghost" (nonsystem) roads and trails, ridges and open terrain (estimate miles for these cases) that are used by motorized vehicles during the spring-summer-fall season.
3. Open miles of roads and trails means miles of roads and trails (including system, ghost, open ridges, etc.) that are used by motorized vehicles on an average of one to two vehicles per week during the spring-summer-fall seasons. Reliance on Forest/District travel plan maps is not appropriate, because some closures have not been effective and the Forest needs to account for ineffective closures.

Closed miles of roads and trails means miles of roads and trails that are not used by motorized vehicles, or the average use is less than one to two vehicles per week, during the spring-summer-fall season.

Roads and trails that experience motorized use for short periods, such as a one- or two-week period for tree planting, should not be counted in open road and trail miles.
4. For roads and trails that fall on a watershed boundary, include total miles for both watersheds and indicate the number of miles that are being counted in the adjacent watershed. Although some double counting may occur, this process should track how much double counting is actually occurring.

Results of these inventories were tabulated and used to establish the current existing condition of roads and trails being used by motorized vehicles on the Forest

During 1994, Idaho Fish and Game raised the issue that the Forest still lacked accurate information on *motorized access on the forest and expressed concerns that some areas on the Forest had vegetation and terrain which allowed for unrestricted, cross-country, off-highway vehicle (OHV) use*. Additional analysis was completed, using vegetation and slope, to identify areas which might be more accessible to OHV use (see Attachment F of Process Paper D for the criteria used in this analysis). The analysis, called the "infinitely open analysis," used the 38 principal watersheds as the basis for the analysis. Results showed that these watersheds currently range from less than one percent "infinitely open" to 95 percent "infinitely open" under the present travel plan.

Because the Elk Vulnerability (EV) model requires a number for motorized road and trail density, the "infinitely open" areas were converted to a road and trail density figure. The conversion used a formula that added an additional six miles of motorized road for each square mile of "infinitely open" area in each watershed. This conversion resulted in the addition of 4,669 miles of motorized road to the previously inventoried road and trail miles. This total number from the conversion and the inventoried road and trail miles was used in the Elk Vulnerability model (See Table 5.7 in Process Paper D). This table presents the current total motorized access density for each principal watershed, incorporating both the road and trail inventory and the "infinitely open" analysis. The total access densities presented in Table 5.7 were used in the Elk Vulnerability analysis to display the existing condition.

Open Road and Open Motorized Trail Route Density (OROMTRD) was established for individual management prescriptions using the most current research studies on motorized access in grizzly bear areas, elk vulnerability and elk habitat effectiveness models.

Each of the proposed alternatives in the Forest Plan revision was analyzed. Each Ranger District mapped the roads and trails that would remain open under each of the alternatives. These maps were then digitized in the Forest's Geographic Information System (GIS) database. Using GIS technology, the miles of roads and trails that would remain open in each watershed under each alternative were calculated. Additionally, each alternative varied in the amount of land open for cross-country OHV use. An "infinitely open" analysis was completed for each alternative to account for this motorized use. (See Process Paper D for more detailed information on Motorized Road and Trail Analysis and the effects on Elk Habitat Effectiveness and Elk Vulnerability.)

During the revision process several refinements were made. Using GIS capabilities, roads and trails were calculated for each prescription. Maps were created that displayed current road and trail densities by prescription, and future road and trail densities under the proposed Forest Plan Revision. Interdisciplinary teams, made up of Forest resource specialists and line officers, reviewed and analyzed the results. Factors of resource damage to soil, water, wildlife habitat, fisheries, riparian area, as well as recreation opportunities for trail systems, accessible scenic areas, and current volume and type of use on a road or a trail were considered.

The following chart, completed in 1997, displays by District and by alternative the miles of roads and trails that will remain open or have restricted use. Each Alternative also lists the miles of roads and trails that have been identified as "not necessary for administrative use" by the Forest.

Table C-1 Motorized Acces by District by Alternative							
Dubois	Alt 1	Alt 2	Alt 3	Alt 3M	Alt 4	Alt 5	Alt 6
Miles of open road	399	385	325	359	225	188	131
Miles of restricted road	43	41	54	45	32	6	7
Miles of open trail	73	77	65	99	74	4	4
Miles of restricted trail	6	9	9	166	4	0	0
Miles eliminated	224	240	287	262	410	473	530
Island Park	Alt 1	Alt 2	Alt 3	Alt 3M	Alt 4	Alt 5	Alt 6
Miles of open road	492	554	450	423	497	405	407
Miles of restricted road	210	84	220	154	156	157	150
Miles of open trail	20	22	20	25	20	20	20
Miles of restricted trail	2	0	2	132	2	0	2
Miles eliminated	1	73	40	130	294	517	153
Ashton	Alt 1	Alt 2	Alt 3	Alt 3M	Alt 4	Alt 5	Alt 6
Miles of open road	476	452	372	356	332	231	294
Miles of restricted road	244	162	92	56	55	51	55
Miles of open trail	36	22	14	18	13	9	13
Miles of restricted trail	78	4	3	95	4	0	4
Miles eliminated	248	117	267	319	343	449	382
Teton	Alt 1	Alt 2	Alt 3	Alt 3M	Alt 4	Alt 5	Alt 6
Miles of open road	149	180	155	152	137	143	148
Miles of restricted road	134	72	46	65	40	37	31
Miles of open trail	124	108	102	142	101	31	17
Miles of restricted trail	5	11	1	204	1	0	2
Miles eliminated	22	50	118	85	130	121	126
Palisades	Alt 1	Alt 2	Alt 3	Alt 3M	Alt 4	Alt 5	Alt 6
Miles of open road	370	292	286	287	281	270	249
Miles of restricted road	33	15	23	37	25	13	12
Miles of open trail	320	241	233	258	213	168	27
Miles of restricted trail	1	1	1	271	1	0	0
Miles eliminated	0	76	74	57	77	99	191
Forest Total	Alt 1	Alt 2	Alt 3	Alt 3M	Alt 4	Alt 5	Alt 6
Miles of open road	1,882	1,863	1,589	1,577	1,372	1,237	1,228
Miles of restricted road	209	131	115	25	108	63	80
Miles of open trail	522	470	435	540	421	232	81
Miles of restricted trail	752	854	889	817	903	1,092	1,242
Miles eliminated	246	555	767	853	1,113	1,290	1,306

Determinations for leaving a road open were made using a priority system. First priority was given to Federal Highway system roads, State and county roads, existing roads needed to access private property, Yellowstone National Park, State Parks and State lands, and existing roads that access administrative sites, electronic sites, communication sites (under permit) or high use recreation sites such as ski areas, boat ramps, campgrounds, etc. In some areas the application of management prescriptions and the road density standard resulted in these "first priority" roads being the only roads designated "open" for the area. The Forest incorporated guidelines from the Eastside Ecosystem Management Project (EEMP) to establish a rule set to insure consistency as each District prepared their access maps. (See Road Analysis Process, in Appendix A) District personnel and Forest planning specialists met over several months to fine-tune and coordinate motorized access between Districts. Roads and trails were selected for restriction or closure depending on the need to maintain wildlife habitat, prevent resource damage, and to balance the level of use or recreation opportunity. Cost of maintaining the road or trail was also a factor. A set of Road Decision Criteria Tables have been developed, showing the decision in keeping roads and trails open in each Alternative. The tables are displayed in the 50 pages following page C-7, by Ranger District.

In some cases non-system trails and non-system roads were identified as needed for access, in managing the Forest. These roads and trails may not have Forest numbers assigned to them but if they remain on the Forest Transportation Inventory System, they will be given a name and a Forest number, for identification on Forest Maps and on the ground. The identification name and number will be given after the ROD has been signed.

All districts, with the exception of Island Park, used the method described above to determine District road and trail densities. Island Park Ranger District worked with the Intermountain Region using aerial photography to determine District road and trail densities. The results of this study show a total of 4,192 miles of existing roads and trails on the Forest, including both "system" and "non-system" roads and trails. Of these, 2,831 miles are being used by motorized vehicles and include roads and trails that have ineffective restrictions on them, such as gates, berms, etc. The remaining 1,361 miles of roads and trails are designated non-motorized. A total of 1,126,757 acres were identified as open for cross-country travel, but only 440,422 acres were identified as suitable for cross-country travel due to steep slopes or type of vegetation cover.

Comments received during public scoping on the Forest Plan revision in the spring of 1996 were considered and some suggestions were used in determining how the forest will implement access management in the future. A site-specific analysis will be used to determine which roads and trails will be closed, restricted, or obliterated. An interdisciplinary team will be prepared a separate analysis to address the 853 miles of roads and trails have been identified as "not necessary for administrative use" by the Forest. The analysis will include a cost estimate for this project.

Public acceptance and compliance with access management strategies will directly affect full implementation of other resource program objectives.

WINTER VISITOR ACCESS ANALYSIS PROCESS

In 1994, Yellowstone and Grand Teton National Parks in coordination with adjacent Forests, began a review of the 1990 Winter Use Plan. Winter visitors in and around the Park's boundaries were contacted and surveyed concerning possible issues and concerns with winter management or resource conditions. Yellowstone National Park was concerned that use levels had already reached levels forecast to be reached in future years. The purpose of the resulting Greater Yellowstone Winter Visitor Use Management (GYWVUM) assessment was to evaluate existing conditions and future opportunities for winter use management. During this time, the Targhee National Forest was completing an EIS for the Grand Targhee Ski Resort Master Development Plan. A significant issue during this analysis was concern for winter recreation use and wildlife conflict potential on the Teton Basin District. A commitment was made during this analysis to carry the findings of recent studies (e.g., Teton Basin District Winter Wildlife/Winter Recreation Management Plan—Draft) into the Forest Plan Analysis that was also underway. The purpose of incorporating this analysis into the Forest Plan revision was to get a broader picture of the concerns and proposed management actions so that a better planning job could be done and consultation with the US Fish and Wildlife Service could be done on a level of planning acceptable to that agency.

Since the Forest Plan Revision and GYWVUM planning processes were being conducted almost simultaneously, the winter use and wildlife analysis for the GYWVUM process were considered and incorporated into the Forest Plan. Analyses from the GYWVUM assessment which were used in the Forest Plan Revision include the following:

- Issues and concerns assessment based on surveys, public meetings, and public comments and letters
- Coordinated Goal Statements and Management Opportunities, based on an evaluation of the issues and the mapping of the following resource data:
 - a) actual recreation use areas
 - b) known winter range areas for wildlife
 - c) snow cover adequacy for winter activities
 - d) conflict areas between types of use or within uses
 - e) conflict areas between recreation and wildlife
 - f) closure areas
 - g) steep slopes or otherwise unusable areas
 - h) road and trail systems and access parking and facilities
 - i) avalanche and other hazard areas
 - j) trespass areas into the Parks, wilderness, or other closure

As this data and mapping was done for the GYWVUM assessment, much of the mapping was incorporated into the Winter Transportation Plan for the Forest Plan—Alternative 3M. Alternative Winter Transportation Plans and opportunities were also considered during the Forest Plan Revision analysis and EIS in other alternatives to the proposed Plan. As a result of this analysis, 93 miles of planned snowmachine routes were identified and added to the Alternative 3M Winter Transportation Plan. These routes were planned in areas away from winter range conflict areas in an attempt to provide users with additional opportunities and to reduce wildlife impacts. These routes would be marked and/or groomed in coordination with the counties in the future as additional capacity was determined to be needed, and as county funding and workload allows. These routes would be added to the Forest Travel Plan as they were developed.

This Winter Transportation Plan concept was reviewed with the public through numerous GYWVUM assessment meetings and through public review and comment on the Forest Plan Revision DEIS maps. Due to comments and administrative review of the draft Winter Transportation Plan, the following adjustments were made for the Final Forest Plan and FEIS:

• The following planned routes shown on the draft Winter Transportation Plan Map have been deleted from the final map

- a) Snow Creek Butte—deleted due to potential trespass concerns for Yellowstone National Park
- b) Cottonwood Creek and Camas Creek—deleted due to desire to manage these areas as undeveloped backcountry area
- c) Rainey Creek—deleted due to concerns with wintering wildlife and feed ground operations

The Forest Plan includes winter recreation Goals, Objectives, Standards, Guidelines, Prescriptions, and a Winter Transportation Plan which have been prepared in concert with the GYVVUM assessment analysis as much as possible. Not all of the pending guidelines of that assessment have been incorporated into the Forest Plan, but an objective was included in the Plan to address the remainder of the pending guidelines to provide for other winter opportunities. The objective states "By 2000, establish by prescriptions, Travel Plan designation or other method a few nonmotorized winter recreation activity areas with easy access for users such as telemark skiers, snowshoers, and snowboarders. Conform to results anticipated from the GYVVUM Assessment currently underway". The GYVVUM assessment is not scheduled to be completed until the end of 1997.

References to this process have been included in Chapters III and IV of the FEIS.

OPEN ROAD AND OPEN MOTORIZED TRAIL ROUTE (OROMTRD) DECISION CRITERIA TABLES

DEFINITIONS

Following are the definitions of the criteria used on the OROMTR Decision Criteria Tables:

- A. Core Access: Needed to access private property, adjoining State and Federal Parks or State Lands, and roads that access administrative sites, campgrounds and picnic areas, electronic sites, permitted communications sites, ski areas, boat ramps and special recreation sites such as Mesa Falls and Big Springs.
- B. First Priority: In some areas the application of management prescriptions and density standards resulted in this type of road/trail being the only facility designated "open" in the area.
- C. Eastside Ecosystem Management Project (EEMP) Guidelines: EEMP guidelines used to establish a rule set to insure consistency as each District prepared their access maps.
- D. Coordinated Access: Roads/trails that provide inter-District access.
- E. Maintenance of Wildlife Habitat: Road/trail selected causes less impact.
- F. Resource Damage: Road/trail selected caused less impact.
- G. Cost: Lower cost to maintain road/trail.
- H. District-specific criteria (if any).
- I. District-specific criteria (if any).

**List of
Process
Papers**



List of Process Papers

Process Paper:

Title

A	Issue Identification and Public Involvement
B	FORPLAN Analysis
C	Tentatively Suitable Timber Analysis
D	Wildlife Analysis for the Forest Plan Revision
E	Benchmarks
F	Sensitive Plant Species
G	Idaho and Wyoming Rare Plant Species
H	Range Suitability (Capability) Criteria for Cattle Range
I	Range Suitability (Capability) Criteria for Sheep Range
J	Logic Used to Estimate Effects of Livestock Grazing on Riparian and Upland Vegetation
K	Forest Range Environmental Study (FRES) Management Strategy
L	Sheep Allotments affected by Grizzly Bear, Bighorn Sheep, and Watershed Conditions
M	Explanation of how OROMTRD affects Livestock Grazing Permittees in Implementing the Forestwide Standard
N	Explanation of how the Phase Out of Sheep Allotments will be Implemented
O	Implementing Ecosystem Management in Forest Plan Revisions (Sept 23, 1994)
P	Adjacent Land Use Patterns Analysis
Q	Roadless Areas
R	Wild, Scenic and Recreational Rivers Eligibility Determination
S	Recreational Use Projection Process for Targhee National Forest Plan Revision
T	Jedediah Smith Wilderness Environmental Assessment for Forest Plan Amendment
U	Supply, Demand and Production Potential
V	Key Indicators for Issue 1, Sustainability, Fire and Natural Disturbances
W	Draft Properly Functioning Condition (Sept 17, 1996)
X	Dispersed Camping Protocol for Monitoring Soil Quality
Y	Targhee National Forest Rangeland Monitoring Protocol
Z	Existing and Potential Rangeland Improvements

LIST OF PREPARERS

The following is a list of the current Forest Leadership Team (FLT) and Forest Interdisciplinary Team (IDT) members and others who developed the Targhee National Forest Plan, Final Environmental Impact Statement, and supporting documents

A Current Forest Leadership Team

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District Ranger, Palisades Ranger District

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Branch Chief for Engineering, Lands, and Minerals

Adrienne Keller
District Ranger, Ashton and Island Park Ranger Districts

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Public Affairs Officer

Mac Murdock
District Ranger, Dubois Ranger District

Jerry Reese
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Administrative Officer, Branch Chief for Fire Management, Acting Forest Supervisor

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Natural Resource Specialist

Education B S , Forest Resource Management
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Timber Management - 14 years
Winter Sports Planning - 6 years
Function Core Team Member, Timber, and Insect & Disease

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Transportation Planner

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U S Forest Service
Engineering Design and Inspection - 11 years
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Winter Sports Planning - 20 years
Function Developed and Dispersed Recreation, Roadless, Wilderness,
and Wild, Scenic, and Recreational Rivers analysis

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GIS Coordinator, Analyst

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U S Forest Service
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Lands - 9 years
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U S Forest Service
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Fire Management - 7 years
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Fisheries and Wildlife Management - 5 years
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Function GIS Analysis

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Function Fire, Air Quality, Jedediah Smith Wilderness Fire Management Plan

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 Function Timber

Kevin Greenwood
 Island Park Ranger District
 Function Range

Walt Grows
 Range Management Specialist

Education	B S , Forest Recreation (major) B S , Range Management (minor)
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Function.	Range, Acting Forest Planner

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 Natural Resource Specialist
 Island Park Ranger District

Education	B S , Range and Forest Management, Colorado State University
Experience	U S Forest Service Range Management - 10 years Recreation Management - 8 years
Function	Recreation and Lands

Lynn Hansen*
 Function Lands

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 Forester
 Island Park Ranger District

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Experience	U S Forest Service - 19 years
Function	Roadless Areas

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 Prospect Ranger District, Rogue River National Forest

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Experience	Southern Oregon Regional Services Institute Urban Planning - 3 years U S Forest Service Land Management Planning - 11 years Project Planning - 3 years
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 Forest Silviculturist

Education	B S , Forestry
Experience	U S Forest Service - 12 years
Function	Ecosystem Management Analysis, and Writer/Editor

Dusty Hincks
 Palisades Ranger District

Function	Range
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Robin Jenkins
 Island Park Ranger District

Function	Wild, Scenic, and Recreational Rivers
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Bill Kirchhoff *

Function	GIS Analysis
----------	--------------

Bob Kirkpatrick *

Function	Facilities
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Julie Lehmann*

Function	GIS Analysis
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Bill LeVere*

Lilly Mayer *

Function	Threatened, Endangered and Sensitive Species
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Maureen McBrien*, Past Forest Planner

Martha Merrill*

Function District Representative, Wilderness Specialist

Kaylene Monson

Rangeland Management Specialist

Palisades Ranger District

Education B S , Range Science
Experience U S Forest Service - 5 years
Function Range Management

Duane Monte

Soil Scientist

Education B S , Natural Resource Management/Biology - UWSP
Post Graduate Work - Soil Science - UWSP
University of Wisconsin - Stevens Point
Experience U S Soil Conservation Service - 4 Years
U S Forest Service -16 Years
Function Riparian, Wetlands, Aquatic Infln, and Soils section

Ronna Simon Monte

Hydrologist

Education B S , Geology
M S , Geography
M S , Watershed Management
Experience U S Forest Service
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U S Geological Survey
Water Resource Monitoring, Quality Assurance - 1 year
Function Water section and assistance on Wetlands section

Craig Morris *

Function FORPLAN

Brent Porter

Recreation Forester

Palisades Ranger District

Education B S , Utah State University, 1972
Experience U S Forest Service since 1972
Recreation, Lands, and Trails - 20 years
Timber - 16 years
Minerals - 20 years
Function Recreation, Recreation Special Uses

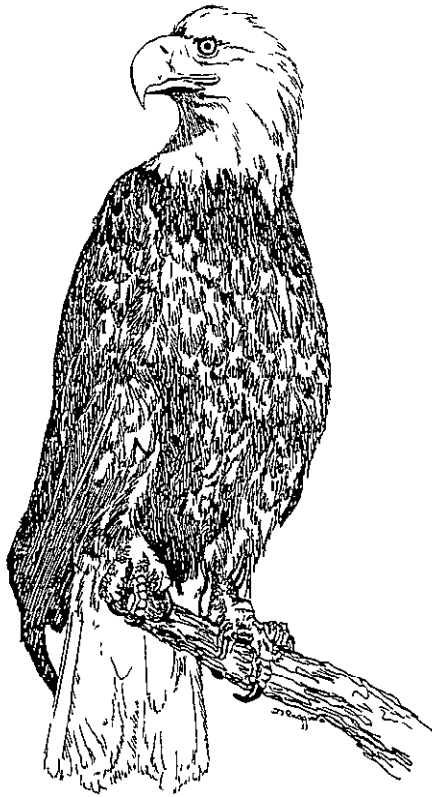
Cheryl Probert Dubois Ranger District Function	Range
John Pruess Minerals Specialist Education Experience Function	B A , Liberal Arts, Gettysburg College M F , Timber Management, Duke University U S Forest Service - Timber - 16 years Minerals - 16 years Lands - 5 years Minerals and Lands sections
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Dee Sessions Forest Silviculturist Function	Public Involvement
Bill Shands * Function	Public Involvement
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Gretchen Straus *
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Keith Tweedie
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Function Range

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* - Not affiliated with the Targhee National Forest



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ents of
the FEIS**



Recipients of the FEIS

Copies of the FEIS and Forest Plan were distributed to the following government, state and local agencies, tribal governments, elected officials, organizations and businesses, and individuals. Copies of the FEIS and Forest Plan are available for review at all Forest offices.

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ALLIANCE OF THE WILD ROCKIES
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ANDERSON OUTFITTING
ANTLER MOTEL
APHIS
ARMY CORPS OF ENG
ARMY CORPS OF ENGINEERS
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ASHTON AREA DEV COMM
ASHTON PUBLIC LIBRARY
ASSOCIATED LOG CONTRACTORS
ASSOCIATED LOGGING CONTRACTORS
ASSOCIATED LOGGING CONTRACTORS, INC
BANNOCK COUNTY COMMISSIONERS
BASIN LUMBER
BCH
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BINGHAM COUNTY COMMISSIONERS
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BLM
BLUE RIBBON COALITION
BLUE RIBBON FLIES
BOISE CASCADE CORP
BOISE NATIONAL FOREST
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BOY SCOUTS OF AMERICA
BPA
BRIDGER TETON NATIONAL FOREST
BROWN'S LAND & CATTLE CO INC
BUGLE
BUREAU OF INDIAN AFFAIRS
BUREAU OF LAND MANAGEMENT
BUREAU OF RECLAMATION
BUREC
BUTTE COUNTY COMMISSIONER
C & B TIMBER
CA 4-WHEEL DRIVE CLUB, IN
CARIBOU NATIONAL FOREST
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CHERRY CREEK VISITOR CENTER
CHRISTIANSEN LOGGING
CITIZENS FOR TETON VALLEY
CITIZENS INTERESTED IN BULL RUN, INC
CITY OF IDAHO FALLS
CITY OF IRWIN
CITY OF ISLAND PARK
CLARK COUNTY COMMISSIONERS
CLARK COUNTY SHERIFF
CLARK COUNTY SNOWRIDERS SNWBILE CL
CLARK TIMBER
CLARK TIMBER/ID WOMEN IN TIMBER
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DEPARTMENT OF ENVIRONMENTAL QUALITY
DEPARTMENT OF HEALTH & WELFARE-DEQ
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DEPARTMENT OF LANDS
DEPARTMENT OF TOURISM AND IND DEV
DEPARTMENT OF TRANSPORTATION
DEPT OF ECOLOGY
DEPT OF HEALTH & HUMAN SERVICES
DEPT OF LANDS
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DEQ
DIVISION OF ENVIRONMENTAL QUALITY
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EAGLE ROCK BACKCOUNTRY HORSEMAN
EASTERN IDAHO REG MEDICAL CENTER
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ENVIRONMENTAL PROJECT AGENCY
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EXTENSION SERVICE
FALL CREEK BASIN CATTLEMEN'S ASS
FALL RIVER REVIEW
FEDERAL AVIATION ADMINISTRATION
FEDERAL ENERGY REGULATORY COMM
FEDERAL HIGHWAY ADMINISTRATION

FEDERAL RAILROAD ADMIN
 FEDERAL RAILROAD ADMINISTRATION
 FISH & WILDLIFE
 FISHLAKE NATIONAL FOREST
 FLATHEAD NATIONAL FOREST
 FMID
 FOREST PEST MANAGEMENT
 FORESTRY SCIENCES LAB
 FOUR CORNERS TRAIL CLUB
 FREMONT CO P&Z
 FREMONT COUNTY COMMISSIONER
 FREMONT COUNTY COMMISSIONERS
 FREMONT ECONOMIC ACTION TEAM
 FREMONT-HERALD CHRONICLE
 FRIENDS OF FALL RIVER
 GALLATIN NATIONAL FOREST
 GOVERNOR OF IDAHO
 GRAND TARGHEE
 GRAND TARGHEE RESORT
 GRAND TARGHEE SKI & SUMMER RESORT
 GRAND TETON NATIONAL PARK
 GRAND VALLEY STATE UNIVERSITY
 GREATER I F CHAMBER OF COMMERCE
 GREATER YELLOWSTONE COALITION
 GREATER YELLOWSTONE CONSERVATION
 GREEN, WILLIAM SCOTT
 GREYSTONE
 GRIZZLY BEAR TASK FORCE
 ORGANIZATION
 GRIZZLY DISCOVERY CENTER
 HAGENBARTH LIVESTOCK
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 HENRY'S FORK WATERSHED CENTER
 HENRY'S FORK WATERSHED COUNCIL
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 HIGH COUNTRY RC&D
 HIGH MOUNTAIN TRAIL MACHINE ASSOC
 HOLLAND & HART
 HOUSE OF REPRESENTATIVES
 HUMBOLT/TOIYABE NATIONAL FOREST
 HYDE OUTFITTERS
 ID OUTFITTERS & GUIDES
 IDAHO ALPINE CLUB
 IDAHO ASSOCIATION OF COUNTIES
 IDAHO CATTLE ASSOCIATION
 IDAHO CONSERVATION LEAGUE
 IDAHO DEPARTMENT OF COMMERCE
 IDAHO DEPARTMENT OF FISH AND GAME
 IDAHO DEPARTMENT OF LANDS
 IDAHO DEPARTMENT OF PARKS AND REC
 IDAHO DEPT OF FISH & GAME
 IDAHO DEPT OF PARKS & REC
 IDAHO DEPT OF WATER RES
 IDAHO ENVIRONMENTAL COUNCIL
 IDAHO FALLS CHAMBER OF COMMERCE
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 IDAHO FARM BUREAU
 IDAHO FISH & GAME
 IDAHO MINING ASSOCIATION
 IDAHO NATURE CONSERV
 IDAHO NATURE CONSERVANCY
 IDAHO OUTFITTERS AND GUIDES ASSOC
 IDAHO RIVERS UNITED
 IDAHO SOIL CONSERV. COMM
 IDAHO STATE HISTORICAL SOCIETY
 IDAHO STATE HOUSE
 IDAHO STATE PARKS & RECREATION
 IDAHO STATE SENATE
 IDAHO STATE SNOWMOBILING
 IDAHO STATE UNIVERSITY
 IDAHO WATERSHEDS PROJECT
 IDAHO WOOL GROWERS ASSOC
 IDAHO STATE UNIVERSITY OUTDOOR PRG
 IDWR
 INEL
 INSTITUTE FOR BUSI. ENVI
 INTERNATIONAL LLAMA ASSOCIATION
 J AND S SALES
 J R SIMPLOT
 J R SIMPLOT CO
 JACKSON HOLE ALLIANCE FOR RESP PLNG
 JACKSON HOLE NEWS
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 KADQ-FM
 ORGANIZATION
 KEY BANK OF IDAHO
 LEMHI COUNTY COMMISSIONERS
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 LOUISIANA-PACIFIC CORP.
 LUMBER PRODUCTS INC
 MADISON COUNTY
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 MADISON LIBRARY DISTRICT
 MANTI-LASAL NATIONAL FOREST
 MEDIATION AND PUBLIC MGMT
 MEDICINE BOW-ROUTT NATIONAL FOREST
 MEYER & GLITZENSTEIN
 MORRIS & WOLFF, P.A.
 MOUNTAIN ROTORS

NATIONAL AREAS
NATIONAL PARK SERVICE
NATIONAL WILDLIFE FEDERATION
NATIVE ECOSYSTEMS COUNCIL
NAVAL OCENOGRAPHY DIVISION
NEC
NEW MEXICO TROUT
NOAA ECOLOGY & CONSERVATION OFFICE
NORTHWEST POWER PLANNING COUNCIL
NRCS
NYBAKKEN AND ASSOCIATES
OFFICE OF PLANNING AND ANALYSIS
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OKADA-MATSUOKA 10-3
PACIFIC RIVERS COUNCIL
PAYETTE NATIONAL FOREST
PENCE CONTRACTING
PENTA POSTS CO INC
POCATELLO TRAIL MACHINE ASSOCIATION
POLARIS INC
PREDATOR PROJECT
REGION 6 ID WILDLIFE COUN
REGIONAL ADMINISTRATOR (BAG)
REPRESENTATIVE BARBARA CUBIN
REPRESENTATIVE MICHAEL CRAPO
REXBURG LIBRARY
REXBURG STANDARD JOURNAL
RIVERTON SNO-GOERS, INC
ROAD-RIP
ROBIE REAL ESTATE
ROCKEFELLER & ASSOCIATES
ROCKIE MOUNTAIN OIL AND GAS ASSOC
S R HIGHLAND'S CONSERV
SALMON/CHALLIS NATIONAL FOREST
SAWTOOTH NATIONAL FOREST
SAWTOOTH SNOWMOBILE CLUB
SDSA
SENATOR CONRAD BURNS
ORGANIZATION
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SENATOR LARRY CRAIG
SENATOR LARRY E CRAIG
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SHOSHONE-BANNOCK TRIBES
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SNO ENGINEERING
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ST ANTHONY LIBRARY
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TETON VALLEY LAND TRUST
TETON VALLEY NEWS
TETONIA CITY COUNCIL
THE WILDERNESS SOCIETY
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TRUE OIL COMPANY
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U S ARMY ENGR DIV, NORTH PACIFIC
U S COAST GUARD (USCG)
U S CORP OF ENG ENVIR
U S DEPARTMENT OF ENERGY
U S DEPARTMENT OF INTERIOR
U S DEPARTMENT OF TRANSPORTATION
U S DEPT OF INTERIOR
U S ENVIRONMENTAL P A
U S FISH AND WILDLIFE SERVICE
U S FOREST SERVICE
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USDA FOREST SERVICE
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USGS
UTAH TRAIL MACHINE ASSOCIATION
ORGANIZATION
VICTOR ADVENTURES
WALDORF COLLEGE
WASATCH-CACHE NATIONAL FOREST
WEST YELLOWSTONE NEWS
WILD FOREVER
WILDERNESS SOCIETY
WILDLIFE COUNCIL, REGION 6
WWF
WYOMING DEPARTMENT OF COMMERCE
WYOMING DEPARTMENT OF GAME AND FISH

WYOMING GAME AND FISH DEPARTMENT
WYOMING STATE CLEARINGHOUSE
WYOMING STATE FORESTRY DIVISION
WYOMING STATE LEGISLATURE
WYOMING STATE PLANNING AND COORD
WYOMING TRANSPORTATION DEPT
YELLOWSTONE ARCTIC/YAMAHA
YELLOWSTONE NATIONAL PARK
YELLOWSTONE SCD
YELLOWSTONE TRACK SYSTEMS
YELLOWSTONE VILLAGE

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TOM BARR
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MORTON J BAUM
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MARK BENNION
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FREDERICK BEVIS
ED AND MERRILIE BIDDULPH
HARVEY BLACKBURN
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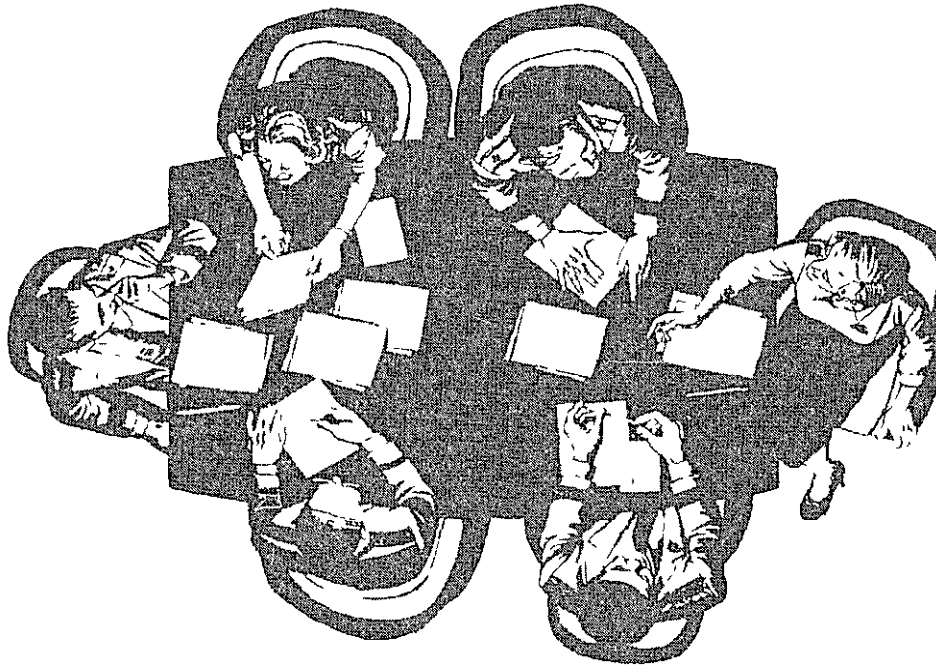
Intermountain
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Targhee
National
Forest



Appendix A Response To Public Comments Volume I

Targhee National Forest
1997 Revised Forest Plan



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THE PURPOSE OF APPENDIX A

Appendix A is a paraphrased summary and the Forest's responses to the substantive comments received during the public comment period of February 29 to June 27, 1996, about the Draft Revised Plan and the Draft Environmental Impact Statement. Letters received before the comment period or after the deadline were reviewed but were not formally acknowledged or analyzed.

New management direction and decisions were made after some of the responses to public comments were written. Although we tried to correct these as decisions changed, we may have missed correcting a few of them. If conflicts and discrepancies are noted, the Record of Decision, the FEIS, and the Final Revised Plan remain the official decision documents, not this Appendix.

BACKGROUND ON THE PUBLIC COMMENT PERIOD

A variety of methods were used to inform people about the draft and to seek input. These included mailings, news releases, newsletters, media interviews, open houses, executive summaries, copies in all local libraries, response forms for ease of response to key issues, meetings, an executive summary of the differences between the current plan and the proposed plan, and contacts with cooperators and other local, state and national agencies and organizations.

The Targhee emphasized the opportunity for extensive public involvement and one-on-one contact during the draft review -- a chance to ask questions, learn more about the issues, and provide input. To accomplish this, the Forest planning team and ranger district staffs held meetings about the draft plan between the dates of March to June throughout the local and extended communities served by the Targhee in Idaho in Ashton, Island Park, Dubois, Idaho Falls, Driggs, Blackfoot and Pocatello; in Wyoming in Jackson; and in Montana in West Yellowstone. The planning team also had meetings about the draft with all adjacent national forests, Bureau of Land Management offices, State Fish and Game agencies, and the U.S. Sheep Experiment Station; the two national parks; county commissioners; U.S. Fish and Wildlife Service; and the Shoshone-Bannock Tribal Council. The team presented information at additional meetings sponsored by other groups and organizations, at their request. Two meetings were held with all Targhee Forest Service employees.

COMMENTS AND ANALYSIS

The Targhee received 454 form Letters, 493 clip-out "coupons" sponsored by the Citizens for a User Friendly Forest (CUFF), 558 postcards sponsored by the Greater Yellowstone Coalition (GYC) and 663 individual letters for a total of 2,168. Another 200 form letters were received with illegible or missing names and addresses. All of these are available for public review at the Forest Supervisor's Office in St. Anthony. Appendix A is twice as large as the Plan and EIS and contains all substantive comments that were considered and addressed. Although Targhee employees and mailings emphasized that analysis of comments does not use vote counting, some groups persisted in sending in mass mailings of form letters, petitions, ballots, coupons and postcards. In the analysis, the same comment is listed once and is responded to once; these have an F (for Form letter) after them. Some Forest Service employees responded as Forest Service employees and their comments have a FS before their number. Copies of all letters signed by representatives of State or Federal Agencies or elected officials are reproduced at the back of the Appendix, as required by the National Environmental Policy Act. Responses

to these letters are treated the same as other comments and can be found throughout the appendix in the appropriate issue areas.

A 5-person team hired from the public-at-large and the public affairs officer analyzed the letters in their entirety, placing substantive comments under appropriate issue areas. Comments were reviewed by resource specialists, planners, and the leadership team to determine needs for further analysis and before making final decisions. Many decisions were changed or improved based on public comment. Most of these changes are explained in the responses of Appendix A and the Record of Decision.

The specialists or planners who coordinated the responses in Appendix A are indicated by their initial. The following Forest Service people coordinated responses: Lynn Ballard (LB); Leon Bleggi (LAB); John Councilman (JC); Walt Grows (WG); Mark Orme (MO); Megan Bogle (MLB); John Pruess (JP); Jerry Reese (JBR); Ed Fischer (EF); Dale Pekar (DP); Alan Silker (AS); Ann Matejko (AM); Ric Rine (RR); Carol Cushing (CC); Ronna Simon Monte (RSM); Duane Monte (DM); Dan Delany (DD); Fred Straus (FS); Jeff Larrieu (JL); Larry Gorringer (LG); Liz Davy (LD); Bud Alford (BA); Marynell Oechsner (MO5); Kendall Adams (KA); Dee Sessions (DS); Ron Dickemore (RD); Cheryl Probert (CP); Keith Tweedy (KT); Adrienne Keller (AK); Brent Porter (BP); and Mac Murdock (CMM).

COMMONLY USED ABBREVIATIONS

To shorten responses, the Forest abbreviated the following:

EIS = Environmental Impact Statement, the document that analyzes all the alternatives and shows the preferred one. DEIS is the draft. FEIS is the final.

Revised Plan = The Targhee National Forest Land Management Plan Revision, the preferred alternative 3-M, which will determine the direction of the Forest for the next 10 years. Sometimes the abbreviation is the "Final Revised Plan" to distinguish it from the Draft Revised Plan.

Targhee and the Forest = Targhee National Forest.

Respondents are from all geographical areas of the United States. Most respondents are from Idaho, followed by Utah, Wyoming, Montana. Attached is a list of every respondent next to his/her letter number.

DID ANYONE LISTEN TO ME? HOW TO FIND YOUR COMMENTS.

All substantive comments were read, considered and responded to. Some people think that if they don't get what they asked for, nobody listened. Although they may or may not get what they asked for, review of this document will show that they were heard. You can find your individual comments by checking your mail label or your letter number in the attached alphabetical list of individuals and organizations. Letters are usually filed under the name of the person who signed the letter, rather than the organization. Look up the subject of your comment, such as snowmobiling or grizzly bear, in the table of contents. Check the subheadings under the subject such as "snowmachines - dates." Look for your letter number under the issue areas.

ACCESS - 40% SLOPE

(CROSS REFERENCE: Soils; Riparian, Hydrologic Disturbance)

COMMENTS: Design effective road closures to "discourage" OHV use on slopes greater than 40 percent and list actions taken if violations occur.

1361

RESPONSE: The Revised Plan allows summer cross country motorized (OHV) use on only 7 percent of the Forest. The Revised Plan also provides OROMTRD standards for each management prescription. The collective effort of these is to reduce the miles of roads and trails open to motorized use. Those not open will be closed with effective closure devices. A new travel plan will implement the new restrictions. Law enforcement action can then be taken against violators. The Revised Plan also contains a guideline to discourage OHV use on slopes greater than 40 percent in the 7 percent of the Forest that is open. JR

COMMENTS: Create a standard which will prohibit OHV travel on steep slopes (e.g., greater than 25 degrees) and thus minimize risk for ATV use as well as erosion potential.

695, 697, 1273b, 1365

No hill climbing over 40-50% slope should be allowed.

FS-3

RESPONSE: Allowing travel on slopes up to 40 percent does not result in serious risk to OHV users. Recreation Standards and Guidelines for OHV use in Chapter III of the Revised Plan states that travel restrictions may be required in areas with 25-40 percent slopes if soil erosion factors warrant. Use is also restricted on identified areas of unstable soil. OHV use is permitted on designated routes and on roads and trails that may cross slopes that exceed 40 percent. The Revised Plan directly addresses the concern for OHV on steep slopes. The Revised Plan allows summer cross-country motorized use on only 7 percent of the Forest. The Revised Plan also has a guideline to discourage OHV use on slopes greater than 40 percent. LAB/TEM/JR

COMMENTS: Remove OHV restrictions on slopes of 25-40 percent.

693, 767

RESPONSE: In the Revised Plan, the Standards and Guidelines state that on slopes 25-40 percent the Forest may require travel restrictions, depending on soil erosion factors. The actual restrictions are provided in the Travel Plan which implements the Revised Plan. The Revised Plan allows OHV use on only 7 percent of the Forest to address a number of resource concerns. (Most areas closed to cross country also contain a good network of designated trails open to motorized use). LAB/TEM/JR

COMMENTS: In the case of 25-40 percent slope erosion concerns, clarify whether restrictions on use are imposed after erosion is identified, or if restrictions are imposed if soil erosion is suspected.

1361

RESPONSE: Most restrictions will appear in the Travel Plan which implements the Revised Plan. Only 7 percent of the Forest will be open to summer

ACCESS - 40% SLOPE

cross-country motorized use to address a variety of resource concerns (most areas also include a good network of designated trails which allow motorized use). In those areas remaining open, additional restrictions would occur only after monitoring and a site-specific analysis. JR

ACCESS - ANALYSIS PROCESS

More Comprehensive Analysis Needed

COMMENTS: The DEIS section of the cumulative impacts of roads on wildlife, soil and water of the forest should address whether those roads are under Targhee National Forest jurisdiction and management or not. The DEIS should also comprehensively address the issue of border roads as well.

1367b

Suggest a comprehensive road management and transportation plan evaluating the need for roads, how those needs are achieved and the impacts roads have on other forest resources. Restrictions should protect resources and public safety.

FS-11, FS-12, 389, 1345

The Plan should include a comprehensive review of the environmental and user impacts of the Recreational Management Plan on OHV use during the past ten years planning period due to the lack of a thorough monitoring/evaluation in original Revised Plan.

1365

RESPONSE: The FEIS addresses the impacts of roads on wildlife and other resources. The analysis for the Revised Plan is sufficient to address access management on National Forest System lands. For more detailed information, see the Access Appendix in the FEIS and Process Paper D, available in the Supervisor's Office. The analysis developed the standards for open road density for each management prescription. The mix of prescriptions and the amount of motorized access varies by alternative and the effects are compared in the FEIS.

The analysis does not include "border" roads outside the Forest boundary because doing so could be interpreted that the Forest Service has the authority to make management decisions for those roads. The road density standards only apply within the Forest boundary. For the same reason, the FEIS only addresses management direction for roads under Forest Service jurisdiction. The FEIS does provide a broader narrative view of the transportation system for Southeast Idaho to give a larger perspective.

The Analysis of the Management Situation provided the basic overview and update of the existing situation (the analysis of the past ten years). This defined the basis for need for change to mitigate environmental and user impacts. We disagree that there was a lack of thorough monitoring/evaluation in the original Plan. JBR/LRG

COMMENTS: Restrictions for off-road vehicles should be planned and implemented to protect resources and public safety.

1345

ACCESS - ANALYSIS PROCESS

RESPONSE: We agree. The Revised Plan restricts ORV use to protect resources and meet public safety needs. For example, 93 percent of the Forest is closed to summer cross-country motorized use in the Revised Plan. The Revised Plan also sets road and trail density standards to meet the needs of other resources. These standards resulted in fewer roads and trails being open for motorized use than is currently the case. JBR

COMMENTS: The DFPR and DEIS need to include: more analysis, stricter standard and guidelines, better methods and science, and adherence to environmental laws because of road closures and the monitoring program.

1361

RESPONSE: The road analysis in the FEIS and the Revised Plan is adequate to address the issues and provide a basis for decisionmaking (see previous response). Appropriate management prescriptions were developed and applied on the ground, along with Forestwide standards and guidelines to address resource concerns and public issues. Appropriate scientific information was used in this analysis. This is particularly true for development of road density standards to meet goals to reduce elk vulnerability, increase habitat effectiveness for elk, and to improve grizzly habitat. The monitoring of road closure effectiveness is a number one priority for the Revised Plan's monitoring. The travel management standards and guidelines are in compliance with applicable laws and regulations. JBR

Wildlife Analysis

COMMENTS: Harassment of wildlife by OHV's is not adequately considered in the Plan analysis, prescriptions or standards and guidelines.

1365

RESPONSE: We disagree. The needs of wildlife species, particularly elk and grizzly bears, were analyzed in depth and provide the basis for restrictions on cross-country motorized use by OHVs and reductions in the road density for motorized vehicles in the Revised Plan. Approximately 93 percent of the Forest is closed to summer cross-country motorized use in the Revised Plan and winter cross-country travel by snow machines is restricted to designated routes through big game winter ranges. These changes respond directly to concerns about harassment of wildlife from OHVs. JBR

COMMENTS: Proposed access program and analysis fails to recognize the beneficial effects on fish, wildlife, water quality, recreation or local economy.

1195

RESPONSE: The FEIS displays the positive and negative effects from implementing the Revised Plan and compares them to the other alternatives considered. The reductions in motorized access in the Revised Plan were developed with the objective of providing beneficial effects for wildlife and fish habitats and water quality. Changes anticipated in recreation opportunities are displayed in the FEIS and are both positive and negative. The effects on the local economy are difficult to quantify but are described in the economic analysis in the FEIS. JBR

ACCESS - ANALYSIS PROCESS

COMMENTS: Evaluate impacts the lack of road standards have on wildlife use and population in timber management areas.

1369

RESPONSE: The construction standards for particular roads will be decided in site-specific analysis when projects are proposed and will be based on project objectives and compliance with Standards and Guidelines in the Revised Plan. Timber access roads specified will be the lowest suitable standard that still facilitates removal of the harvested trees. Most new roads will be closed after removal of the timber to meet road density standards in the Revised Plan.

The impacts on wildlife are more related to the density of roads than the particular road construction standards. The impacts of roads are adequately addressed in the FEIS and the Revised Plan contains specific standards for road density that are designed to be compatible with wildlife habitat objectives. JBR

COMMENTS: Clarify the basis for such high OROMTRD standards of up to 2.0 miles per square mile and lower this standard to protect elk and deer. (CROSS REFERENCE: Access, Wildlife)

1273b

RESPONSE: Most management prescriptions have OROMTRD standards between 1.5 miles per square mile and 0.0 miles per square mile to address wildlife habitat objectives.

Only three prescriptions in the Revised Plan have OROMTRD standards higher than 1.5 miles per square mile. Prescription 5.1.3 (b) is an urban interface prescription and has a standard of 3 miles per square mile. The density relates to the developed nature of the lands, with summer homes, adjacent private land developments and similar human activities. Where this prescription overlaps winter range, the winter range area is restricted to designated routes for snowmachines in winter. Prescription 6.1 is a range management prescription with a density standard of 2 miles per square mile. No conflicts were identified with wildlife or other resources in areas where this management prescription applies that would dictate a lower density. Again where this prescription overlaps winter ranges, the winter motorized use is restricted to designated routes. Prescription 2.7 is the winter range prescription with a summer motorized density standard of 2 miles per square mile. Since wildlife are not concentrated on winter ranges during the summer, no need was identified to restrict motorized use beyond this level. Winter motorized access is limited to a few designated routes. JBR

COMMENTS: Add a provision to prohibit motorized activities if they conflict with the primary goal of providing and protecting big game habitat.

389, 640

RESPONSE: The Revised Plan includes specific management direction regarding motorized use. The road density standards for each prescription are specifically designed to meet wildlife habitat objectives (refer to Process Paper D in the Supervisor's Office for more detail). Cross-country motorized use is greatly reduced in the Revised Plan and roads and trails open to motorized use are reduced. JBR

ACCESS - ANALYSIS PROCESS

COMMENTS: The Plan should acknowledge that road density is significant in habitat management for the lynx and wolverines, both of which are in the Forest Service Region 4 Support List. (CROSS REFERENCE: Wildlife)

389

RESPONSE: The road densities provided in the Revised Plan are designed to meet the needs for wildlife habitat protection. The densities will meet the habitat requirements for viable populations of lynx and wolverine. JBR

COMMENTS: The Plan fails to recognize that the OROMTRD in BMUs does not address access of motorbikes in those areas. (CROSS REFERENCE: Road Density)

1361, 1367a

RESPONSE: The Revised Plan specifically addresses access of motorbikes in the BMUs. OROMTRD standards include all types of motorized use, whether cross country or on roads or trails, and include motorbikes. No motorized use of any kind is allowed in grizzly bear "core" areas and each BMU has an OROMTRD standard of less than or equal to 0.6 miles per square mile of motorized access routes, whether roads or trails. JBR

COMMENTS: The draft does not examine issues of fragmentation, edge effects, other impacts of roads on species other than elk and grizzly bear.

1365

RESPONSE: New information and analysis is in the FEIS concerning fragmentation. The effects on many other species besides elk and grizzly bears are presented in the FEIS and standards and guidelines are included in the Revised Plan to address habitat needs of those species. MO/JBR

COMMENTS: Recommend adding "Big Game Summer/Winter" to any list prioritizing or emphasizing implementation of motorized access.

766

RESPONSE: All acres on the Targhee National Forest were considered in the analysis of motorized access. Standards for each prescription address "Big Game Summer/Winter" issues (See Process Paper D in the Supervisor's Office and the Access Appendix in the FEIS for more details on the process used). MO/BBP

COMMENTS: Plan needs to include references and full citation to support the management direction and activities for big game security, winter and summer range.

389, 1365, 1369

RESPONSE: All references cited are located in the Access Appendix of the FEIS and in Process Paper D in the Supervisor's Office. BBP/MO

COMMENTS: Monitor BMUs when determining road closures.

58

RESPONSE: Monitoring road closure effectiveness is a priority #1 in the monitoring plan for the Revised Plan. Monitoring road closures in BMUs

ACCESS - ANALYSIS PROCESS

receives such high emphasis because successful road closures are necessary to achieve grizzly bear habitat objectives. BBP/JR

COMMENTS: Plan should integrate Key Issues 3-5 when addressing the impacts of roads on Threatened and Endangered Species.

1204

RESPONSE: All threatened and endangered (T&E) species were selected as Management Indicator Species for the Revised Plan and FEIS as documented in Process Paper D in the Supervisor's Office. The Revised Plan sets OROMTRD standards that address effects of roads and trails on T&E species. The effects are displayed in the FEIS and the Biological Assessment submitted for consultation with the U.S. Fish and Wildlife Service. BBP/MO

Single Track Trails

COMMENTS: The Plan equates single-track trails where motorized use occurs with a road and without any scientific basis and in face of significant opposition. Trails should not receive the same weight as roads. Consider using a Northern Idaho process which weighs motorized trails 1/10th the value of motorized roads with their impact on wildlife.

The analysis needs to compare the effects of single-track OHV trails to the forest roads maintained at various levels; recommend allowing wheel motorized access on trails unless otherwise designed; oppose converting single-track trails to be more accessible. (CROSS REFERENCE: Access, OHV; Wildlife)

629a, 1202, 1260

RESPONSE: To address these comments, a new analysis was completed between the Draft EIS and the FEIS to see what the differences might be using the two weighing systems. The results are presented in detail in the FEIS. Over the Forest, minor differences were noted between the two systems. The percent of the Forest meeting elk vulnerability objectives does not change. Elk vulnerability changes only 1 percent and elk habitat effectiveness changes 3 percent. Little difference in the amount of open motorized roads and trails is noted in the majority of watersheds.

Neither system has research which specifically supports one approach over the other. In fact, no research exists that objectively compares trail use to road use. Therefore, the Forest used the same process outlined in the DEIS and Process Paper D, which has been concurred with by the the Idaho Fish and Game Department and the Wyoming Game and Fish Department. The Northern Idaho process remains a draft and has not been adopted.

The reasons that the differences are minor in most watersheds are because: 1) Motorized trails account for 23 percent of the total motorized road and trail miles on the Forest. When cross-country motorized use is included (as described in Process Paper D) then only 10 percent of the motorized use is accounted for on trails. 2) The trail system is not equally distributed across the Forest, and in those drainages where most of the motorized trails occur, the trail densities are generally low (which means they have less effect in the EV and EHE analysis). 3) Motorized access on trails is only one factor in EV and EHE analysis; the factors such as hunter densities for EV and cover for EHE also contribute to the analysis. MO/JBR

ACCESS - ANALYSIS PROCESS

Non-System Roads

COMMENTS: Non-system road analysis is flawed. Analyze non-system roads per NFMA and Forest Manual direction.

1273b, 1361, 1365, 1367b

RESPONSE: Refer to Section II, Physical Elements, of the FEIS where nonsystem road closures are addressed. Each alternative includes differing mileages of open and closed roads. In any alternative, non-system ("ghost") roads are either added to the road inventory or closed. This complies with the intent of NFMA and Manual direction.

Correspondingly, the Revised Plan retains some non-system roads and trails, which will be made "system" roads and trails and added to the Forest travel maps. All roads not identified as part of the Forest Development Road System and not shown on the Forest Inventory will be closed after a site-specific analysis determines the method of closure, as funding permits. LRG

COMMENTS: Concerned how the Targhee National Forest proposes to address non-system road creation because of the negative impacts to resources if mileage from unauthorized roads are not contained for the duration of the Plan process. List all non-system roads and when they were created.

1273b, 1361

RESPONSE: This Revised Plan makes major changes in access management compared to the previous plan. The majority of the forest lands now will be managed as closed with access limited to designated routes. Indiscriminate cross-country travel is mostly prohibited (only 7 percent of the Forest is open to cross-country motorized travel in the summer). This type of use in the past facilitated the proliferation of non-system roads. With controls in place, unauthorized non-system road creation will be contained.

All non-system roads that we discovered were mapped and are included in the access analysis. However, many have never been named or numbered. The Forest does not know when most of these roads were created and that information is not needed to determine future management. The complete analysis of roads is summarized in the Access Appendix in the FEIS. LRG

COMMENTS: Designate uninventoried trails as a part of effective trail closure. Obliterate the 363 miles of non-system roads and 98 miles of non-system trails you are leaving open illegally.

1332, 1361

Justify why the Plan allows "created" routes to be "legal." Should not have included roads and trails illegally created/used by OHV users as legal routes.

1365

RESPONSE: The Revised Plan directly addresses this issue. During the planning process all roads and trails were inventoried, including "ghost" roads and motorized trails. Trails and roads which are to remain open will be added to the Forest Development System. Those not needed will be closed, with site-specific analysis determining the type of closure. The analysis is more fully described in Access Appendix in the FEIS. JBR

ACCESS - ANALYSIS PROCESS

COMMENTS: Define "historic recreation use" in road closure guideline. NFMA requires reclamation of non-system roads within ten years of their creation and therefore the definition of historic recreation use should not violate NFMA.

1361

RESPONSE: Historic recreation use relates to recreation use that has developed over time on either "system" or "nonsystem" roads and trails. The Revised Plan used historic use as one criterion for determining whether a particular road or trail should remain open or be closed. If designated as open, the road/trail will be added to the Forest Development System as described in previous responses. Other roads and trails will be closed.
JBR

COMMENTS: Consider more thoroughly the overall impacts of OHV use in the Plan. Disagree that there are no serious widespread adverse consequences as a result of rapidly increasing OHV use.

1365, 1367a

RESPONSE: The effects of OHV use are directly addressed in the Revised Plan and are described in the FEIS (see previous responses). The term "widespread" has a wide range of interpretations. The FEIS states that the problems exist in several places on the Targhee, but problems do not cover large areas. Sections along most trails are not currently suitable for motorized use because they were not originally designed for that use. However, most trails can accommodate the use and the bad sections can be relocated or reconstructed to eliminate the concern. In simple terms, the problems are mostly localized and can be corrected. JBR

COMMENTS: Because the Targhee's OHV data base is insufficient, need to perform floral/fauna inventory (regarding OHV/Recreation Impacts); and establish complete baseline ecological data for a thorough monitoring and evaluation plan.

1365

RESPONSE: The Revised Plan provides appropriate direction to guide our management of OHV use across the Forest. The Forest does not need a complete floral/faunal inventory to take appropriate actions. As site-specific analyses are completed to implement road and trail improvement projects, these surveys will be completed and used to guide location and design of specific roads and trails. Monitoring items are included in the Revised Plan to review the success of management and to identify new site-specific problems. Only 7 percent of the Forest will be open to summer cross-country motorized use in the Revised Plan and a significant reduction will occur in open motorized roads and trails. JBR

Include Roads Scholar Project in Analysis

COMMENTS: Need data on road closure effectiveness, suggest using Roads Scholar Program. Also, current data indicates ineffective monitoring, could use RSP to develop new measures.

643, 1361

ACCESS - ANALYSIS PROCESS

RESPONSE: The Forest has the information from the Roads Scholar program and will use it where appropriate. The definitions of "effective closure" and similar terms used in the Revised Plan conform to the Interagency Grizzly Bear Committee definitions and/or to the definitions agreed to with the Idaho Fish and Game and the Wyoming Game and Fish Departments. These are not the same definitions used in the Roads Scholar report (see Process Paper D in the Supervisor's Office for more detail). The Forest conducted an extensive inventory of all roads and trails, including "ghost" roads and considered them in the analysis (see the Access Appendix in the FEIS). Roads and trails which are retained are added to the Forest Development System. The others will be closed or obliterated. Only 7 percent of the Forest is open to summer cross-country motorized use in the Revised Plan. This will prohibit use on any routes not designated as open. Monitoring of road closure effectiveness is a number one priority for the Revised Plan. JBR

COMMENTS: Suggest using the Visitor Impact Management Access (Graefe, Kruss, Vashe).

1365

RESPONSE: The analysis, monitoring, goals and objectives, and other management direction adequately address the access issue and are based on studies cited in the References and Access Appendix in the FEIS. JBR/AS

Concerns about Road Analysis

COMMENTS: Designate all existing and proposed roads, trails, air fields, and other facilities as Forest Management transportation facilities.

1361

RESPONSE: These facilities are routinely included in the Forest transportation inventory system. All facilities not scheduled for permanent closure or obliteration will be added to the inventory, if not already included (see previous responses). JBR

COMMENTS: The open road analysis is egregiously flawed and uses simplistic assumptions: treats road closures as 100% effective; does not consider non-inventory roads or restricted road usage data; treats roads reclaimed/obliterated between 1981-1993 as absent; monitoring of road closures in priority level 2. (CROSS REFERENCE: Access, Roads)

375, 643, 697, 1277, 1361

RESPONSE: The assumptions in the open road analysis are consistent with the Interagency Grizzly Bear Committee Access Report and/or the agreements with Idaho Fish and Game and the Wyoming Game and Fish Departments. The analysis process considered all the items listed. See Process Paper D in the Supervisor's Office for details on Wildlife Analysis and the Access Appendix in the FEIS for the specific analysis of roads and trails. The Revised Plan directly addresses access concerns and the effects are displayed in the FEIS. Monitoring of road closure effectiveness was moved to priority one in the monitoring plan. JBR

ACCESS - ANALYSIS PROCESS

COMMENTS: Analysis should include an evaluation of the need for roads on forest and their impacts on other resources, such as: spread of disease and insects; hunting and fishing access; and, recreational opportunities.

325, 389, 697, 1195, 1276, 1368

RESPONSE: Development of a balanced transportation system, which meets the needs of users and managers, while protecting other resources, is a major focus of the Revised Plan. The effects of the changes in access are displayed in the FEIS. A primary concern was the effects on wildlife of a high density of roads and cross-country motorized access. Extensive analysis inventoried all roads and trails, including ghost roads, and identified areas of cross-country motorized use. The analysis is detailed in Process Paper D, in the Supervisor's Office and the Access Appendix in the FEIS. Only 7 percent of the Forest is open to summer cross-country motorized use in the Revised Plan and OROMTRD standards are established for each prescription which collectively reduce the miles of roads and trails open to motorized use. This reduces some recreational opportunities and increases others, as described in the FEIS. Standard procedures such as requiring certified weed free hay on the Forest and specific revegetation/treatment guidelines for activities causing soil disturbance address the spread of noxious weeds. Roads and trails do not have significant effect on spread of insects and diseases, and any such effects are reduced from the present. JBR.

COMMENTS: Recommends an additional EIS be done to evaluate impacts of road closure methods, which in turn will decide monitoring methods.

1206

RESPONSE: We disagree. Evaluation of impacts of road closure methods and corresponding decisions regarding monitoring methods are adequately covered in the Revised Plan. Additional site-specific analysis will be done to determine specifically "how" to close individual roads and trails scheduled for closure in the Revised Plan, such as obliteration versus gating. JBR

COMMENTS: Plan should require both access routes to recreation areas and traffic patterns to these areas be planned to avoid impact to sensitive species/area.

1365

RESPONSE: A site-specific NEPA document will assess the potential impacts on sensitive species and areas. Such analysis is standard Forest Service policy which is not repeated in the Revised Plan. All such projects will be surveyed by a qualified botanist and wildlife biologist to identify and address impacts to sensitive plant and animal species. JBR

COMMENTS: Plan needs to show how the forest evaluated the differing effect of forest levels 2 and 3 roads on forest natural resources.

1260

RESPONSE: In assessing the effects of roads on other resources at the Forest Plan level, road density is much more critical than the road maintenance level. While there may be some difference in the amount of traffic between the different maintenance levels, this is minor compared to the effects of

ACCESS - ANALYSIS PROCESS

road density. The standards for road density are established in the Revised Plan. Maintenance level is an operational decision based on site-specific use for the road. JBR

COMMENTS: When implementing the preferred Alternative, must consider gravel roads and trails as resources.

FS-12

RESPONSE: While the Plan does not directly state this, we agree that the infrastructure, which includes gravel roads and trails, is a resource needing proper management. LRG

COMMENTS: Change language to, "a road closure and reclamation project will ensure the signing of the Record of Decision of the Forest Plan." In addition, this section needs to specify inventoried and non-inventoried roads.

643

RESPONSE: The Revised Plan includes objectives to complete road closures and/or reclamation within three years of signing the Record of Decision in the Bear Management Units and by 2007 in the remainder of the Forest. This is a realistic schedule given funding constraints. We signed a site-specific Travel Plan decision implementing the road density standards in the Revised Plan at the same time the ROD was signed for the Revised Plan. Open routes will be designated on the ground and on maps immediately and enforcement of the Travel Plan will begin. Actual gates and other restrictive devices will be installed within three years in the BMUs and by 2007 on the remainder of the Forest. As stated in previous responses, all open roads are added to the Forest Development System and the others will be closed or obliterated. JBR

COMMENTS: Explain how Targhee National Forest will effectively manage these lands without a thorough inventory of existing roads and trails; state when the last on-the-ground road inventory occurred.

1273b, 1361

RESPONSE: A thorough inventory of existing roads and trails exists to manage Targhee National Forest lands. A specific effort was made to inventory all roads and trails, including "ghost" roads as part of the Revised Plan effort. See the Access Appendix in the FEIS for details. The most recent inventory was in 1996. The inventory is routinely updated each year. JBR

National/State Highways

COMMENTS: Corridors for maintaining connectivity along I-15/Highway 20 should be identified in the Plan so mitigation can be pursued with Highway Management.

1206

State highways passing through the Targhee National Forest should be in road analysis figures.

1367b

RESPONSE: State highways were included in road density calculations where they cross the Forest and they are included in the analysis. We disagree that the Plan needs to address connectivity corridors along I-15 and Highway 20. These can be addressed at the site-specific level within the Standards and Guidelines in the Revised Plan as problems are identified. If the intent is to reroute these major highways for this purpose it is outside the scope of the Revised Plan. JBR

COMMENTS: Spend more time explaining what is needed (e.g. I-15/Highway 20) than only speaking to road closures.

FS-12

RESPONSE: Road and trail access and the effects of roads and trails on other resources are key issues addressed by the Revised Plan. The Revised Plan explains key goals and objectives to be achieved in arriving at a Desired Future Condition. A standard is established in each Prescription for road density, which includes the major highways. Where current road density exceeds the standard, roads are scheduled for closure and obliteration. In no case does the Revised Plan suggest that a major highway be closed (see the Access Appendix in the FEIS). The Revised Plan and FEIS address road closures because in most cases the existing transportation system is larger than the desired future transportation system. JBR.

COMMENTS: Address the impact that highways have on rare carnivores and other wildlife species.

1206

RESPONSE: The existing highways are included in road density calculations that assess compliance with the OROMTRD standards in the Revised Plan. To a great extent, these density standards were determined by wildlife habitat needs (see the Process Paper D in the Supervisor's Office). The effects on wildlife are also displayed in the FEIS.

Consideration of future highway construction is outside the scope of the Forest Planning Process. The development of major highways on the Forest falls under the authority of the Federal Highway Administration (FHWA), not the Forest Service. When warranted, FHWA will from time to time propose to construct or reconstruct segments of these routes, initiate the NEPA process and seek public input. During this process, impacts on rare carnivores and other wildlife species are addressed. LRG

More Definition Needed

COMMENTS: Define the Forest Plan goals for the following problems: dirt bikes/four wheelers create new routed trails in Island Park and Centennials; riparian /wet meadows are deeply rutted along Henry's Fork; ghost roads are traveled regularly; roads previously closed are traveled in spite of gates/berms.

697

RESPONSE: The Revised Plan establishes OROMTRD standards for each prescription and the collective effect of these is to reduce the roads and

ACCESS - ANALYSIS PROCESS

trails open for motorized use. Only 7 percent of the Forest will be open to summer cross-country motorized use under the Revised Plan. These changes will directly address the concerns listed. For specifics, review the access tables for the prescriptions in Island Park and the Centennials and the new Forest Travel Plan. The analysis is detailed in the Access Appendix in the FEIS. The Forest intends to enforce these restrictions effectively. Monitoring the effectiveness of road closures is a number one priority in the monitoring plan for the Revised Plan. JBR

COMMENTS: The DFPR states net forest development road mileage will not increase. Clarify whether this is for open roads or all forest development roads. Plan should also clarify that the construction of temporary roads is new road construction.

667, 1273b, 1361, 1446

RESPONSE: The goal which includes this reference was removed in the Final Revised Plan because the Revised Plan provides specific OROMORTD standards for each prescription. We agree that the goal is confusing.

Construction of temporary roads must also conform to the density standards for the prescriptions. For example, if a temporary road is constructed that would exceed the road density standard for a particular prescription, another road of comparable mileage must be closed to achieve the density standard for the time that the temporary road is in use. JBR

COMMENTS: Does not support "designated routes" because it would be difficult to modify in the future.

1202

RESPONSE: The Revised Plan retains designated routes. This is the only feasible way to enforce road restrictions where areas are closed to summer cross-country motorized use. Only 7 percent of the Forest is open to cross-country motorized use in the Revised Plan. Modification of these routes can be done with a site-specific NEPA document documenting the rationale for the change with appropriate public involvement. JBR

COMMENTS: The Plan needs to consider OHV impacts on: loss of vegetation which is food and cover for wildlife; loss of structural variability/reduction in small mammal population; reduction of reptile number, diversity, bio mass and species richness; loss of migrating bird habitat, populations, and nesting areas; increase in mortality through harassment and shooting; feeding and spatial-use pattern that leads to decreased reproductivity; noise impacts wildlife by increasing nest and juvenile predation on birds and other wildlife which is exuberated after nightfall.

1365

RESPONSE: The Revised Plan and FEIS appropriately consider the impacts of OHV on wildlife habitat. The road and trail density standards in the Revised Plan in conjunction with other Standards and Guidelines provide for the habitat needs of the listed species. Cross-country motorized use by OHV is allowed on only 7 percent of the Forest. Collectively, a significant reduction in open motorized road and trails is provided in the Revised Plan. Not every wildlife species is evaluated separately in the FEIS; instead Management Indicator

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Species are used. Also, the direction for achieving Properly Functioning Condition provides for functioning ecosystems across the Forest with appropriate structure, species composition, and so forth for species dependent on these ecosystems. JBR.

COMMENTS: Disagree that (DEIS III-58) there are no serious widespread adverse consequences as a result of "rapidly increasing" OHV use.

1365

RESPONSE: DEIS III-58 describes the current situation regarding OHV use as not causing widespread adverse consequences. This section goes on to say that concern for OHV effects on soil and vegetation do exist in areas of highest concentrations such as the Big Hole Mountains/Palisades and Caribou Subsections and it is possible that motorized use is affecting some big game wildlife habitat potential or vulnerability to hunting pressure. These areas will be evaluated and measures established to correct the problems. The effects of OHV use are displayed in the FEIS and specific standards and guidelines are provided in the Revised Plan to address problems (see previous responses). JBR

COMMENTS: The Plan should close more than the 764 miles of existing roads and trails.

1367b

RESPONSE: The Revised Plan provides specific OROMRTD standards for each prescription area. Where existing open motorized road and trail route density exceeds these standards, specific roads and trails are identified for closure. The effects are displayed in the FEIS. A site-specific travel plan to implement the Revised Plan is also provided. The analysis is described in detail in Process Paper D in the Supervisor's Office and the Access Appendix in the FEIS. JBR

COMMENTS: The Plan should truly effect road/trail closures that will in fact regulate access and help restore wildlife security.

690

RESPONSE: We agree. The Revised Plan specifically provides for this. Thank you for your comment. JBR

COMMENTS: The final plan should change policy of allowing motorized bikes into non-motorized areas.

1273b

RESPONSE: The Revised Plan specifically establishes by prescription whether motorized bikes are allowed, either cross-country or on designated routes. Summer cross-country travel is allowed on only 7 percent of the Forest. Several prescriptions do not allow motorized use. Overall, a balance of motorized and non-motorized recreation opportunities is provided. JBR.

COMMENTS: Road closures that are being violated and have not been remedied should be in TMARD and OMTARD statistics.

1361

ACCESS - ANALYSIS PROCESS

RESPONSE: Road closures that are being violated highlight the need for more rigorous law enforcement action and/or the need to provide better physical restrictive devices. Monitoring of closure effectiveness is a number one priority in the monitoring plan for the Revised Plan because of the importance of maintaining effective closures. The OROMTR density standards set the upper limit and define the access density needed by prescription. Forest efforts will be focused on achieving those standards. JBR

COMMENTS: Justification of further restrictions on motorized recreation has not been proved.

300

RESPONSE: Considerable research documents the effects of motorized travel on roads to wildlife species like elk and grizzly bears. The Forest has monitoring information on erosion from road and trail systems on the Forest as well as considerable watershed and sedimentation research documenting the effects of roads and trails on water quality and fish habitat. This information was used to develop standards and guidelines for the Revised Plan. For specific references, refer to Process Paper D available in the Supervisor's Office and the Access Appendix and the references cited in the FEIS. JBR

COMMENTS: Plan should include research on trails as much as was done on roads.

1202

RESPONSE: Little specific research is available on the effects of trails, particularly the effects of motorized trails on wildlife populations. However, the information available along with professional judgments by resource specialists provide sufficient information to address trails in the Revised Plan. Monitoring will determine the effectiveness of the direction in the Revised Plan and changes can be made if necessary. JBR.

COMMENTS: Analysis is not specific enough on how road closures will be re-evaluated or changed.

697

RESPONSE: Site-specific analysis with public involvement will be the vehicle for re-evaluating road closures and making changes as necessary. Monitoring information will be used to determine the need to initiate a change. JBR

COMMENTS: Add to the DEIS any roads not in your inventory to be monitored.

1367

RESPONSE: Roads to be retained in the Revised Forest Plan will be added to the Forest Transportation System and will be monitored. Those scheduled for closure will be closed or obliterated and removed from the inventory. Monitoring will be done to assure the closures are effective as a number one priority in the monitoring plan for the Revised Plan. JBR

COMMENTS: Plan should receive more explicit attention to road closures.

489

ACCESS - ANALYSIS PROCESS

RESPONSE: The Revised Plan explicitly addresses road and trail access as a key issue, including closures where necessary. See previous responses. JBR

COMMENTS: The analysis is misguided/reckless in determining the difference between motorized access and human access.

496

RESPONSE: The studies that assess the environmental and social impacts associated with motorized and human access are sufficiently detailed and comprehensive to allow enlightened decisions in the Revised Plan. See previous responses. JBR

ACCESS - CROSS-COUNTRY

Cross-Country Summer - Non Support Restrictions

COMMENTS: Oppose proposed restrictions on summer cross-country access; support more access or at least keep at current management levels.

6, 21, 24, 26, 27, 28, 29, 30, 35, 36, 39, 40, 41, 43, 44, 45, 46, 47, 49, 50, 52, 53, 54, 55, 258, 285, 292, 316, 319, 337, 338, 347, 370, 413, 447, 481, 645, 645b, 646, 687, 1311, 1316, 1317, 1390, 1449

Disagrees with the Plan's duplication of road closures and summer OHV cross-country restrictions.

694

RESPONSE: Impacts to resources is occurring in many areas on the Forest due to the large increase in off-highway vehicles. Because of this, the Revised Plan redirects the future use of OHVs by restricting cross-country access. Each area on the Forest is covered by a management prescription which has road densities that determine how many roads are allowed in a particular area. The road densities are beneficial to wildlife and other resources. CMM

Support Restrictions

COMMENTS: Support restrictions on cross-country motorized travel to protect Forest resources and habitat. Eliminate cross-country motorized travel.

F-K(4), 1, 5, 27, 41, 42, 45, 62, 143, 156, 158, 161, 173, 176, 200, 212, 219, 227, 258, 266, 293, 305, 311, 312, 325, 351, 354, 356, 357, 373, 389, 391, 392, 406, 489, 610, 611, 625a, 631, 632, 643, 644, 645, 650, 655, 659, 662, 665, 667, 669, 687, 695, 697, 1247, 1257, 1258, 1273b, 1276, 1311, 1312, 1330, 1331, 1339, 1365, 1367b, 1371, 1378, 1387, 1388, 1395, 1399

RESPONSE: The Revised Plan eliminates summer cross-country motorized travel in all but seven percent of the Forest. CMM

Suggestions

COMMENTS: Partition the forest for various uses; close some areas to OHVs (summer) to protect wildlife/watershed values, reduce conflict with foot/stock

ACCESS - CROSS-COUNTRY

uses and give OHVs (summer) other places to go. (CROSS REFERENCE: Social Concerns)

5, 161, 173

RESPONSE: The Forest examined areas that can provide additional OHV (summer) use. Additional access will balance with the resource objectives in the Revised Plan. Education in trail etiquette for users is encouraged to reduce conflicts with foot stock and OHV. CMM

COMMENTS: The demand for cross-country opportunities should be equated to other recreational use, then enforced.

12

RESPONSE: Cross-country opportunities are considered in the road density for each prescription in a watershed. If a new opportunity is recognized it will be evaluated in relationship to the road density for that area. In most areas of the Forest there is adequate access and cross-country travel is unnecessary. Enforcement of the new travel plan receives high priority in the Revised Plan. LAB/CMM

Cross-Country Summer

COMMENTS: Change April 1 date for opening up winter range due to stress and mortality caused to ungulates by OHV travel.

643

RESPONSE: In winter range, OHVs are restricted to designated routes. After April 1, OHVs are still restricted to designated routes. OHV summer cross-country travel is restricted year-around. Changing the April 1st date will not change the use season for OHVs. The April 1st date pertains to people on foot, horseback, or mountain bike. CMM

COMMENTS: Use weather conditions and consultation with State game biologists to determine opening dates for summer cross-country travel.

643

RESPONSE: Only a few areas on the Forest are open to cross-country travel and the ground and weather conditions will determine when the summer travel plan will begin. Winter Range Prescription 2.7 (a) and (b) have special dates and conditions. Reference the 2.7 Prescription access table in Chapter III of the Revised Plan for the winter range conditions. There is no cross-country motorized travel allowed in winter range yearlong. CMM

COMMENTS: Allow cross-country use from June 15 to approximately October 10.

767

RESPONSE: Seven percent of the Forest is open to cross-country travel from early summer to Thanksgiving. The opening date to implement the summer travel plan will depend upon ground and weather conditions of the Forest. Some years the conditions could be ready before June 15th and some years later. Thanksgiving is the usual date most areas are closed by snow and it is also the end of many hunting seasons. LAB/CMM

ACCESS - DISABILITIES

COMMENTS: Concern that the disabled and elderly will be negatively impacted by the proposed access restrictions/road closures. Do not support motorized access restriction for persons with disabilities.

1, 46, 52, 240, 318, 319, 467, 511, 528, 607, 695, 713, 766, 1240

RESPONSE: Forest users will have access to most of the Forest as they do now, and major access roads will remain open. Occasionally a road that was open will be closed so that a road that was closed may be opened. There is a road density assigned by prescription to each area which determines how many miles of motorized roads or trails can remain open.

During the big game hunting seasons, persons with disabilities may be permitted to use motorized vehicles, if needed for mobility, on designated restricted roads and trails which are authorized for such use. A hunting license for disabled persons is issued by the State to qualified applicants. A special permit is issued by the Forest to allow access on designated roads for those with the State permit. This program has been going on for several years and is used by a small number of people. LAB/CMM

COMMENTS: The game retrieval system when used by the disabled needs to be monitored for disturbances and road densities.

1369

Need to show what roads are authorized for persons with disabilities or game retrieval, whether or not the roads are "open" at this time, and whether or not the OROMTRD will be recalculated and "made up for" with additional road closures elsewhere.

1273b, 1361

RESPONSE: Less than five Disabled Access permits are issued in any given year, and some years as little as one or none. The roads are not identified on the Travel Plan Map because the areas may differ from year to year on each district. Given the few people that participate in the Disabled Access permit, there will not be an impact on OROMTRD because use has been less than 1-2 vehicles per week on any road. If participation increases over the years, the Forest will reanalyze the road densities for the affected areas. LAB -

ACCESS - HUNTING

COMMENTS: Support limited access mainly to enhance hunting opportunities or experience; restricting hunters to a limited area will result in more hunting fatalities.

F-B(4), 157, 228, 270, 280, 413, 511, 1202

RESPONSE: Designated areas for hunting are determined by Idaho/Wyoming State Fish and Game agencies. The Forest Service manages access. If hunters feel an area has too much access, they may choose to hunt other areas. By reviewing the travel maps of the Forest it is possible to select areas that have the least or limited access. LAB/CMM

COMMENTS: No exceptions to motorized closures during hunting seasons should be allowed (including for hunters with disabilities).

157, 351, 694, 695

ACCESS - HUNTING

RESPONSE: The Revised Plan allows administrative access and the continuation of special access for hunters with disabilities through the Forestwide Access Standards and Guidelines in chapter III.

At this time, few hunters with disabilities use this special access. Administrative access is needed and may occur at any time of the year depending on emergencies or other special work projects. LAB/CMM

COMMENTS: Close some roads during elk season only.
1267, 1389

RESPONSE: The Targhee is doing this now and will continue to do so under Prescription 5.1.4 (a-c) in chapter III of the Revised Plan. The gates in 5.14(a) on these roads will be closed on October 1st, and 5.14(c) restricts use prior to and after fall hunts. LAB/CMM

COMMENTS: Confine motorized hunting opportunities to areas where road densities are excessive.
645

RESPONSE: Hunting areas and numbers of permits/hunters are determined by Idaho/Wyoming State Fish and Game agencies. Most people drive to their hunting areas or to a trailhead. The Revised Plan provides a road network that meets elk security and road density goals. LAB

COMMENTS: The Plan should include scientifically-based standards for managing OHV use in areas where this activity is permitted because inadequately managed OHV use on The Targhee has a major long-term negative impact on wildlife. These standards should include the following: impose additional seasonal or bag limits if justified by OHV-facilitated hunting mortality; and prohibit the transport of weapons on OHVs if justified by OHV-facilitated hunting mortality.
1365

RESPONSE: Seasonal or bag limits and prohibition of transport of weapons are determined by the Idaho/Wyoming State Fish and Game agencies. Information is provided to those agencies about motorized use after the Forest's monitoring is completed. These agencies can consider annual motorized information in determining limits. LAB/AM

ACCESS - LAW ENFORCEMENT

Access Enforcement Will Be Difficult

COMMENTS: Access enforcement will be difficult or impossible; the Forest Revised Plan will make enforcement worse because of increased closures and wilderness designation; better enforcement would reduce the need for more closures or restrictions. Problems with snowmachines on private land are a result of the Forest Service promoting this use without backing it up with appropriate level of law enforcement, particularly in the Centennials. Problems of habitual trespass by snowmobiles into wilderness on the Montana side of the Centennials is facilitated by illegal use on the Targhee. Lack of

ACCESS - LAW ENFORCEMENT

law enforcement of winter recreational activities is negatively affecting land owners. (CROSS REFERENCE: Centennials)

1, 36, 137, 175, 212, 277, 737, 1176b, 1322

Access enforcement has not occurred in the past. Current law enforcement is a joke or embarrassment: when someone shot a bear from a snowmobile, out of season, and reported it to the Game Warden and Forest Service, nothing was done. Failure to enforce rules breeds disrespect and because of problems, other agencies trying to enforce Targhee National Forest regulations. Some people enjoy breaking the law or ignoring restrictions.

1, 26, 161, 179, 296, 643, 737, 1277, 1322, 1337

RESPONSE: The Forest agrees that additional road closures and wilderness restrictions require an increase in enforcement efforts. Changes will increase the workload for the present law enforcement officers with no additional personnel expected. One additional source of assistance are permanent and seasonal Forest Protection Officers (FPO's) to supplement the Law Enforcement Officers (LEO's) with law enforcement duties, especially during peak use periods, such as the hunting and snowmobile seasons.

The Targhee continues to coordinate off-highway vehicles (OHV) and snowmobile restrictions with the surrounding forests: Gallatin, Beaverhead, Caribou, and the Bridger-Teton National Forests, so that restrictions and closures along borders are similar. For example, if a road or an area is closed on one forest, the bordering forest has a compatible closure so that enforcement is consistent.

The Forest Service does not promote OHV or snowmobile use on private lands surrounding the National Forest. Violations of trespass on private lands, due to a closure on public lands is a problem that must be coordinated with local and State law enforcement agencies so that trespass violators can be prosecuted. JL

Enforcement Funding and Personnel

COMMENTS: Access enforcement needs adequate funding and personnel. Cut backs in funding and personnel will make additional enforcement difficult or impossible. Do not approve of restrictions that will lead to additional enforcement costs for taxpayers.

161, 167, 169, 170, 191, 204, 212, 377, 392, 625a, 645a, 1276, 1330

RESPONSE: The Targhee recognizes the need for adequate funding and personnel for law enforcement. During these days of downsizing, funding for law enforcement is a challenge with all Federal, State, and local agencies. The Targhee has more of a funding problem than many forests. Two full-time funded LEO's are available to cover the entire Forest year-round, with an additional officer to help in the winter. The Forest is also proposing to fund law enforcement operations, using seasonal and permanent FPO's to assist the two LEO's in the enforcement of closures as well as other regulations. There are forest employees in other disciplines who also do part-time law enforcement. The two LEO's concentrate on areas of high-use or high-violation probability; therefore, providing adequate attention to these more heavily used areas.

To manage the National Forest under current concepts additional rules or restrictions become necessary. When additional restrictions occur of course additional monitoring or law enforcement must follow. The cost of

ACCESS - LAW ENFORCEMENT

monitoring or law enforcement is part of the new management. Budget allocations may be behind the need but the Forest tries to keep the programs in balance. The balance of funding and law enforcement are considered in the Revised Plan. JL/LAB/CMM

Enforcement Suggestions

COMMENTS: Suggestions for enforcement: Shift personnel from administration, office duties, or timber positions to enforcement; coordinate with other Forests or agencies on law enforcement; impose and advertise fines, which would help with funding for monitoring; use consistent and strict regulations; provide better signage for closed areas; better educate public to reduce need for regulations; and apprehend and punish persistent abusers. Support the CUFF Alternative because it would allow those who define recreation differently to legally engage in their definition without degrading forest.

1, 139, 161, 219, 296, 625a, 713, 737, 1330, 1337, 1357

RESPONSE: Presently the Targhee works with the Beaverhead, Gallatin, Caribou and Bridger-Teton National Forests, the U.S. Park Service and the State Fish and Game on periodic, joint enforcement operations involving illegal outfitter/guides, wilderness intrusions, and wood theft.

The Forest plans to train more people in other jobs to support the regular Law Enforcement Officers.

Often, newspapers print a list of violators and fines paid. Fines are paid to the United States Treasury and are not returned to the agency writing the citation.

Many closures are presently signed, but others are in need of signing. Notice of closures are published in newspapers before high-use seasons. Forest officers have met with, and will continue to meet with, user-groups to explain the closures and other regulations as well as solicit volunteers from these groups to assist in watching for violations, put in signs, and maintain trails, roads, and other sites. JL/LAB/CMM

Site Specific

COMMENTS: Problems with trespass in wilderness on the Montana side of the Centennials is facilitated by illegal use on the Targhee. There is little legal OHV use in Italian Peaks, but a lot of illegal use. There is concern about increased trespass into restricted areas, such as the Jediah Smith Wilderness. (CROSS REFERENCE: Access, Site-Specifics)

161, 643, 1322

RESPONSE: The Italian Peaks area has had a designated motorized trails system. This provides for legal motorized travel on the Targhee National Forest or Idaho side of the Centennials. Some users in the Italian Peaks will leave the designated trail and travel into the Beaverhead National Forest or Montana where the trails are signed closed. Patrolling this area by both Forests will help to control illegal use.

Motor vehicle use in wilderness areas (such as the Jediah Smith Wilderness) is mainly from snowmobile use rather than OHV's. Most of the trails and trailheads are signed so visitors know when motorized access is

ACCESS - LAW ENFORCEMENT

allowed. However law enforcement officers are hampered by vandalism of signs and by those who are eager to gain access to the area. JL/LAB/CMM/AM

ACCESS - MAPS

COMMENTS: Use maps and signs to educate the public about access issues on the Targhee National Forest. Need more maps and signs; control access through strong, visual displays and a travel map with all non-system and system roads; provide more education for the public on road closures; fund strategies for these requests.

1, 139, 161, 219, 296, 389, 625a, 629, 643, 690, 737, 1202, 1244, 1330, 1337, 1357, 1365, 1393, 1400

RESPONSE: The Forest will educate the public about access issues through the use of road signs and Forest and District travel maps. The Forest will also allocate funds for signing and access education when sufficient funds are available. LAB/TEM

Site Specific

COMMENTS: Post signs in Palisades Wetland area educating people about the negative impacts of human and motorized access to waterfowl.

389

RESPONSE: In the Revised Plan, the Palisades Wetland area, also called the "Alpine Wetland Area", is closed to all cross-country motorized travel year-long to protect the plant and wildlife resources using this area. This designation is currently on all of the Forest Travel Plan maps, and will be on the new Travel Plan map issued with the Revised Plan. Signing and education are always dependent on funding and priorities. MO

ACCESS - MONITORING

Support

COMMENTS: Support for monitoring access items in the Draft Plan, such as: effectiveness of road and trail closures; all accessible roads and trails; and, general access to the Targhee National Forest emphasized the need to educate the public of any monitoring implemented, and to make all monitoring direction explicit in the Revised Plan.

7, 62, 277, 334, 350, 489, 667, 687, 697, 1202, 1361, 1365

RESPONSE: Monitoring is an effective tool to assess compliance with the Revised Plan direction and after review of public comments it was changed from a Priority 2 to a Priority 1. The Targhee monitoring effort explicitly assesses closure effectiveness. The results of monitoring will be shared with the public. Education of the public regarding the monitoring activities is necessary and an ongoing process. LAB

ACCESS - MONITORING

Change Monitoring Methods

COMMENTS: Precision and reliability of monitoring will significantly decrease if just one user group is designated to do the monitoring.

629

RESPONSE: It is our intent to use a variety of methods and groups to assist with monitoring activities. LAB

COMMENTS: Frequency of monitoring is inadequate; Forest Service personnel could monitor 100% if they used trail bikes.

629

RESPONSE: We will monitor with the number of personnel and funding available each year. Monitoring of roads is a Priority One in the Revised Plan. Forest Service employees use trail bikes and other modes of transportation during monitoring. AM

COMMENTS: Institute citizen monitoring programs for education and enforcement, to develop Standards and Guides and regulations.

1365

RESPONSE: Greater reliance on user monitoring and input during the development of management direction through volunteer programs will assist Targhee. LAB

COMMENTS: Adequate monitoring and evaluation program must have the following four (4) components:

1. Scientifically sound method for assessing habitats and populations of the indicator species or groups of indicator species.
2. A reasonable frequency of measurement.
3. Pre-determined degree of change that will trigger a re-analysis of management activities.
4. Include an interrelated set of impact indicators.

1365

RESPONSE: The Monitoring and Evaluation Plan is in Chapter V of the Revised Plan. In the section titled "How will Monitoring information be used" frequency, degree of change, and indicators are some of the elements that are covered. The Revised Plan's Monitoring Plan will be followed as long as the reality of budget and workforce constraints meet the level and intensity of implementing these components. LAB

COMMENTS: Monitoring Plan and research of OHV impacts should be site-specific; examine short and long-term; consider multiple and cumulative effects; evaluate reinvasion, recovery rates, effects of disturbances be funded.

1365

RESPONSE: In the Monitoring and Evaluation Plan (Chapter V, Revised Plan), there is a monitoring item under Recreation that will assess impacts to

ACCESS - MONITORING

on-trail and off-trail soils and vegetation from impacts from various sources, including OHV'S. Annually we hope to monitoring 5-10% of the areas, initially focusing on the Big Hole Mountains and Palisades areas. LAB/CC

COMMENTS: Using one and two motorized vehicle trips per week is difficult to monitor, imprecise and not of concern. To be accurate, you should require counters with cameras.

629

RESPONSE: In areas of great concern and where resource protection needs warrant, the Forest agrees that counters and cameras should be used. Cost precludes uniform use throughout the Forest. LAB

Need More Monitoring Roads/Closures

COMMENTS: Need to effectively monitor road closures and roads and trails. Protect sensitive habitats and soils; enforce road restrictions to prevent abuses; and, protect wildlife. Monitoring and its funding should receive high priority and strict standards, guidelines and timetables. Monitor road closure as Priority I.

204, 489, 643, 690, 695, 1273b, 1365, 1361, 1446, 1367b

RESPONSE: Monitoring road closures is now a Priority One. The Targhee plans to implement strict standards, guidelines, and timetables as it implements road closure monitoring. LAB

COMMENTS: Road closure monitoring must include public input as required by 36 CFR 295.5.

1361

RESPONSE: The Targhee will comply with all laws, regulations, and policy relating to including public input in road closure monitoring. LAB

COMMENTS: Add, "road closure locations and designs" to effectively control use in the annual Monitoring Report.

1361

RESPONSE: Roads and trails that will be left open with the implementation of the Revised Plan are illustrated on the Summer Motorized Access map and a list of these roads is contained in the Access Appendix of the FEIS. The closure method (gate, obliteration, etc.) will be determined in a separate site specific NEPA analysis that will assess the tradeoffs of different closure methods and the potential effects on the resources. The annual Monitoring Report will display effectiveness of the actual closures. LAB/CC

Funding

COMMENTS: The program for obliterating, closing and monitoring roads should have its own budget and not be tied to other projects, e.g., timber sales. If funding is unavailable, the environmental consequences should be displayed in

ACCESS - MONITORING

the Final Environmental Impact Statement (FEIS). Also, the program should receive high priority and adequate funding.

356, 634, 643, 695, 766, 1195, 1247, 1273b, 1320, 1367, 1381

RESPONSE: The Forest is committed to the program of closing and monitoring the effectiveness of these closures, and funding will be allocated to accomplish these activities. Road closure effectiveness was elevated to priority one, after reviewing public comments. We plan to issue a yearly monitoring report that will illustrate accomplishments, clarify direction, and determine whether further evaluation is necessary. Road closure and monitoring does not have to be tied to other projects and has its own budget. LAB/CC

COMMENTS: Current funding is inadequate for trail program and more funding is needed for accurate road inventories.

734, 643, 695

RESPONSE: Funding for the trail program is not always adequate to accommodate the planned work. The Targhee has implemented an effective volunteer program, matching grants, and state assisted programs in an attempt to stretch the available funding as far as possible. The Revised Plan places a higher emphasis on the trail program and funding to provide accurate road inventories, along with implementation of the much stricter travel management direction. LAB

ACCESS - OHV/ATV

Specifically ATV Use

COMMENTS: Allow ATV use because use does not destroy vegetation or habitat, cause the spread of noxious weeds, or cause soil erosion.

319, 638

RESPONSE: Seven percent of the Forest is open to summer cross-country travel by ATVs. ATVs can cause resource damage if not properly managed. The Revised Plan provides direction to avoid resource damage and minimize impacts. The new travel plan will be in affect through the summer and early fall months to provide the necessary direction for access. CMM

COMMENTS: Restrict ATV use and access because restrictions can protect habitat. Support prohibiting ATV cross-country use.

F-K(4), 440, 610, 611, 621, 629, 1202, 1387, 1457

RESPONSE: Except for seven percent of the Forest, ATVs are restricted to designated routes. This was done in cooperation with the State Fish and Game Departments to address needs for elk habitat effectiveness and elk vulnerability. LAB/CMM

COMMENTS: Develop positive incentives to reduce or mitigate impacts by offering reduced user-fees for OHV users, and operating machines that meet noise and emission standards.

1365

RESPONSE: Incentive programs are effective in many situations, however, the Forest Service is not charging a user-fee for OHV users and the State enforces the noise and emission standards. LAB/CMM

COMMENTS: Before obliteration, consider opportunities to develop OHV/ATV roads if there are no conflicts with other resource objectives.

629

RESPONSE: The Revised Plan incorporates some of the old roads into motorized trail loops where terrain and road densities can accommodate them. The type of closure for roads no longer open to motorized travel will be determined in site-specific NEPA analysis and will include additional public involvement.

MLB

COMMENTS: Off-highway vehicle access should not be restricted in the Revised Plan. Respondents to this issue express opposition to Alternative 3M because of unreasonable closures and restrictions on OHV access.

215, 284, 288, 291, 367, 388, 486

RESPONSE: In the Revised Plan (Alternative 3M) seven percent of the forest is open to summer cross-country travel while OHV use on the rest of the forest is limited to designed routes. These access restrictions were made to aid in grizzly bear recovery; to reduce elk vulnerability; and to improve elk habitat effectiveness; and to protect other resources. LAB/CMM

COMMENTS: Disagree with the Standard. ORV use is one of the activities having the highest likelihood of producing irreversible damage.

1202

RESPONSE: The DEIS stated in Chapter IV, "Road construction, timber harvest, grazing, dispersed recreation and motorized recreation (OHV's) have the highest likelihood of producing irreversible damage to the soil resource." This statement is still true in that it speaks to "highest likelihood" and addresses cumulative effects across the forest without ranking them individually. Chapter IV of the FEIS under "Consequences Common To All Alternatives" emphasizes that unmanaged dispersed recreation and OHV use will be one of the main challenges in the future based on increases in demand for these uses. LAB/DM

Supports Restrictions On OHV Access

COMMENTS: Off-highway vehicle use should be restricted on the Targhee National Forest because of wildlife protection needs, equal access for non-motorized use, erosion concerns, emission concerns, safety concerns and the concern for general forest health. Limit OHV use to current roads and trails and provide proper enforcement of restrictions. (CROSS REFERENCE: Access, Law Enforcement)

27, 143, 157, 161, 165, 170, 176, 204, 271, 278, 280, 293, 296, 330, 359, 401, 489, 621, 625, 662, 695, 735, 766, 1202, 1273b, 1365, 1367b, 1387, 1457

ACCESS - OHV/ATV

RESPONSE: On all but seven percent of the Targhee, off-highway vehicles are restricted to designated routes. Each area on the Forest is covered by a prescription and each prescription has a road density that determines the amount of roads and trails that can be allowed in an area. The road density is based on wildlife values, such as elk vulnerability and grizzly bear security. Erosion and safety concerns are considered in the travel plan. Enforcement and education are an important part of implementing the access portion of the Revised Plan. LAB/CMM

COMMENTS: Prohibit access to the Targhee National Forest by OHV use because of abuse of historic logging roads; habitat sensitivity, threatened and endangered species (TES); riparian and wetland health; natural vegetation survival; forest health; degraded rangeland protection; noise impacts, impacts to Wilderness Study Areas (WSA), roadless, wilderness, and proposed wilderness areas; and, contamination of resources by vehicle refueling.

157, 179, 244, 376, 650, 719, 1365

RESPONSE: The Revised Plan designates 7% of the Forest open to summer cross-country travel. The remainder of the Forest is restricted to designated routes for many of the reasons cited above. The road density for each prescription will provide the direction for the amount of roads or trails that may remain open in each area. Contamination of resources by vehicle refueling has not been a problem on the Forest and with cross-country travel restrictions the potential for refueling contamination becomes smaller. LAB/CMM

COMMENTS: Does not support OHV use because of negative impacts on wildlife, vegetation, soils, water, air, trails/roads, aesthetics, user conflicts, and the spread of noxious weeds. (CROSS REFERENCE: Access, Noxious Weeds; Range, Noxious Weeds)

231, 291, 625, 1365

RESPONSE: The Revised Plan designates seven percent of the Forest open to summer cross-country travel. The remainder of the Forest is restricted to designated routes. All open routes meet road density which considers impacts on wildlife and other resources. The Revised Plan provides a balance of opportunities for a variety of users while reducing OHV impacts from the current situation. Noxious weeds are a growing problem on lands throughout the west. The Revised Plan has an aggressive program to control noxious weeds in all Targhee Forest activities. LAB/CMM

ACCESS - RANGE

COMMENTS: Support the language in the Preferred Alternative which allowed livestock permittees the use of "historic" roads for range facility maintenance.

432

RESPONSE: Forestwide standards and guidelines found in Chapter III of the Revised Plan allows permittee access to maintain range facilities. This permitted access is limited to less than 2 trips per week (average). The term "historic" roads is not retained in this direction. MLB

ACCESS - RANGE

COMMENTS: It is not acceptable to restrict permittees access to livestock once or twice per week.

1391

RESPONSE: A standard in the Revised Plan, under Production of Commodity Resources, states that if a road is used by a permittee consistently more than twice a week, for weeks at a time; or during the spring, summer, and fall period; then the road or trail is included in the calculation for Open Road and Open Motorized Trail Route Density (OROMTRD) in that prescription area. But, if a permittee needs to use a road or trail for less than this amount, the road or trail is not counted in the OROMTRD. LAB

ACCESS - RECREATION

Access For Dispersed Recreation

COMMENTS: Motorized access to dispersed campsites or picnic areas should only be allowed within 300 feet of existing open roads or trails (CROSS REFERENCE: Recreation)

643, 766, 1194, 1393, 1401

RESPONSE: We agree. The Revised Plan, Forest Use and Occupation, Dispersed Recreation Use, has a standard that allows motorized access (unless otherwise posted), for parking and dispersed camping within 300 feet of open motorized roads and trails. CC/JR

COMMENTS: Provide equal access opportunities for dispersed motorized recreation. (CROSS REFERENCE: Recreation)

300

RESPONSE: In the Revised Plan, approximately 7 percent of the Forest is open for summer cross-country motorized use. Parking and dispersed camping is allowed within 300 feet of a open road or trail, unless otherwise posted.

Access For Non-motorized Recreation

COMMENTS: Recreational opportunities will increase if we reduce motorized access. (CROSS REFERENCE: Recreation)

No Letter #

RESPONSE: This depends on how a person defines a recreational opportunity. Some consider motorized use a recreational opportunity. The Forest received requests to leave motorized access as it is, increase it or reduce it. It is true some types of nonmotorized recreational opportunities may increase if we reduce motorized access. The Revised Plan represents a balance. LAB/JR

Too Much Access For Recreation

COMMENTS: The large amount of roads and trails used for recreation need to be lower to ensure protection for wildlife and threatened and endangered species. (CROSS REFERENCE: Wildlife)

325, 1322

ACCESS - RECREATION

RESPONSE: The Revised plan directly addresses this issue by excluding motorized roads and trails from the core areas of the Grizzly Bear Management Units and allowing fewer open roads and trails in other portions of the Forest to provide protection for a variety of resources, including wildlife, fish and water (see Process Paper D available in the Supervisor's Office). The Revised Plan is made up of Management Prescriptions. Each prescription has an open motorized road and trail density attached to it, and allows a certain number of roads and trails per square mile. LAB/MB

Supports Access For Recreation

COMMENTS: Access should not decrease because there is an increase in recreation; and in fact, support more recreational access. Do not support any restrictions on recreational vehicles.

219, 291, 375, 1260, 1308, 1332, 1447a

RESPONSE: The increase in recreational use of all types necessitates some restrictions on use to address other resource concerns and to balance motorized and non-motorized use opportunities. The Revised Plan addresses this need for balance by establishing OROMTRD standards for each management prescription to achieve the goals and objectives for that prescription. Overall this has significantly reduced cross-country motorized travel on the Forest and will reduce that type of recreational opportunity. Most areas closed to cross-country have a reasonable network of designated trails for motorized use. In popular areas this may concentrate use and change the quality of the motorized recreation experience. If sufficient concern is developed, localized management actions may be necessary to alleviate conflicts and improve the experience. These will be implemented with a site-specific analysis and public comment. This is unfortunate, but increasing population and use make reasonable restrictions necessary. JR

ACCESS - RIPARIAN

COMMENTS: Prohibit motorized access to streams, wetlands, riparian areas, and restrict motorized access to these areas to existing system roads and trails as a way to better regulate access. Prohibit all cross-country travel, parking, etc. from 25 feet of any stream, pond or lake. Need to develop standards for roads in riparian areas. (CROSS REFERENCE: Riparian, General)

F-B(4), FS-10, 24, 136, 143, 157, 159, 180, 181, 185, 190, 209, 226, 227, 273, 359, 407, 643, 644, 659, 690, 697, 766, 1194, 1197, 1220, 1270, 1331, 1365, 1367, 1369, 1371, 1401

RESPONSE: In the Revised Plan, summer cross-country access is permitted on 7 percent of the Forest. The remainder of the Forest provides access during the summer on designated roads and trails. Forestwide standards and guidelines allow motorized access (unless otherwise posted) for parking and dispersed camping within 300 feet of open roads and trails. The Management Prescription 2.8.3, which covers water types such as streams and wetlands, contains guidelines for new road and trail construction, and improvement. CC

ACCESS - RIPARIAN

COMMENTS: Allow limited cross-country motorized access to riparian areas. Allow cross-country motorized access in areas already open for cross-country travel.

FS-10, 392

RESPONSE: In the Revised Plan, motorized access is allowed for parking and dispersed camping within 300 feet of roads and trails which are open for motorized use. CC

ACCESS - ROAD AND TRAIL

Road and Trail Closures

COMMENTS: Oppose any new or additional road/trail closures because the public needs access for safety and fire suppression efforts; impacts to livestock management on grazing allotments; negative impacts to recreation use and general enjoyment of Targhee National Forest; more congestion equates to higher impacts; in conflict with multiple-use philosophy; hunting opportunities are potentially lower; social concerns including historic use; view that the ecosystem is already healthy; access to firewood too limited; less access equals negative economic impacts; mineral entry restricted; too much public access locked up by proposals; and, human needs should take precedence over any other needs. Create new roads for viewing enjoyment.

(CROSS REFERENCE: Social Concerns)

F-C(13), F-F(6), F-G-2(2), F-O(4), 1, 3, 7, 11, 16, 20, 24, 32, 34, 38, 41, 42, 53, 56, 60, 61, 64, 69, 73, 75, 151, 174, 175, 178, 182, 242, 250, 251, 265, 267, 270, 271, 272, 277, 284, 285, 286, 287, 288, 293, 298, 300, 307, 309, 311, 314, 315, 316, 319, 323, 327, 342, 344, 348, 367, 369, 371, 374, 379, 380, 381, 388, 391, 397, 412, 429, 431, 439, 445, 451, 473, 474, 476, 479, 480, 481, 484, 495, 501, 505, 506, 511, 512, 524, 525, 528, 529, 607, 608, 610, 624, 625, 633, 634, 637, 645b, 646, 660, 665, 669, 687, 688, 691, 692, 694, 704, 715, 728, 1179, 1187, 1189, 1191, 1193, 1200, 1239, 1240, 1248, 1252, 1256, 1264, 1265, 1267, 1268, 1271, 1315, 1319, 1320, 1321, 1330, 1332, 1338, 1339, 1341, 1354, 1359, 1363, 1367, 1371, 1375, 1376, 1378, 1380, 1386, 1390, 1446, 1447, 1448b

Open currently closed roads to public access; implement 1965 Targhee National Forest Travel Plan.

2, 219, 412, 476, 607

Against any new or proposed trail closures because want more access; will negatively impact environment; recreation access will decrease; congested use will be a problem; and social concerns.

F-D(51), F-O(4), 11, 34, 35, 36, 46, 98, 156, 197, 203, 262, 270, 334, 367, 371, 374, 381, 397, 488, 520, 645, 645b, 648, 649, 702, 703, 1179, 1191, 1256, 1332, 1334, 1339, 1376, 1385

RESPONSE: The Forest received extensive public comment on both sides of the access issue. Some road and trail closures were made in the Revised Plan based on resources including erosion, soil, wildlife, water quality and existing access. The major change was the closing of 93 percent of the Forest to summer cross-country travel because unmanaged cross-country travel was causing resource damage. Each watershed on the Forest has a management

ACCESS - ROAD AND TRAIL

prescription which directs the activities in an area. Road density in the prescription determines the amount of roads and trails that can be open for motorized travel, and helps balance wildlife security and users' activities. The Revised Plan provides adequate access and allows motorized use on designated routes.

The Forest considered all specific comments about access. Changes were made conforming with the general thrust of the preferred alternative and the desired future condition. The Final Revised Plan represents a balance and accommodates those on both sides of the issue. See the Access Appendix in the FEIS and Process Paper D in the Supervisor's Office for more information about the access analysis for the Revised Plan. LAB/LG/CMM

COMMENTS: Do not abandon any trails without contacting Idaho Department of Parks and Recreation.

629

RESPONSE: The Targhee will continue to involve all interested parties in decisions that could affect forest users. This is especially true regarding trails that are of mutual interest to the Idaho Department of Parks and Recreation and the Forest. LRG

COMMENTS: Delete historic recreation use as a closure consideration because it is too arbitrary. Close roads only to protect wildlife, soil or for other ecosystem health reasons.

695

RESPONSE: Closing roads only to protect wildlife, soil or other ecosystem health reasons too narrowly defines the closure criteria. Humans are also part of the ecosystem; sometimes decisions regarding use of the Forest favors use by humans with less protection for wildlife, soil or other ecosystem health reasons. LRG

COMMENTS: Road restrictions and closures alone will not solve problems; Idaho Department of Fish and Game should do their part, too.

688, 689, 1336, 1448

RESPONSE: The Targhee National Forest will continue its current partnership with the Idaho Department of Fish and Game in an effort to find a common ground regarding the amount and kind of road restrictions and closures needed to meet their game populations and management needs. LRG

COMMENTS: Support proposed road/trail closures because closures protect the ecosystem, environment, wildlife, forest health, and grizzly bear; closures help maintain migration corridors; closures solve social and economic concerns; closures prevent erosion; and closures could possibly lengthen hunting seasons. Motorized travel should, as a whole, be limited to very few roads.

F-B(4), F-K(4), 5, 32, 37, 42, 62, 136, 143, 150, 155, 156, 162, 165, 167, 170, 171, 173, 174, 175, 181, 189, 190, 209, 212, 215, 227, 252, 266, 270, 278, 280, 292, 293, 311, 356, 357, 359, 361, 376, 389, 392, 396, 398, 441, 443, 467, 489, 490, 516, 527, 608, 611, 625a, 629, 631, 633, 643, 645, 650, 652, 655, 659, 665, 667, 668, 690, 694, 695, 719,

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725, 731, 733, 1197, 1240, 1241, 1258, 1269, 1271, 1276, 1277, 1314, 1330, 1331, 1333, 1337, 1348, 1361, 1365, 1367, 1381, 1387, 1388

RESPONSE: Thank you for your support. The changes for access in the Revised Plan are based on the resources for reasons you stated. The Forest received extensive public comments on both sides of the access issue. The Final Revised Plan represents the best accommodation and balance of access for those on both sides of the issue. Summer motorized travel will be limited to designated routes throughout all but 7 percent of the Forest. See also the Access Appendix in the FEIS and Process Paper D in the Supervisor's Office.
LAB/LG/CMM

Road Obliteration

COMMENTS: Road obliteration and revegetation is the only way to achieve effective road closures; and as such, obliteration should be the emphasis of the Targhee National Forest road closure program. Obliteration is a waste of taxpayer dollars. Close or obliterate all unofficial roads and trails, built in conjunction with timber harvest.

4, 389, 621, 643, 690, 719, 1197, 1276, 1365, 1367b

Recommend that the road closure program emphasize obliteration over other forms of closure, and only obliterated roads be counted fully closed.

276, 370, 489, 643, 1194, 1365, 1367b, 1401

RESPONSE: A NEPA site-specific analysis is made for each road scheduled for closure. The decision on how the closure is accomplished is based on this analysis. Where warranted, obliteration and revegetation are utilized. In other instances, scarification, water, barring or gating might be the preferred solution. One closure action does not fit all situations. LAB/LRG

COMMENTS: Address effects of obliteration versus road closures, monitoring two days per week for administrative use of closed roads. (CROSS REFERENCE: Access, Monitoring)

1361

RESPONSE: This is considered in the site-specific analysis for each road scheduled for closure. Cost efficiency, closure effectiveness, and administrative impacts are addressed in the analysis. Road density standards in each management prescription will be achieved as soon as practical: three years in the Bear Management Units and ten years for all other areas.

Administrative use on restricted roads and trails are normally two types: emergency use such as fire suppression and search and rescue or planned project work. In planned project work, permission will be given by the Forest Supervisor or District Ranger and the entry is recorded. A sign is posted on the restricted road during the project. LAB/LG/CMM

ACCESS - ROAD AND TRAIL

Ghost Roads

COMMENTS: Close, obliterate, revegetate or otherwise remove "ghost roads." Use the best available ghost road data in OROMTRD. Remove the term from analysis use. (CROSS REFERENCE: Access, Process)
FS-11, 127, 136, 725, 1361, 1367

RESPONSE: There will no longer be ghost roads. The final disposition of ghost roads will either be closure, obliteration, revegetation, (such as removal from the Forest) or adding the road to the Forest Development Road System for management as a system road. LAB/LRG

Closing Roads

COMMENTS: Implement greater resource protection measures including road closures. Close all non-vital secondary roads; revegetate upon closure of all temporary roads; close short, spur roads; close those roads requiring extensive maintenance; close all nonsystem roads; close all roads built since 1965; close all old logging roads; and close all roads.
2, 61, 170, 178, 180, 204, 226, 396, 405, 445, 627, 643, 664, 690, 694, 695, 697, 698, 1202, 1204, 1314, 1361, 1367

RESPONSE: Access in an area is determined by road density standards described in each management prescription. The road density standard will be achieved as soon as practical: three years for Bear Management Units and ten years for all other areas.

A site-specific analysis is made for each road scheduled for closure. The decision on how the closure is accomplished is based on this analysis. Where warranted, obliteration and revegetation are utilized. In others instances, scarification, water barring or gating might be the preferred solution. One closure action does not fit all situations.
LAB/LRG/CMM

New Roads

COMMENTS: Oppose building any new roads on Targhee National Forest so wildlife habitat will continue to be protected.
174, 179, 181, 204, 209, 325, 389, 507, 690, 697, 1328, 1331, 1364, 1365, 1367

RESPONSE: Road density standards are part of every management prescription for each area on the Forest. Some management prescriptions do not allow new roads, such as Prescription 2.6.5 Grizzly Bear Security Area. Road density standards were developed considering elk vulnerability and grizzly bear security, providing emphasis for wildlife.

Road density provides the standard for the amount of roads or trails left open in an area. If an additional road is needed for a management activity, the road density determines whether another road would have to be closed before an additional road could be constructed or if a closed existing road could be opened. The Targhee National Forest will continue to be managed under the multiple-use, sustained-yield concept as currently reflected in ecosystem management. LAB/LRG/CMM

ACCESS - ROAD AND TRAIL

Road/Trail Management

COMMENTS: Provide non-motorized buffer zones around important areas; strengthen and enforce Bear Management Plans (BMPs); provide long distance travel corridors; designate trails/roads as strictly motorized or non-motorized; provide restrictions on pack animals and horse use; and, maintain existing roads and trails.

51, 175, 330, 632, 1249, 1276, 1365

RESPONSE: There are many areas on the Forest where non-motorized vehicles are restricted. Only seven percent of the Forest allows summer cross-country travel and motorized travel is restricted to designated routes on the rest of the Forest. Roads/trails are designated motorized or non-motorized. Horses and pack animal travel is not restricted except on some winter ranges. Long distance travel corridors will continue to exist.

The Bear Management Prescriptions in the Revised Plan strengthen and enforce the Bear Management Plans. They are Grizzly Bear Habitat, Grizzly Bear Core Area, and Grizzly Bear Security Area.

The Revised Plan provides for maintenance of existing roads and trails. LAB/LRG/CMM

ACCESS - ROAD DENSITY

General

COMMENTS: The current road density on the Targhee National Forest is too high. Road density should be decreased for riparian and ecosystem protection.

FS-10, F-K(4), 174, 625, 697, 1365, 1367b

RESPONSE: The Revised Plan decreases open road and trail densities throughout the Forest to enhance the wildlife habitat, riparian resource, and other components of the ecosystem. AM

COMMENTS: Need an accurate inventory of roads or road density standards are useless.

1365

RESPONSE: The Forest has made an intensive effort to inventory both "system" and "non-system" roads and trails during the Revision process (see Access Appendix in the FEIS). The Forest is continually updating this inventory. The Revised Plan will be implemented by a Travel Plan that identifies all roads and trails open for motorized use. Those not open will be closed or obliterated. LAB/JR

COMMENTS: The OROMTRD policy has been "crafted in darkness" with the GYC and does not follow NEPA.

393

RESPONSE: The Forest used the criteria established in the Interagency Grizzly Bear Committee's Task Force Report on Grizzly Bear/Motorized Access Management for establishing OROMTRD in the Grizzly Recovery Zone. Elsewhere, the need to reduce elk vulnerability was the key determinant of road density (see Process

ACCESS - ROAD DENSITY

Paper D in the Supervisor's Office). All alternatives in the EIS have different access travel management plans and the effects of various open road and trail densities are addressed in this analysis. Therefore, the policy follows NEPA. A very open public process has been used to craft the Revised Plan. CC/JR/AM

COMMENTS: Road densities used by recreationists adversely affect the suitability of the Forest for wolf habitat.

1365

RESPONSE: The Revised Plan adopted the direction in the EIS for reintroduction of gray wolves to Yellowstone National Park and Central Idaho. In general, road density is not a critical factor for wolf reintroduction as long as the habitat needs of prey species are met. The density standards in the Revised Plan directly address wildlife habitat needs. LAB/AM/JR

COMMENTS: If road restrictions are needed to protect biological diversity, restrict access only in areas of high road density.

629

RESPONSE: We agree. Each management prescription in the Revised Plan has a density standard tailored to the multiple-use direction in that prescription. JR

Road Density and Bear Management Units

COMMENTS: No new roads should be allowed in Bechler-Teton BMU and administrative use of restricted roads/trails needs to be added as a standard to the OROMTRD. Roads need to be closed elsewhere to keep the area within standards.

1273b

RESPONSE: In the Revised Plan, Prescriptions 2.6.2 (Plateau Core Area) and 2.6.5 (Bechler-Teton Security) have a open road and trail density of zero. In Prescription 5.3.5 (Grizzly Habitat Outside of Core) new roads are allowed if they are within the specified open road and trail density. In the forestwide standards and guidelines there are standards that must be followed when administrative use occurs. Many roads and trails throughout the Forest are being closed to protect a variety of resources, including grizzly bears, water quality, and elk. That is true in the Bechler-Teton BMU. CC/JR

COMMENTS: Reduce road densities more in areas surrounding BMUs.

1276

RESPONSE: In general, road densities are reduced adjacent to BMU's in the Revised Plan where the Targhee National Forest has management jurisdiction. The Plateau and Bechler-Teton BMU's are adjacent to National Parks on the East side where the road density remains near zero. Other areas of the BMU's are adjacent to private land or areas with highly concentrated recreation developments where grizzly bear occupancy is not desirable. Overall, the Revised Plan contains a grizzly habitat management strategy which provides for

ACCESS - ROAD DENSITY

recovery of the grizzly bear (see Fish and Wildlife Service Biological Opinion). JR

COMMENTS: Include all roads (Forest Service, private, County, State, two-track) when determining road densities within BMU.
1194, 1401

RESPONSE: All roads are included in the BMU when determining road densities.
LAB

COMMENTS: The Plan fails to address how total motorized density will be altered in BMU areas.
1376b

RESPONSE: Total motorized densities are listed for each BMU in the Revised Plan, Forest Use and Occupation section. In the FEIS, Chapter IV displays how total motorized density is altered in the BMU's by alternative. LAB

COMMENTS: Close the 0.2% of the Bechler/Teton BMU that is currently open to OHV use. If this is not done, a clear rationale and its beneficial or negative impacts to grizzly bear recovery must be stated.
1273b

RESPONSE: The two-tenths of 1 percent (0.2%) of open motorized use in the Bechler/Teton BMU allows access to dispersed camping areas. This will not cause negative impacts to grizzly bear recovery. LAB/JR

Issues/Concerns of Enforcement

COMMENTS: If areas around wild and scenic rivers are to have an OROMTRD of 0.0mi./Sq.mi., motor bikes must be prohibited, and the Final Plan should ensure that cross-country motorized use is prohibited.
1273b

RESPONSE: We agree. Lands within the Prescription for Eligible Wild Rivers (2.3) have an OROMTRD of 0.0 mi/sq. mi, where motor bikes and cross-country travel are not allowed. CC/JR

COMMENTS: There should be no exceptions to the 1.0 mi/Sq.mi. OROMTRD for semi-primitive. Exceptions belie the reasoning that set the standard. CROSS REFERENCE: Access, Standards & Guidelines)
1273b

RESPONSE: Not all of the semi-primitive motorized areas in the Revised Plan (3.2 Prescriptions) have the same density because different areas on the Forest have different motorized use objectives. If necessary, exceptions can be made to all density standards in the future provided a site-specific NEPA analysis is done, public involvement is conducted, and a Forest Plan Amendment accompanies the decision. CC/JR

ACCESS - ROAD DENSITY

COMMENTS: The EIS must identify priority watersheds where limits on additional road construction should be imposed and where road densities already exceed optimal levels.

1368

RESPONSE: In the Revised Plan, open road and trail density standards are established by prescription area. Where the current road density exceeds the standard, roads and trails are identified for closure to achieve the standard. Some prescription areas are at the maximum standard now. If new roads or trails would exceed the standard, then either existing roads must be closed to compensate or an amendment to the Forest Plan is required to change the density standard. CC/JR

COMMENTS: Do not allow OHV use to exceed road density levels.

1369

RESPONSE: Open road and trail densities are calculated on a prescription basis. Road and trail densities are standards, not guidelines, so if plans are surfaced to exceed use, a site-specific analysis with public involvement will have to be done to determine if density levels will be exceeded. To exceed the standard would require a Forest Plan Amendment. CC/JR

COMMENTS: Road density standards should be met and calculated on an activity area basis.

1446

RESPONSE: All the road densities are calculated on a prescription area, except for Bear Management Units where they are calculated by the BMU or the subunit of the BMU. This conforms to agreements with the Idaho Fish and Game Department, Wyoming Game and Fish Department and the Interagency Grizzly Bear Committee Access Report. (See Process Paper D in the Supervisor's Office). CC/JR

COMMENTS: Define actual expected road densities and do not just control to a certain level.

1369

RESPONSE: The Revised Plan provides road density standards for each prescription. The Travel Plan which implements the Revised Plan shows the actual roads and trails open for motorized use. JR

Recommend Specific Density

COMMENTS: Road and trail densities on the Targhee National Forest should be at two mile per square mile, with more restrictive standards by prescription area as needed.

389, 1247, 1273b

RESPONSE: The Revised Plan meets this direction as density standards are set by prescription. Only two prescriptions have a density of 2 miles per square mile and one prescription has a density of 3 miles per square mile. All others have a density of 1.5 miles per square mile or less. JR

ACCESS - ROAD DENSITY

Question Value of Analysis

COMMENTS: Suggest the Targhee National Forest research and adopt OROMTRD standards for the entire forest.

1367b

RESPONSE: The Revised Plan adopts OROMTRD standards across the entire forest. The same OROMTRD definition is used on the entire Forest; but the actual OROMTRD standard varies by prescription. LAB/KR

COMMENTS: Non-system roads need to be analyzed as per NFMA and Forest Service Manual direction. (CROSS REFERENCE: Access, Process)

1273b

RESPONSE: All roads on the Forest are analyzed, whether nonsystem or system, and dealt with as directed by the National Forest Management Act. (See Access appendix in the FEIS.)

LAB/JR

COMMENTS: No road density limits or road reclamation/obliteration requirements are proposed relative to watershed conditions and aquatic systems.

1368

RESPONSE: In the Revised Plan, any road that needs to be reclaimed/obliterated or effectively closed is identified (whether because of watershed conditions or some other reasons). LAB/JR

COMMENTS: The figures given for miles of open system roads do not include all applicable roads.

1367b

RESPONSE: The roads that show up as open system roads are accurate. The figures are applicable to all roads on the Forest. LAB

COMMENTS: Questions need for road density access standards deviation allowance for emergencies.

695

RESPONSE: Road densities are figured on less than 2 vehicles use per week or they are classified as "open roads". If there was an emergency and a road had to be used (like for fire or in a rescue) this use would not have an impact on long-term road density, because it is an intense short-term use. In such situations there is not time to complete a site-specific NEPA document to change the standard. LAB/AM/JR

COMMENTS: Open road densities need to be evaluated to determine the impacts on wildlife species other than the grizzly bear.

1369

RESPONSE: The effects of differing open road densities are evaluated and displayed in the FEIS, and do consider other wildlife species besides the

ACCESS - ROAD DENSITY

grizzly bear, including all the management indicator species for the forest. The analysis is described in detail in Process Paper D in the Supervisor's Office. LB

COMMENTS: Recommend replacing "road density" with "motorized access".

766

RESPONSE: The meanings of these phrases are not the same, and to change the phrases could change the direction of the Revised Plan. LAB

Methods of Determining Density

COMMENTS: Gated roads, or roads open to "administrative use," should not be considered a closed road when determining road densities for elk habitat guidelines.

204

RESPONSE: Traffic on gated roads is negligible and administrative traffic can be controlled. If administrative use exceeded an average of two trips per week, then it would be considered open. LAB/JR

COMMENTS: Existing road densities do not accurately depict actual road densities because they do not take into account private roads, county and non-inventoried roads.

643

RESPONSE: Inventoried roads include all roads of every description and jurisdiction. They are all included in the road density calculations. LAB/JR

COMMENTS: All potential off-highway vehicle use should be incorporated in the analysis of road density to determine impacts on habitat security and effectiveness (including the proposed use in the Wyoming part of Island Park, Madison Plateau, and Teton Range Subsections).

389

RESPONSE: The Forest incorporated your suggestion. LAB

COMMENTS: Road densities should be calculated for all un-roaded areas, and not disregarded for small prescription areas.

1247

RESPONSE: The vast majority of the Forest is included in the calculating of road density. The exceptions are minor. JR

COMMENTS: Adjust road densities based on the effectiveness of different seasons of closures (similar to Nez Perce Forest).

643

RESPONSE: Road densities are different from season to season. For example, the Forest closes more roads in the fall during the big game hunting season than in the summer months. LAB

ACCESS - ROAD DENSITY

COMMENTS: Consider best available data on ghost roads, ineffective closures, and authorized use of closed roads as components of OROMTRD.

1273b

RESPONSE: We used the best available data we had on ghost roads, and it is figured into the OROMTRD calculations. The analysis is described in detail in the Access Appendix to the FEIS. LAB

COMMENTS: Open road density analysis must include an allowance for closure violations, more effective closures and monitoring.

643, 690

RESPONSE: Violations and effectiveness of closures is part of the monitoring process, not of the planning process. Monitoring effectiveness of road closures is a number one priority in the Monitoring Plan for the Revised Plan. LAB/JR

COMMENTS: Do not compare road and trail densities the same because roads usually get used more. (CROSS REFERENCE: Access, Analysis Process)

363

RESPONSE: Several comments were received about the process used to address effects of motorized trails and motorized roads on wildlife. Specifically, several people commented that trails should not receive the same weight as roads. Several people suggested using a process being considered in Northern Idaho which weights motorized trails as only 1/10 the value of motorized roads. The Northern Idaho process remains a draft and has not been adopted. To address these comments, a new analysis was completed between the Draft EIS and the FEIS to see the differences between the two weighing systems. The results are presented in detail in the FEIS. Forestwide, minor differences were noted between the two systems. The percent of the Forest meeting elk vulnerability objectives does not change. Elk vulnerability changes 1 percent and elk habitat effectiveness changes 3 percent. Little difference in the amount of open motorized roads and trails is noted in the majority of watersheds.

Neither system has research which specifically supports one approach over the other. In fact, no research exists that objectively compares trail use to road use. Therefore, the Forest used the same process as outlined in the DEIS and Process Paper D, which has been concurred with by the Idaho Fish and Game and Wyoming Game and Fish Departments.

Differences are minor in most watersheds because:

1) Motorized trails account for only 23 percent of the total motorized road and trail miles on the Forest. When cross-country motorized use is included (as described in Process Paper D in the Supervisor's Office) then only 10 percent of the motorized use is accounted for on trails.

2) The trail system is not equally distributed across the Forest, and in those drainages where most of the motorized trails occur, the trail densities are generally low, which means they have less effect in the EV and EHE analysis.

3) Motorized access on trails is only one factor in EV and EHE analysis; factors such as hunter densities for EV and cover for EHE also contribute to the analysis. MO/JR

ACCESS - ROAD DENSITY

COMMENTS: When establishing road density standards exclude bear management units, roadless, wilderness acreages from road density calculations.
1367b

RESPONSE: For the most part, road densities are calculated by prescription, not by total Forest acres. Thus wilderness is not included in calculations of road density for prescriptions outside wilderness. In the bear management units, road densities are calculated for the BMU or subunit of the bear management units to conform with the Interagency Grizzly Bear Committee Access Report (see Process Paper D in the Supervisor's Office). LAB/JR

COMMENTS: Add "open" roads information when discussing road density.
FS-11

RESPONSE: Access density standards include open roads and motorized trails. Standards are by prescription areas, except in the BMU's. The accompanying travel plan displays the open roads and motorized trails across the Forest.
LAB/JR

COMMENTS: Count livestock operators against the scientific number used for OROMTRD.
FS-1.

OROMTRD (Section III Page 22, Part F): Review statement "For a short period (2 weeks?), a permittee may access area for maintenance purposes for as many as ten times per week." Consider if this fits with OROMTRD, and conflict and adverse effects would also occur if permittee is in an area where/when breeding/calving activities are occurring.
FS-5

RESPONSE: Livestock operators are counted toward the OROMTRD if they exceed the two trips per week for an extended period of time. Because this is of short-term duration, it would not have a negative effect on wildlife. LAB

COMMENTS: Temporary roads should be a part of the OROMTRD and TMARD.
766, 1446

RESPONSE: All open roads and trails are part of OROMTRD & TMARD, whether temporary or permanent. LAB/JR

COMMENTS: Modify Page III-16 (Road Densities) to emphasize TES and candidate species.
1446

RESPONSE: The Forest modified this to read, "Road density standards are emphasized in grizzly bear habitat, big game management prescriptions, and habitat for other species." LAB/MO

COMMENTS: An open road should be defined as any road that can be traveled on by motorized vehicles, even if the road is designated as closed.
389

ACCESS - ROAD DENSITY

RESPONSE: A closed road is closed and may not be traveled by motor vehicles. However, road usage occurring more than two times per week would be classified as an open road. LAB

COMMENTS: Refigure all applicable roads to be included in the open road system pertaining to the DEIS.

1367b

RESPONSE: Based on public comments, the existing road and trail data was re-examined. This analysis determined there are fewer roads and trails currently open than was displayed in the DEIS. The corrected information is displayed in the FEIS. JR

ACCESS - RS 2477

COMMENTS: Do not violate RS-2477 when closing roads, and keep all historic Right-of-Ways (per RS-2477) open.

413, 689, 1202, 1448b

RESPONSE: Roads which qualify as RS-2477 roads will pass to the jurisdiction of the County where located. The Revised Plan will need to be amended if it does not conform to the new jurisdiction. The RS 2477 determination has not been made for any Counties encompassed by the Targhee National Forest (as of 3/97), so this question will be addressed as these determinations are made. JR

ACCESS - STANDARDS AND GUIDELINES

Road Closure

COMMENTS: "Road closures will be located and designed to effectively control use. (S)" Will this be formalized as part of the annual monitoring report? Please qualify what effective means.

1273b

RESPONSE: Yes, monitoring of road closures is a number one priority in the Monitoring Plan for the Revised Plan. "Effectively control use" means a road will be effectively barricaded to prevent motorized vehicles from unlawfully accessing a restricted road. LAB/LG/JR

COMMENTS: Standards and Guideline Item 1-A should be changed to: "Road closures will be located and designated to effectively control human use."

1446

RESPONSE: Good point but instead of using "human" we changed it to "motorized" use. Thank you for your comment. LAB

COMMENTS: Forest should be closed unless designated as open in Prescriptions (adopt White Arrow Road Plan as done on Shoshone National Forest).

1247

ACCESS - STANDARDS AND GUIDELINES

RESPONSE: The Revised Plan is written like the White Arrow Road Plan; the Forest is closed except for routes designated open. On-the-ground, the open designated routes will be identified, similar to the White Arrow Program. LAB/LG/JR

Historic Use

COMMENTS: "Restrict or reclaim roads not needed for future management as determined in site-specific analysis, at the end of project use. Consider historic recreation use before closure. (G)" What does "historic recreation use" mean? Nonsystem roads must be reclaimed within ten years since their creation. What would consideration of "historic use" entail and would it violate the NFMA direction to reclaim nonsystem roads? Either reclaim or bring up to Standards as a system road. The Standards and Guidelines must make this explicit (CROSS REFERENCE: Access, Process)

1273b

RESPONSE: "Historic Recreation Use" relates to recreation use that developed over time on either "system" or "non-system" roads and trails. The Revised Plan uses this as one criterion for determining whether a particular road or trail should remain open or be closed. If designated as an open road or trail, the road/trail will be added to the Forest Road Development system. If not added, it will be closed or obliterated. You are correct in your description of the options for non-system roads. JR

Road Density

COMMENTS: "Other administrative uses (such as planned project work) on restricted roads, trails or areas will only be allowed with the following standards (S)":

Official use, permission of District Ranger or Forest Supervisor; A sign will be posted; and allowed by permit if project work is a) greater than 1 mile or 30 minutes walk b) equipment is unreasonable to carry c) contract inspectors with equipment. Request that a "Maximum Administrative use" be included in standards and guides on closed roads. If the maximum is surpassed due to high administrative use, then include direction that the closure of other roads maintain the OROMTRD.

1273b

RESPONSE: This is already considered in the Revised Plan (see Access Appendix in the FEIS). If a road is used more than the determined amount of traffic, (which is 2 days per week) whether for administrative or other uses, it will be reclassified and included as an open road, and must meet the OROMTRD Standard. LAB/LG/JR

COMMENTS: Develop a criteria for site-specific closures.

1365

RESPONSE: The Access Appendix in the FEIS describes the criteria used to determine which roads are open in the Travel Plan which implements the Revised Forest Plan. The Travel Plan can only be modified by a site-specific NEPA analysis with public involvement and the criteria would be developed in that

ACCESS - STANDARDS AND GUIDELINES

site-specific analysis. Some items that are considered in the analysis are erosion, water quality, soils, slope, wildlife, vegetation, use and the other resources in the site-specific area. LAB/LRG/CMM/JR

COMMENTS: The third objective - DFPR III-16, the net Forest development mileage will increase. This implies that the Forest Service will build new roads as fast as they are closed. Will road closures be re-evaluated and changed?

697

RESPONSE: This goal was deleted from the Revised Plan because it is confusing. Each management prescription has a road density standard in the Revised Plan that cannot be exceeded. The road density standard indicates the amount of road to be open. If a new road is proposed for a project and would exceed the standard, then another road would need to be closed to meet the road density standard. Changing the density standard would require a Forest Plan Amendment. The Forest will determine how each road will be closed by a site-specific analysis. A road could be closed by a gate, obliterated, or reclaimed. LAB/LG/CMM/JR

COMMENTS: There should be no exceptions allowed to the semi-primitive motorized road density standard ≤ 1.0 mile per square mile. (CROSS REFERENCE: Access, Road Density)

1361

RESPONSE: The Recreation Opportunity Spectrum classification for the Spring Mountain Canyon area (Lemhi Mountains, Dubois Ranger District), is a Semi-Primitive Motorized Prescription in the Revised Plan. This area allows 1.3 miles/per square mile, because the roads in this area access old mining claims and a route from the Challis National Forest, which both Forests will leave open. There are a few other semi-primitive motorized areas that are narrow and have roads or trails that pass through and cause them to exceed the ≤ 1.0 mile per square mile density mostly because of the long, narrow configuration. These are areas where management saw a need to keep a motorized trail or road open.

The 3.2 semi-primitive prescription area of the Big Hole Mountains will also exceed the 1.0 road density in the Final Revised Plan. In order to reach a compromise between motorized and non-motorized users, the road density standard in the Palisades portion is reduced to 0.5 (from 1.0) in the Final Revised Plan and increased in the Big Holes to 1.2 (from 1.0).

The decision to increase the density standard in the Big Holes is based partly on public demand. The character of the area will still fall well within the definition of "semi-primitive" (see glossary, "Recreation Opportunity Spectrum).\" LAB/LRG/CMM/JR/MLB

COMMENTS: Standard B., DFPR III-7, should preclude administrative use on restricted roads, trails or areas.

697

RESPONSE: Administrative use is necessary in many cases to meet management goals. An example is grooming cross-country ski trails with motorized equipment, which is otherwise excluded from motorized use. If approved by the

ACCESS - STANDARDS AND GUIDELINES

Forest Supervisor or District Ranger, administrative use will occur on a short-term basis when necessary. LAB/LG/JR

COMMENTS: Information is needed to demonstrate management guidelines on specific road densities.

1369

RESPONSE: The process used to develop road density standards and the research citations are included in Process Paper D available from the Supervisor's Office. JR

Timing of Implementation

COMMENTS: Include a standard to implement travel plan immediately.

1195

RESPONSE: The Travel Plan is implemented when the Record of Decision is signed. The ROD for the Travel Plan will be signed about the same time the ROD for the Revised Plan is signed. It will take some time to sign the open designated roads and trails. The Forest will proceed with signing as rapidly as possible. However, the Travel Plan will take effect immediately.

LAB/LRG/CMM/JR

COMMENTS: Implement motorized access, access to be a standard in the Plan immediately upon signing of the Record of Decision.

766

RESPONSE: OROMTRD Standards are included for each prescription in the Revised Plan. These standards will be implemented upon the signing of the Record of Decision. LAB/LG/JR

Temporary Roads Need Standards and Guidelines

COMMENTS: In the standard and guidelines address the designated temporary roads.

1446

RESPONSE: The Revised Plan OROMTRD Standards address this concern. A temporary road is a road other than a specified road which is constructed by a timber purchaser for the purpose of harvesting timber. Temporary roads are usually closed after completion of the contact. Any temporary roads constructed will need to meet the OROMTRD Standard in the Revised Plan. If the standard would be exceeded, another road would need to be closed while the temporary road is in use. For more information on temporary roads, see Glossary, Roads. LAB/LG/JR

Non-Motorized

COMMENTS: This Non-Motorized Management Prescription should be changed to the New Management Prescription in 2.2.1. Use strict, clear standards to implement this prescription area.

643, 1365

ACCESS - STANDARDS AND GUIDELINES

RESPONSE: This prescription was not adopted in the Revised Plan. The prescriptions adopted in the Revised Plan meet wildlife needs in balance with other resource objectives. Making the Centennial Mountains non-motorized is not necessary to manage the area for wildlife habitat needs. The road density standard in each prescription provides the necessary security for grizzly bears and meets elk vulnerability objectives. JR

COMMENTS: Recommend/Proposed Wilderness Prescription 1.3: Prescription 1.3 should be managed in a manner identical to that of wilderness; the Standard should be modified to read "they already exist as official and legal motorized travel ways."

1365

RESPONSE: This suggestion was not adopted in the Revised Plan. Forest Service responsibility is to maintain the wilderness character until Congress makes a decision as to whether the area will be wilderness.

The description says they will be "managed in their present condition" which means the Forest can allow motorized access on designated roads or trails in the prescription as long as wilderness character is maintained. The access table provides the specific standards for each area. LAB/LG/JR

Trails Need Standards

COMMENTS: Goals for trails are not adequate. Standards are needed to define requirements for trails.

697

RESPONSE: (Manual policy is not repeated in the Revised Plan), See Forest Service Manual, Policy, Appendix A, Pages 6, 27 and 28, for requirements of trails. LAB/LG

OHV

COMMENTS: Standards and guidelines should be made for physical damage related to logging and off-road vehicle use, implement protection standards for resources because of these impacts.

678, 697

RESPONSE: There are standards and guidelines for physical damage, related to logging and off-road vehicles, and many other uses on the Forest. Any time there is evidence of resource damage, the Forest can restrict the operation. The Revised Plan provides for summer cross-country motorized use on seven percent of the forest. The rest of the Revised Plan restricts summer motorized use to designated routes. LAB/LG/CMM/AM

COMMENTS: Forest should adopt a forestwide standard prohibiting all cross-country use except for snowmobiles.

695

RESPONSE: The Revised Plan prohibits summer cross-country motorized use on all but seven percent of the forest. Snowmobiles are allowed cross-country

ACCESS - STANDARDS AND GUIDELINES

without restrictions in all non-wilderness areas except in big game winter ranges where they are restricted to designated routes. AM/JR

COMMENTS: OHV Guideline three should be a standard not a guideline (Restrict OHV use on identified areas of unstable soil).

695

RESPONSE: The guideline provides more flexibility to deal with site-specific conditions. The Revised Plan only allows summer cross-country OHV use on seven percent of the Forest. JR

COMMENTS: OHV Standard and Guideline four: no motorized vehicles > 50" inches wide are allowed on trails unless the trails are specifically designed for such vehicles.

695

RESPONSE: This is correct. This standard prevents regular vehicles (pickups and jeeps) from traveling on motorized trails designated for OHVs. LAB/LG

COMMENTS: Evaluate in terms of the damage done by each use group (ORVs snowmobiles, etc.), then control access accordingly. (CROSS REFERENCE: Access, Trails)

351

RESPONSE: Resource damage is an important factor used in determining which roads and trail were to remain open. See Access Appendix in the FEIS for more details. This type of information is also collected in the monitoring reports and will provide information for needed changes in the future. LAB/LG
CMM/JR

COMMENTS: Proposed ORV corridor is objectionable, change to what was in Prescription 1.3.

No letter number

RESPONSE: Prescription 1.3 is appropriate for the areas for which it was set. LAB/LG/CMM/AM

Change Recreation Standards and Guidelines

COMMENTS: Recreation Standard and Guidelines for OHV's: Guidelines 1, 2, 3 should be standards; in Guideline 1 the word "discourage" should instead read "prohibit; Guideline 3 should include provisions for restricting and prohibiting snowmobile use on unstable soils when there is any significant risk of negative soil impacts; The ROS Standard should be changed to suit the non-motorized designation.

1365

RESPONSE: The guidelines provide the needed flexibility to manage the variety of conditions that exist on the Forest. The guideline provides the site specific direction needed in managing OHV's.

The word discourage is used because some slopes greater than 40% are stable enough to allow OHV use. Site-specific conditions will determine

ACCESS - STANDARDS AND GUIDELINES

the use that can be accommodated. Only seven percent of the Forest is open to summer motorized cross-country travel and within the seven percent there may be areas where use on slope greater than 40% is acceptable.

Guideline 3 is not intended to restrict snowmobiles. Soils usually become unstable when they are saturated with moisture rather than when they are frozen or overlaid with snow. The usual snowmobile activity on the Forest during the winter has not had an effect on unstable soils that have snow cover. Most of the snowmobile areas on the Forest receive an average of 3-12 feet of snow a year.

The Revised Plan uses a composite of specific multiple-use directions including goals, objectives, standards and guidelines with probable management practices. The Recreation Opportunity Spectrum was part of the management selection and was coordinated with other resources in the area. In recreation a motorized ROS standard is appropriate in some prescriptions just as non-motorized is suitable for other prescriptions. LAB/LG/CMM/JR

COMMENTS: It seems incongruent to set some guidelines for some uses, and then not deal with the damage caused by off-road vehicles.

697

RESPONSE: The Forest deals with damage caused by off-road vehicles by citing violators for resource damage, closing areas to off-road travel and rehabilitating some areas. Specific OROMTRD standards are established for each Management Prescription to address this concern. Only 7 percent of the Forest is open to summer cross-country motorized vehicles in the Revised Plan. LAB/LG/JR

COMMENTS: Forest use and occupation: all the guidelines should be standards.

1365

RESPONSE: Standards describe a condition of land, normally a maximum or minimum condition, that is measurable. Deviation from compliance with a standard requires a Forest Plan amendment. A guideline represents a preferred or advisable course of action that is generally expected to be carried out: Deviation from compliance with a guideline does not require a Forest Plan amendment, but requires a site-specific analysis with documented rationale. The Revised Plan provides the proper mix of standards and guidelines. Guidelines are applicable in site-specific projects when conditions are not uniform and flexible options may be the best to meet resource objectives. The guidelines allow for this flexibility. LAB/LG/CMM/JR

Wildlife - Recreation

COMMENTS: In DFPR, Forest use/occupation/access: modify access goal to emphasize threatened endangered candidate and sensitive species and big game habitat.

1446

RESPONSE: The access goals in the Revised Plan address these concerns. Each management prescription provides a OROMTRD standard which was determined to a great degree by wildlife concerns (see Process Paper D in the Supervisor's Office). LAB/LG/CMM/JR

ACCESS - STANDARDS AND GUIDELINES

COMMENTS: In DFPR, Recreation/OHV/Objective: expand objective to minimize effects of OHV on Riparian Aquatic, and critical/crucial wildlife; Develop motorized recreation management Standard and Guidelines to exclude use within crucial seasonal wildlife habitat.

1446

RESPONSE: The objective was not expanded to minimize effects of OHVs on riparian aquatic and critical wildlife. Neither were the recreation management standards and guidelines developed to exclude use within crucial seasonal wildlife habitat. However both situations are covered in the individual Management Prescriptions 2.7 (a-b) Elk and Deer Winter Range and 2.8.3 Aquatic Influence Zone. In both management prescriptions OHVs are restricted to travel only on designated roads or trails. Winter motorized use is also restricted to designated routes in winter range areas outside of the 2.7 prescription in the Final Revised Plan. The road density standards further emphasize wildlife by controlling the amount of road or trail open for motorized travel. Elk vulnerability and grizzly bear security are both considered in developing the road density standards for a prescription.
LAB/LR/CMM

COMMENTS: Need a Standard with mandatory environmental review process for all site-specific projects; impose/enforce speed limits in a standard; impose restrictions on party size and length of stay; prohibit use during slush conditions; base season of use on conditions.

1365

RESPONSE: The standard mandatory environmental review process used for site-specific projects is the NEPA process. This will be used for each site-specific project proposed on the Forest. The Revised Plan does not duplicate existing legal requirements or policy direction. Most of the suggestions are not appropriate to be included in the Revised Plan because they are site-specific decisions.

The Forest recommends speed limits but does not have authority to enforce them on National Forest Road Systems. The local County Sheriff enforces speed limits.

The Targhee, under "Special Orders," limits length of stay and party size. The travel map for the Forest will also establish road closing dates to meet traditional weather conditions. Opening and closing some roads can also be done in accordance with weather conditions.

LAB/LG/CMM/JR

ACCESS - SEASONAL RESTRICTIONS

COMMENTS: Oppose seasonal restrictions. Use seasonal restrictions through the use of gates. Support access restrictions for elk protection.

4, 181, 350, 646

RESPONSE: There need to be some seasonal restrictions on access in the spring to protect resource damage and big game calving areas, and in the fall for protection of resources and big game security. In most cases, restrictions are done by gating, unless these prove ineffective; then more restrictive measures are taken. LB

ACCESS - SEASONAL RESTRICTIONS

COMMENTS: Adjust road mileages for seasonally restricted roads according to the proportions of each season they remain closed (similar to the Nez Perce Forest).

643

RESPONSE: Roads which receive two vehicle trips per week are considered open for the purposes of analysis; they are included in the open road density analysis. This is in agreement with other agencies. LB

ACCESS - SITE-SPECIFIC

Site Specific Dubois Ranger District

Support Closures - Italian Peaks

COMMENTS: Close the following trails in Italian Peaks "Wilderness Area": Webber Creek-Divide (111); Myers Creek (113); Crooked Creek-Willow Creek (081).

395, 695

Close Italian Peaks to OHV and all motorized use.

161, 200, 643, 725

RESPONSE: When the area was proposed as wilderness, the Forest agreed to allow motorbike access on designated trails including the ones listed above as long as the wilderness character was maintained. These trails make up the only bike loop system in the high country on the Dubois Ranger District.
LMM/KT

Non Support Closures - Italian Peaks

COMMENTS: Off-road travel into Italian Peaks does not cause lasting damage, therefore do not close Italian Peaks.

270, 1202

RESPONSE: The Italian Peaks area has steep slopes, shallow soils, and little vegetation to protect the resources from off-road travel. OHV's on the slopes can destroy vegetation; without the vegetation, runoff and rainstorms can rapidly cut gullies in the shallow soils. Much of the area is a fragile alpine environment where even walking can cause damage. The trail system was left open to certain motorized and non-motorized use in order to provide continued access. LMM/KT

COMMENTS: Open Scott Canyon road to Italian Peaks.

1202

RESPONSE: Scott Canyon road is not currently used and is closed as part of the compromise to allow some motorized use in the Italian Peaks proposed wilderness area. The closure allows some nonmotorized use of trails by visitors wanting a more primitive experience. LMM/KT

ACCESS - SITE-SPECIFIC

Support Closures - Centennials

COMMENTS: Keep roads for the Sheep Station in the Centennials open for determining long term ecological trends.

1398

RESPONSE: East Dry Creek Road is open in the Revised Plan. LMM

COMMENTS: The use of snowmachines in the Centennial Mountains stresses and impacts: wildlife (birds); private land owners; and the forest.

1322

RESPONSE: The Revised Plan provides continued public access to the National Forest and Centennials in the winter. Some areas in the Centennials are designated winter range and snowmachines are restricted to designated routes through the winter range. Most of the birds remaining on the Forest during winter seek tree cover for shelter and security. Tree cover is often heavy enough that snowmachines go around them or they are on steep slopes that snowmachines cannot traverse. Private landowners can post their lands to remind snowmobilers to avoid their private property. LMM

COMMENTS: Restrictions should remain for cross-country motorized travel in the Centennial Mountain Subsection.

432, 1333

RESPONSE: Thank you for your support. The Revised Plan retains cross-country motorized travel restrictions in the Subsection.

LMM

Non Support Closures - Centennial Mountains

COMMENTS: Do not maintain the Centennial Mountains as a crucial roadless corridor.

368

RESPONSE: The major access routes in the Centennial Mountains are still open to motorized uses. LMM

COMMENTS: Oppose closing the areas around Centennials.

342

RESPONSE: In the Centennial Mountains the main access roads are still open to travel. There are some trails that remain open for motorized use. On all but 7 percent of the Forest, summer motorized travel is restricted to designated routes. Closing some areas in the Centennials helps the Forest meet elk security requirements and to reduce potential damage to fragile soils. LMM/AM

Support Closures - Sheep Creek

COMMENTS: Access restrictions should be applied to Sheep Creek - Road 325.

1185

ACCESS - SITE-SPECIFIC

RESPONSE: Sheep Creek is a dead-end road that provides access to Sheep Creek. The only access allowed is on the main road. The Revised Plan does not allow cross-country motorized access in the area. LMM

Support Closures - East Dry Creek

COMMENTS: Supports closures in the East Dry Creek area.
432

RESPONSE: East Dry Creek is open to access the Sheep Station. LMM

Non Support Closures - Eight Mile/Pass Creek

COMMENTS: Designated routes in Eight Mile/Pass Creek area have had little off-trail impacts and should be left open.
1202

RESPONSE: These routes have received a lot of impact. They are steep trails used for hill climbing that have received significant amounts of erosion and these are now closed. LMM

Support Closures - Other - Dubois

COMMENTS: System roads #185, #022, and #204 should be closed from their junction in S22, T13N, R43E.
643

RESPONSE: Roads #185 and #022 are closed in the Revised Plan because they are not passable and have not been maintained. However, 204 was left open for permittee access. LMM

COMMENTS: System roads #010, #019, #674, & #675 should be closed.
643

RESPONSE: The Forest carefully considered each road during the Forest Plan revision process. After road densities were determined for each prescription area, management decided which roads to leave open or closed. Road #010, a dead end road providing the main access to Pete Creek, remains open. Road #019, a dead end road providing access to the Bear Gulch canyon and access for livestock and timber management, remains open. Roads #674 and #675, both old timber roads, are closed because they are no longer needed. LMM/KT

COMMENTS: Motorized use of Trail #110 (and associated trails) should be eliminated.
643

RESPONSE: Because this trail provides access to Corral Canyon and ties in with other roads, the Revised Plan leaves it open to motorized use. LMM

COMMENTS: Supports closures on roads #530, #531, #534, #539, #540, #173, and #240 as well as roads to Bald Mountain and Pass Creek.
643

ACCESS - SITE-SPECIFIC

RESPONSE: All these roads remain open because there is no resource damage. The Revised Plan provides road density compatible with wildlife, while still allowing some motorized access. LMM

COMMENTS: Trails that need to be closed are #045, #046, and #047.
643

RESPONSE: #047 Rocky Canyon will be closed. Trail #45 and #46 connect with access on the Challis National Forest and will remain open. LMM

COMMENTS: Supports closures #020 and #021.
459

RESPONSE: #020 Long Creek provides access to electronic sites on the mountain and a cattle allotment; #021 Threemile a main system road, provides access to Threemile Canyon, the head of Rattlesnake Canyons, livestock, timber, and Signal Peak. LMM

COMMENTS: Leave Modoc, Medicine Lodge, and Crooked Creek areas open for ORV's.
348

RESPONSE: Parts of Medicine Lodge and Crooked Creek area are in proposed wilderness. These areas are closed to cross-country motorized travel because of steep slopes and to maintain wilderness characteristics, but they are open on designated trails. The Modoc area is closed from September 1 to July 1 except for designated roads. Snowmobiles are allowed in the area from Thanksgiving until June 1, except in designated winter range where travel is restricted to designated routes. LMM

COMMENTS: Wants to have trail access in the following areas: #2, #4 thru #9, #26, #45, #47, #81, #110, #111, #113, #175, #177, and #179.
262

RESPONSE: All trails are open except for two: Rocky Canyon #47 is closed because of resource damage and because it provides important wildlife habitat. The main portions of the canyon are closed to livestock use also. The trail #9 of East Camas-Table Mountain was closed to meet elk vulnerability standards and to provide security for elk. LMM

Mapped "Comments"

COMMENTS: The following responds to requests for road and trail changes submitted on maps without dialogue.

RESPONSE: Pleasant Valley, Road 323 remains open it access the area as well as State lands; there is low resource impact; and is a designated route.

Spur off of 020 - Remains open because it provides access to an electronic site.

Spur off of Sheep Creek #325 - Remains open because it provides access to private land.

ACCESS - SITE-SPECIFIC

Dairy Creek Road #017 is a major system road, accesses State land and the National Forest, and has no major resource damage. Therefore it remains open.

Road 534 - The Forest will not close this road as it provides the only viable access into Deer Canyon.

Road 539 - Because it provides access into Surette Canyon, the Forest will not close this road.

Road (unnumbered) Little Sawmill - The Forest will leave it all open. It is within density standards and provides access to National Forest lands.

Road (unnumbered) fork of Road 296 - The Forest will leave it open because it provides access to private lands.

Pasture Creek Road #023 - Goes to trailhead. Major access. Timber/sheep access. Already closed.

Mandingo #175 - Already closed. Only used administratively to plant trees.

Ching Creek Road - #027 - Remains open because it is the major access to Aldous Lake Trailhead. LMM

Site Specific Island Park

Support Closures - Lionhead

COMMENTS: Supports closures for Lionhead Roadless area.
362, 695, 727

RESPONSE: Lionhead Roadless area is closed to motorized vehicles except snowmobiles. It is open to snowmobiles from Thanksgiving to June 1.

COMMENTS: Prohibit motorized access in Lionhead because it will diminish the prospect for wilderness designation.
727

RESPONSE: There is one motorized trail that goes through approximately 1/8 of the roadless area in T16N, R44E section 19. This is a Gallatin National Forest motorized trail. Cross-country is not allowed because the area has steep terrain and a pristine character; cross-country would cause irreparable damage to its wilderness character.

Non Support Closures - Lionhead

COMMENTS: Open all of Lionhead for the summer and winter activities.
F-I(4), 342

RESPONSE: Lionhead is proposed for wilderness designation and the lake basin and surrounding area was designated a Research Natural Area. It is open for snowmobiling from Thanksgiving Day to June 1. The area is closed to summer motorized use to protect and preserve its pristine character and to prevent user conflicts.

ACCESS - SITE-SPECIFIC

Support Closures - Targhee Creek

COMMENTS: Supports closure for Targhee Creek.
695, 362

RESPONSE: We agree. It is closed in the Revised Plan. AK

Support Closures - Red Rock Pass Road

COMMENTS: Maintain habitat security on Red Rock Pass Road.
1185

RESPONSE: Red Rock Pass Road (053) remains open in the the Revised Plan since it is a Forest development road and provides access to Lakeview, Montana. Habitat security is maintained for the area by meeting road density standards. JH/MLB

Support Closures - Buffalo River Headwaters

COMMENTS: Eliminate vehicle access directly to the spring by designating a parking area 1/4 mile from the spring and adding pit toilets to the parking area near Buffalo Headwater.

1276

Do not close roads 291 and 292 to the 1219 because wants access to put canoe in headwaters of Buffalo River.

511

RESPONSE: Roads 291, 292 and 1219 provide access to the Buffalo Headwaters and remain open in the Revised Plan. The roads are needed to access an area of heavy recreation use to both developed and undeveloped sites. The Forest will continue to monitor the area for resource damage. AK/AO/MLB

Non Support Closures - Wood Road #461

COMMENTS: Close Woodroad #461.
1371

RESPONSE: Road 461 is closed in the Revised Plan. AK

Non Support Closures - Black Canyon Road

COMMENTS: Open Black Canyon.
F-I(4), 227, 323, 380, 412, 466, 473, 474, 476, 524, 648, 1202
Roads that are now closed should be open, especially the Black Canyon Road.
F-C(13)

RESPONSE: Part of the Black Canyon road is open to 068. A portion of the road, which was originally closed for rehabilitation following the North Fork fire, remains closed in the Revised Plan in order to meet the road density standards needed for bear security in the Bear Management Unit. Other roads remain closed in the Revised Plan in order to meet road density standards per

ACCESS - SITE-SPECIFIC

individual prescription. Refer to the Access Appendix in the FEIS and Process Paper D, available in the Supervisor's Office, for more information concerning road densities. AO/JH/MLB

Non Support Closures - Keg Springs

COMMENTS: Keep Keg Springs Road open.

F-C(13), F-I(4), 19, 323, 380, 412, 473, 474, 476, 524, 643, 648, 1202, 1308, 1310, 1350, 1455

Keg Springs system roads should be open approximately one mile north of Forest Service southern boundary.

F-I(4)

Leave Blair Lake Road open.

19

RESPONSE: The Keg Springs Road north of the Forest Service southern boundary (near Blair Lake) is in the U.S. Sheep Experiment Station and outside Forest Service jurisdiction. This road remains closed to the public due to the Station's research work. Forest Road 042 is open to Keg Springs in the Revised Plan. AK/JH/MLB

Non Support Closures - Blue Creek and West Blue

COMMENTS: Blue Creek and West Blue needs to have hunting access for disabled/handicapped.

713

RESPONSE: Blue Creek remains open to the bridge, but the bridge is unsafe to cross. Both roads are closed in part or whole to meet BMU density standards. The Forest has areas accessible to hunters with disabilities. AK

Non Support Closures - Willow Creek

COMMENTS: Willow Creek system roads should be open approximately one (1) mile north of Forest Service southern boundary.

643

RESPONSE: This area is open to the culvert and closed beyond the culvert for resource protection and to meet road density standards. AK

Non Support Closures - East Dry Road

COMMENTS: Open East Dry (327) system road south of S32, T15N, R40E.

643, F-I(4)

RESPONSE: This road is open to motorized travel to within 1/4 mile of the Continental Divide (CD). The CD trail portion is not built for motorized vehicles. The Sheep Experiment Station land is closed to motorized vehicles. AK

ACCESS - SITE-SPECIFIC

Non Support Closures - Two Top

COMMENTS: Open Two Top for recreational use.
342, 1308, 1310, 1333, 1350

RESPONSE: This area is in Situation 1 grizzly bear habitat. The Revised Plan designates one route for OHVs greater than 50 inches open to motorized use. Additional open areas would exceed road density and cause further resource damage (soils) and conflict with the bear. The road to Two Top remains open. The road from Meadow Creek to Tygee Creek Basin remains open. It is the only road in the area (#061). AK

Non Support Closures - Other - Island Park

COMMENTS: Preserve road/trails in the Island Park areas.
298
Closing Island Park area is not acceptable.
4

RESPONSE: The Revised Plan does not close Island Park. Roads and trails will be preserved to the extent that roads meet the road density standards, and there are no adverse environmental effects. AK

COMMENTS: Open more trails in Island Park area.
262

RESPONSE: The Revised Plan closes more roads due to adverse environmental effects and to meet road density standards. The Forest also considered intermingled ownerships. AK

COMMENTS: Designate trails for ATV use.
1202

RESPONSE: The Revised Plan adds a system of loop trails that connect to West Yellowstone and the railroad right-of-way North of Ashton to West Yellowstone. As the Forest implements the plan, other loop trail opportunities will be examined within the road density standards. AK

COMMENTS: Create a motorized trail from Warm River to West Yellowstone.
640

RESPONSE: This area is closed to motorized use to protect fisheries beyond Warm River; however, it is open beyond Mesa Falls in the Revised Plan. AK

COMMENTS: Leave roads as they are for winter and summer activities.
529

RESPONSE: The Forest must meet road density standards and close roads that show adverse environmental effects. Please refer to the Access Appendix to the FEIS and Process Paper D, available in the Supervisor's Office, for a more detailed explanation. AK

ACCESS - SITE-SPECIFIC

Support Closures - Other - Island Park

COMMENTS: Supports the closure of road #024.
459

RESPONSE: If this is referring to the Sawtell Road, it will remain open because the road serves the FAA and high recreation use in summer. AK

Support Closures - Subsections - Island Park

COMMENTS: Island Park Subsection: close significant amount of roads.
Madison Plateau Subsection: close as many roads as possible.
489

RESPONSE: Roads are closed to meet road density standards, protect grizzly bears in BMU's, and prevent resource damage or effects on water quality and fisheries. AK

Site Specific Ashton Ranger District

Non Support Closures - Antelope Flats

COMMENTS: Open Antelope Flats.
1455

RESPONSE: Antelope Flats is open in the Revised Plan. AK

Support Closures - Aspen Ridge

COMMENTS: Preserve roads and trails in Aspen Ridge area.
298

RESPONSE: Forest Service system roads are partially open and limited in the Bootjack area behind the Aspen Ridge Estates. Most trails in the area were not built by the Forest Service and do not meet trail standards; they were created by "dispersed use". The Forest will continue to preserve roads in the area consistent with road density standards and resource concerns. AK

Non Support Closures - Fish Creek

COMMENTS: Open Fish Creek for recreational vehicles.
6, 1308, 1310, 1350

RESPONSE: Fish Creek Road #082 is open in the Revised Plan. The surrounding area is closed to summer cross-country motorized travel in order to meet BMU standards. AK

Non Support Closures - Fish Creek Road/Baker Draw Road

COMMENTS: Open Fish Creek Road from Baker Draw Road for outdoor activities (hunting, snowmobiling).
F-P(2)

ACCESS - SITE-SPECIFIC

RESPONSE: The Fish Creek Road is open to hunting and snowmobiling in the Revised Plan. The areas on either side of the Fish Creek Road are closed to summer cross-country motorized travel during the snow free seasons. The area closure is necessary to provide security for wildlife. During the snow season, the road and adjacent areas are open to snowmachine travel. AK

Non Support Closures - Fall River Ridge

COMMENTS: Keep Fall River Ridge open to snowmachines and for elk hunting.
F-P(2)

RESPONSE: The Revised Plan allows motorized travel on designated routes in the Fall River Ridge area. Cross-country travel in the area is not permitted during snow free seasons to provide security for wildlife. The area is also Situation 1 grizzly bear habitat. During snow seasons cross-country snowmachine travel is permitted. AK

Support Closures - Porcupine

COMMENTS: Oppose the easement that provides access by Porcupine Station.
153

RESPONSE: If this is referring to the request for access across National Forest System lands from the Fall River Ridge road to private land on the north side of Fall River, the issue is outside the scope of the Forest Plan and is being addressed in a separate environmental analysis. AK

Non Support Closures - Pole Bridge Campground

COMMENTS: Provide handicapped/disabled access to clearcuts behind Pole Bridge Campground.
713

RESPONSE: Road #153 is open. Other roads are closed to meet BMU standards.
AK

Non Support Closures - Other - Ashton District

COMMENTS: Designate ATV trail in the Ashton area.
1202

RESPONSE: The railroad grade from Road 154 north to West Yellowstone is designated as an ATV trail. AK

COMMENTS: Supports motorized trail from Warm River to West Yellowstone.
640

RESPONSE: This area is closed beyond Warm River to protect the fisheries; however, it is open beyond Mesa Falls in the Revised Plan.

COMMENTS: Provide access across Fall River Ridge from Porcupine Lake Road.
199

ACCESS - SITE-SPECIFIC

RESPONSE: Road #243 is designated open in the Revised Plan. AK

Support Closures - Other - Ashton District

COMMENT: Supports two miles or less of roads per square mile with more restrictive Standards dependent on specific Prescriptions on portions of the Ashton Ranger District, especially the portions of that District located in Wyoming.

389

RESPONSE: The road density standards in each prescription in the Revised Plan are designed to compliment the management intent of the prescription. A large portion of the Ashton Ranger District in Wyoming is designated Wilderness which has no roads. The other prescription in this area is 5.3.5 (Grizzly Bear Habitat). The road density for this prescription is calculated on a Bear Management Unit basis which would be the Targhee Portion of the Bechler-Teton BMU. The Total Motorized Access Route Density (TMARD) standard for the BMU is 1 mile/square mile and the Open Road and Open Motorized Trail Route Density (OROMTRD) is 0.6 miles/square mile. AK

COMMENTS: Close Reclamation Road near Ashton to Flagg Ranch because it: fragments wildlife habitat; endangers grizzly bear; is most damaging and unnecessary road in Yellowstone Ecosystem; as use grows, road becomes more difficult to close and more damaging.

171

RESPONSE: The Reclamation Road will remain open in the Revised Plan. This road serves as a designated route that links the community of Ashton, ID, with recreation opportunities at Flagg Ranch, WY, the John D. Rockefeller Jr. Memorial Parkway, and Yellowstone and Teton National Parks. This road provides access to an established youth organization camp and developed trailhead facilities for people accessing the Winegar Hole and Jedediah Smith Wildernesses. AK

Prescriptions - Big Bend Ridge

COMMENTS: It is crucial that the Big Bend Ridge be managed with a non-motorized prescription to ensure its protection in the face of growing development pressures.

1365

RESPONSE: This area is closed to cross-country snowmachine travel except from January 1 to April 30, and open to cross-country travel for motorized vehicles <50" wide from June 15 to September 30. AK

Mapped "Comments"

COMMENTS: The following responds to requests for road and trail changes submitted on maps without dialogue.

ACCESS - SITE-SPECIFIC

RESPONSE: Snow Creek (094), Road 702, and Road 572 (Big Grassy) will remain restricted year-long for a portion of the road to meet road density in the BMU.

Trail Canyon goes through CORE of Plateau BMU. Density standard is 0.0.

The Forest decided not to build new connector from 749, Fish Creek Spur #3, because it would go through Core in BMU.

Although Fish Creek Spur #3 is not in Core, but in security area, the Forest will not open it due to road density standards.

The Forest can not open #037 (Moose Creek Trail) to motorized use because part of it is in Core where Standard is "0", and part is in security area for BMU.

The Forest can not open #554 year-long (Snow Creek Spur #1), because of required road densities in BMU Security area. AK

Site Specific Palisades Ranger District

Analysis Process

COMMENTS: Table on Page III-101 is incorrect. For 10-15 years roads have been closed to snowmobiles from Heise Canyon to Blacks Canyon to protect critical winter range. Prohibit vehicles, including snowmobiles, on designated trails.

FS-3

RESPONSE: This area was incorrectly shown as open to snowmachines on the draft's map. This was corrected in the Final and is closed. The River Road from the Forest Boundary to Blacks Canyon is closed to snowmachines to protect critical winter range. BBP

Support Closures - Garns Mountains

COMMENTS: Close the following trails to ORV use in the Garns Mountains Roadless Area: Big Burns Creek #068; Hell Hole #070; Jensen Creek Coal Mine #064; Beartrap Canyon; Little Burns Creek #071; Slide Rock #072; Little Burns - Slide Rock #073.

695

RESPONSE: Burns Creek Drainage: (068 Big Burns Creek Trail) is a main OHV loop trail. Resource damage along this trail is minimal with little damage at stream crossings or along trailheads. This trail remains open to OHV travel except from the junction of Bear Trap Trail to junction of Slide Rock Trail 072, where it will be closed and not maintained. This portion will be allowed to return to natural conditions. The Forest made this decision because the trail goes through a designated RNA and does not provide a connection since Slide Rock trail will also be closed.

Hells Hole (070) was proposed to be closed in the DEIS, because of exceeding road density standards. After further review the prescription road density standard was not exceeded and the trail was left open.

Jensen Creek Coalmine (064), Little Burns Creek (071) and Bear Trap trails provide important access loops to OHV users. The Forest determined them suitable for designated routes. Slide Rock (072) is closed to OHV travel

ACCESS - SITE-SPECIFIC

and all other uses due to resource damage. This trail will not be maintained and will be allowed to return to natural conditions from junction of Trail 073 to junction of Bear Trap Trail. From junction of Trail 073 to Liars Peak Trail, 072 will remain open to OHV Travel.

Little Burns/Slide Rock (073) trail will remain open for OHV use and has the same attributes as Trails 046, 071, and the Bear Trap Trail. BP

Support Closures - Fall Creek

COMMENTS: Support a new winter time route through June Creek Winter Range to connect to Skyline Drive.

1202

RESPONSE: June Creek is outside the critical winter range and therefore, a designated route is not needed for this area. Snowmachine trail grooming will be allowed on the June Creek Road as part of the county grooming program. BP

COMMENTS: Designate Fall Creek area for ORV use.

206, 204

Unfair closures to OHVs in Fall Creek.

1190

RESPONSE: Fall Creek is open for OHV use; summer cross-country travel is restricted in all of the Palisades District. BP

COMMENTS: All system trails should be opened to motorized use.

1202

RESPONSE: While not all system trails should be closed to motorized use, it is equally true that some areas should not be opened. This decision was evaluated for each area in the Revised Plan.

During the Plan Revision, the Forest looked at motorized use and its compatibility to other resource values (such as wildlife, watershed, water quality, recreation uses and needs). Current restrictions and closures were reviewed to see if they were still needed or if additional closures were warranted due to increased use. If the situation showed changes were needed, then changes were recommended in the Revised Plan. The biggest change for all the Districts was the recommendation for cross-country travel restrictions. Most of the Palisades Ranger District is steep and has terrain that limits cross-country travel. This type of activity was occurring in the form of hill climbing where evidence of resource damage was readily visible. Where terrain was less restrictive, damage occurred simply because of the increased number of OHV's that have been introduced since the last planning period. New and better machines caused trails/roads to appear. In many cases, visual resources were a major reason for recommending closure of cross-country travel. MB

COMMENTS: Palisades (Antelope, and Fall Creeks) are excessive motorized travelways in important big game range; highest road densities and highest elk vulnerability. Limit use seasonally or all year. Idaho Fish and Game says there are too many vehicles in here.

FS-4

ACCESS ~ SITE-SPECIFIC

RESPONSE: This area was evaluated in the open road density calculation. Those roads and trails proposed open to motorized use are within the standard for this prescription. Some resource areas, when considered alone, may appear to have too many roads. The standard in the prescription is a mix of all resource considerations. BBP

COMMENTS: Close Burns Creek and 1000 Springs to cross-country because of destruction to riparian areas and decrease in wildlife security.

632

RESPONSE: These areas are closed to cross-country travel in the Revised Plan. Travel is restricted to designated routes, which are existing trails in the area. BBP

Support Closures - Poker Peak

COMMENTS: Support the proposal of Poker Peak non-motorized Prescription 3.1.1 (a).

695

RESPONSE: This area is closed to motorized travel under the Revised Plan. Boundaries were selected which could easily be followed and understood by the public and administrators. BBP

Non Support Closures - Pine Creek

COMMENTS: Establish a motorized corridor between Pine Creek and Indian Creek.

1202

RESPONSE: A corridor would require a trail system through the Palisades Creek OHV closure. The Forest decided to leave this area closed. BBP

Support Closures - Indian Creek

COMMENTS: Close Indian Creek to ORV's.

161, 200

Motorized access to Indian Creek is unfair.

304

RESPONSE: Indian Creek is within the Wyoming Wilderness Study Area. This WSA allows motorized use on designated trails (Indian Creek) until a wilderness decision is made by Congress for this area. BBP

COMMENTS: Concerned about unsafe horseback/ORV use of trails.

304

RESPONSE: The Forest does not agree that horseback and OHV uses are unsafe on trails. It is true that some users create unsafe situations on forest trails. This is best handled through education rather than closures. BBP

Non Support Closures - Indian Creek

COMMENTS: Establish a motorized corridor between Pine Creek and Indian Creek.
1202

RESPONSE: This would require a trail-system through the Palisades Creek OHV closure. After review of this area, the Targhee decided not to provide a loop in the Revised Plan. BBP

Non Support Closures - Red Ridge

COMMENTS: Closing OHV use in Red Ridge area is unfair.
1190

RESPONSE: Red Ridge is closed to cross-country travel as is the entire district. Trails in Red Ridge area are left open. With the exception of cross-country travel, which is difficult due to steep terrain, access in this area changes very little in the Revised Plan. BBP

COMMENTS: Apply OROMTRD in Table Rock.
1273b

RESPONSE: Table Rock was included in the road density calculations. Prescription standards are developed and will be implemented. BBP

Support Closures - Bear Creek

COMMENTS: Close entire roadless area in Bear Creek to motorized use.
204, 1202

Close to OHV use to retain big game security, reduce erosion, and provide solitude in Bear Creek drainage.
204

RESPONSE: Bear Creek is a major motorized use area and remains open. The Fall Creek/Bear Creek area was reviewed for the amount of OHV use and its compatibility with other resources and uses. OHV use was determined to be compatible with uses and resources needs with some trail work and relocation. Road density was within the Plan standard, and so no adjustment was needed. One trail (less than one mile) was closed to all uses and allowed to return to natural conditions in the four corners area because it paralleled another system trail serving the same area. Other than this one trail, all other system trails in the Caribou subsection remain open in the Revised Plan. BBP

Non Support Closures - Bear Creek

COMMENTS: Open all system and non-system trails Big Holes, Fall Creek, Bear Creek, Palisades to motorized use.

OHV closures in Bear Creek are unfair.
1190, 1202

ACCESS - SITE-SPECIFIC

RESPONSE: All but one short trail are open to motorized use in Bear Creek. Cross-country travel is restricted (hill climbing and random travel). RD

Support Closures - McCoy Creek

COMMENTS: Prohibit winter motorized travel north of McCoy Creek road with date restriction November 1 - August 31 to protect nesting areas.

389

RESPONSE: There are no nesting areas north of McCoy Creek Road. There are identified eagle nesting sites between McCoy Creek Road and Palisades Reservoir. McCoy Creek Road has long been a major groomed trail. There is no evidence to suggest this has been a problem. In fact, new nesting sites have been recorded during the snowmachine use period. JR

COMMENTS: Do not make a trail head at Long Springs because of contamination.

459

RESPONSE: The District is not currently planning to develop a trailhead at this area. However, there will be a road end and trail beginning location. This would be an undeveloped trailhead. BBP

Non Support Closures - McCoy Creek

COMMENTS: Establish ORV use in McCoy Creek.

204, 206

RESPONSE: OHV use is allowed in McCoy Creek except for cross-country travel.

BBP

Non Support Closures - Palisades Creek/Big Elk

COMMENTS: Change Prescription 1.3 (Plan III-69) to leave drainages of Big Elk and Palisades Creek open to snowmachine use.

395

RESPONSE: The lower part of these drainages are within identified Big Game Critical Winter Range, and are closed to snowmachine use. No designated route is planned for these areas. Big Elk Creek Road is a county road and use of the road is allowed or disallowed by the county from US Highway 26 to the trailhead. From the trailhead up stream to the boundary of the winter range closure, the trail is closed to snowmachines and is not a designated route.

BBP

Closures - General - Palisades

COMMENTS: Keep all Palisades off limits to ORVs.

F-M(5), 200

RESPONSE: The Revised Plan continues summer time OHV restrictions. OHV travel is prohibited in the Palisades backcountry area and is limited to designated routes in other areas of the Snake River Range. BBP

ACCESS - SITE-SPECIFIC

COMMENTS: Close trails: #065, #089, #051, #090, #045, #055, #046, #099, #057, and #058.

RESPONSE: These trails were evaluated for what type use would be allowed. None were determined as not needed, however, some were closed to motorized use to meet road density standard or some other resource need. The following closures refer to motorized closures only. Trails will be maintained for other uses.

#065 - Mike Spencer - Trail used by OHV, designated route for OHV.
#089 - North Fork Rainey Creek - Trail used by OHV as loop trail.
#051 - Sheep Driveway - Closed.
#090 - South Fork Rainey Creek - Used by OHV as loop trail.
#045 - Poker Peak - Closed.
#055 - Box Canyon - Trail does not currently exist and will not be reopened for any uses.
#046 - Big Elk Mountain - OHV trail open along ridge-top.
#099 - Waterfall Canyon - Closed.
#057 - Burnt Timber - Open OHV designated route trail.
#058 - Deadhorse - Open OHV designated route trail. RD

COMMENTS: Locate corridors for winterized travel in the Palisades Wetland area on or south of McCoy Creek (regarding trumpeter swan and waterfowl).

389

RESPONSE: The snowmachine designated route for this area is on the south side or along the existing McCoy Creek Road as recommended. BPP

COMMENTS: Prohibit motorized access from November 1 - August 31 to protect mating and brood rearing periods in the Palisades wetland areas.

389

Provide access in the following areas: Palisades Ranger District, (including Caribou Forest administered by Targhee Forest) trails #4, #26, #27, #28, #30 thru #50, #55, #60, #63, thru #68, #70, thru #74, #78, #79, #80, #82, #83, #86 #89 thru #92, #94, #107, #120, #138, #140, #142, #144, #145, #148; #155, #157, #158, and #159.

262

OHV closures in Palisades are unfair.

F-M(5), 1190

Open all system trails in the Palisades to motorized use.

F-M(5), 1202

RESPONSE: The proposed designated route system for winter time travel and the summer time seasonal restriction should adequately protect the wetland and wildlife.

Most areas that are currently open for motorized use are still open. Palisades and Big Elk Creek areas are currently closed to motorized travel during the summer time and will remain closed because of amount of use, type of use, terrain features and future desired conditions of the area.

During the plan revision, the Forest looked at motorized use and its compatibility to other resource values (e.g., wildlife, watershed, water quality, recreation uses and needs). Current restrictions and closures were reviewed to see if they were still needed or if additional closures were

ACCESS - SITE-SPECIFIC

warranted due to the increased use. If the situation showed changes were needed, they were recommended in the Revised Plan. The biggest change for all the Districts was the recommendation for summer cross-country travel restrictions. Most of the Palisades Ranger District is steep and has terrain that limits summer cross-country travel. Where this type activity was occurring, it was in the form of hill climbing where evidence of resource damage was readily visible. Where terrain was less restrictive, damage occurred simply because of the number of OHVs that have been introduced since the last planning period. New and better machines caused trails/roads to appear. In many cases, visual resources were a reason for recommending closure of cross-country travel.

The following is a brief summary of the recommendation for the Revised Plan by subsections:

Big Holes - Most system trails were compatible with existing use and resources. However, it was recognized that many trails were not properly located and would require trail work.

Road density review was made for the Big Holes for elk vulnerability and security and motorized road/trail density was slightly above the established standards. It became necessary to reduce the road/trail density in order to meet the standard. Trails were closed that were used the least and would be the most difficult to bring up to standard. Loop ride trails were considered important and received high consideration.

Only a small number of trails were closed to motorized travel for either of the reasons stated above. Most trails remain open in the Big Holes and access to the Big Holes remains basically the same as before.

Palisades - Existing closures were reviewed in this area, particularly the Palisades Lakes area. Considering the amount and type of use which occurs in this part of the Forest, a closure was decided in the Revised Plan. Motorized use in this area is not compatible with existing uses.

Other parts of the Palisades Mountain Range were also evaluated for motorized use and were compatible with designated route selections. Routes in the Indian Creek area were left much as they existed. Selection of the closed routes were the same as in the Big Holes.

Fall Creek/Bear Creek - This subsection was reviewed for the amount of OHV use and its compatibility with other resources and uses. OHV use is compatible with uses and resources needs with some trail work and relocation. Road density was within the Plan standard, and so no adjustment was needed. One trail (less than one mile) was closed in the four corners area because it closely paralleled another system trail serving the same area. Other than this one trail, all other system trails in the Caribou subsection remain open in the Revised Plan. BBP

Site-Specific Teton Ranger District

Support Closures - Big Holes

COMMENTS: Restrict off-highway vehicle (OHV) travel in Big Holes to prevent resource damage.

215

RESPONSE: All summer motorized travel is limited to designated roads and trails and closed to cross-country in the Revised Plan. By having a defined

ACCESS - SITE-SPECIFIC

system of motorized roads and trails, resource protection is more easily obtained through trail maintenance, reconstruction, and/or relocation. MB

Support Closures - Spring Creek

COMMENTS: Motorized use in the Spring Creek area (Prescription 3.2) should be limited to designated routes.

1312

RESPONSE: Spring Creek is located above the Rapid Creek Guard Station. When reviewing this area for access and potential problems, the Forest determined that terrain limits cross-country travel so a closure to cross-country travel was not needed. The winter range portions of the area are closed to both motorized and non-motorized use from Thanksgiving Day until June 1. BP/LD/MLB

COMMENTS: Do not create more needless access to the Big Hole Mountains to maintain Elk Security.

325

RESPONSE: The Revised Plan reduces motorized access from the current situation. By eliminating cross-country motorized travel and designating roads and trails open to motorized use, the problem with access in the Big Holes should be reduced significantly. Any changes to access as presented in the Revised Plan will be subject to project-specific analysis. Some trails may be relocated as part of reconstruction but there are no plans at this time for construction of additional motorized access in the Big Holes.

Some roads and trails were closed to motorized use in order to comply with density standards of the Revised Plan.

The Targhee has always considered public access to the National Forest and elk security as important elements of forest management. Elk security is a major consideration when determining road standards and was evaluated in the plan revision. No needless access is allowed to occur in the Big Holes. MLB/BP

COMMENTS: Need more restrictions on the cross-country off-road vehicles in the Big Holes area.

387

RESPONSE: All summer motorized travel will be limited to designated open roads and trails and closed to cross-country in this area. This is more restrictive than current management. MB

COMMENTS: Wants more road/trail closures in the Palisades Big Holes Units.

387

RESPONSE: Motorized access has been a polarized issue, particularly in the Palisades Big Holes Subsection. After reviewing public comments and revisiting access as proposed in the Draft Revision, the Forest changed the open road and trail densities in Prescription 3.2(g) which represents the majority of the subsection. The Revised Plan divides the 3.2(g) areas to allow a lower road density (from 1.0 to 0.5) in the Palisades portion of the subsection next to recommended wilderness and a higher road density (from 1.0

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to 1.2) in the Big Holes Subsection. The result will be less motorized access than is allowed under current management and more than was proposed in the Draft Revision. MB/BP

Non Support Closures - Big Holes

COMMENTS: All system roads in Big Holes should be open to motorized use.
F-G-2(2), 1202

RESPONSE: All roads were evaluated in the Revised Plan. Those identified as needed and within the road density standard will remain open and become system roads. Those identified as not needed or outside the standard will be closed. More system roads will be open in the Big Holes in the Final Revised Plan than was proposed in the draft. In the north end of the Big Holes (Prescription 5.1.4(b)), it is impossible to leave all the system roads open and stay within road density standard of 1.5 miles per square miles. In the south end of the Big Holes, all system roads will be open in the Final Revised Plan with the exception of Power Line Road. The Power Line Road will be open to off-highway vehicles and motorcycles from Mike Harris Campground to Murphy Creek and closed to all motorized vehicles from Murphy Creek west to Rainey Creek. The reason the western section is closed is because the powerline access is not contiguous, traverses steep terrain and does not currently receive a lot of use. The entire powerline corridor is open to Bonneville Power Authority for service. MB

COMMENTS: Disagree with statement RE: unacceptable resource damage in Big Hole/Palisades as stated in DEIS.
1202

RESPONSE: The summer access reference in Chapter III of the EIS states, "The highest concentration of these activities are in the Big Hole/Palisades and Caribou Subsections, where there is significant use by motorcycles and mountain bikes. As noted in the Soil and Riparian section, there are areas of concern for OHV effects on soil and vegetation. There is not serious widespread adverse consequences as a result of this use." The soils and riparian sections for the Big Hole/Palisades Subsection identifies OHV use as one of many activities affecting soil and riparian quality. The Forest will continue to repair resource damage caused by all forms of access in the Subsection. MB/DM

COMMENTS: Discriminating to include Big Holes as wilderness.
311

RESPONSE: The roadless area of the Big Hole Mountains are not currently managed as wilderness nor proposed by the Forest Service to be wilderness. The motorized access provided for in the Revised Plan would not be allowed if the area was designated wilderness. MB

COMMENTS: OHV use must be regulated and monitored in the Big Hole Mountains.
215

ACCESS - SITE-SPECIFIC

RESPONSE: The Forest concurs that the Final Revised Plan provides a network of designated motorized roads and trails that will be better regulated than the current situation (which allows extensive cross-country motorized travel). Chapter V of the Revised Plan provides for monitoring and regulation of OHV use, as funding and personnel allow. MB

COMMENTS: Does not want trails closed in the Big Holes area.
54, 97, 1282, 1449

RESPONSE: The Revised Plan provides a workable network of trails together for the Big Holes area. The revised trail system provides general access to most areas in the subsection and provides several loop opportunities of various lengths and degrees of difficulty which are feasible to maintain and manage. Because the resulting network exceeded the road and trail density standard in the Draft 3.2(g) Prescription, the Revised Plan increases the density in the prescription to provide motorized access on most of the site-specific trails requested to be open by the public. Closure of some of the trails in the Big Holes was necessary to meet road density standards and address resource concerns. Trails closed to motorized use will remain open to other uses when possible and maintained accordingly. MLB

COMMENTS: Provided access into the Big Hole Mountains should continue.
311

RESPONSE: Most of the existing trail system remains open to motorized use in the Revised Plan. The major change in access is the closure of the area to summer cross-country motorized travel. Cross-country motorized travel in the Big Holes has resulted in numerous unplanned roads and trails which often access areas already provided by existing trails. Undesigned roads and trails can cause negative impacts to soil, water quality and wildlife. These "trails" can result in confusion for recreation users since they are not on maps. Maintaining or rehabilitating these "trails" are not the best use of limited trail maintenance funds nor to other Forest resources. The District attempted to keep all specifically requested trails open in the Final Revised Plan. See also site-specific responses in this section. MB

COMMENTS: Big Hole/Palisades. Correct misstatement: "there are no serious widespread adverse consequences as a result of this use." Not true. This area has a serious problem and most trails need to be rerouted to be suitable. Most of the problems are in MA17 and MA21.

FS-2

RESPONSE: The statement in the Revised Plan remains as written. The Forest recognizes that there are some serious local problems on trails which must be corrected by relocation or closure of the trail, (e.g., Castle Lake to Blacktail Pass, and Slide Rock Trail). Action will be taken as funding and opportunity become available. This is not a widespread problem - it is not occurring everywhere, nor are the trails in serious condition. BP

ACCESS - SITE-SPECIFIC

Support Closures - South Leigh Lakes

COMMENTS: No trail construction to accommodate use at South Leigh Lakes.
1312

RESPONSE: There is no constructed, maintained trail into the South Leigh Lakes Basin. The Revised Plan does not propose one, nor are any projects planned to provide such access. Use of the unmaintained route area is expected to continue. The Forest will monitor the South Leigh Lakes basin and has no intentions of encouraging additional use of the area. MB

Non Support Closures - Fox Creek

COMMENTS: Maintain a public right-of-way to Fox Creek Quarry.
1312

RESPONSE: The Forest Service has legal public access through the Fox Creek quarry. The quarry was inactive for years and recreation access through the quarry was not a problem. Now that the quarry is active, heavy equipment and mining activity pose a potential safety hazard to the public. A more indepth site-specific analysis will occur to involve the public in the decision making process. Any proposal to change public access in the area would be conducted in compliance with the National Environmental Policy Act. MB

Support Closures - Canyon Creek

COMMENTS: Support closures to motorized recreation from Canyon Creek to Garns Mountain.
1312

RESPONSE: After considering public comments, the Revised Plan provides motorized access (#063, 064 and 066) into this area. This increase in motorized access meets open road and trail density standards and responds to the demand for more motorized access in the Big Holes. MB

COMMENTS: Leave Canyon Creek open.
342

RESPONSE: Trail #064 North Fork of Canyon Creek and Trail #063 South Fork of Canyon Creek remain open in the Revised Plan. MB

Non Support Closures - Castle Lake

COMMENTS: Thousand Springs to Castle Lake should be opened.
397

RESPONSE: Thousand Springs/Castle Lake Trail remains open under the Revised Plan. This trail was identified as a shared use trail including motorized use. In the field season of 1996 the trail was rerouted around Castle Lake to

ACCESS - SITE-SPECIFIC

Blacktail Pass in order to correct resource damage on the old trail. The new trail was relocated on a good grade with good water drainage. BP

Non Support Closures - Pine Creek/Piney Pass

COMMENTS: Open Pine Creek to Piney Pass.
397

RESPONSE: Trail #050 is open in the Final Revised Plan.

Non Support Closures - Ryan's Creek/Elk Flat

COMMENTS: Open Ryan's Creek across Elk Flats.
397

RESPONSE: This area was not located on maps. BP

Non Support Closures - Pony Creek

COMMENTS: Oppose closing the area around Pony Creek.
342

RESPONSE: All motorized travel in the Big Holes subsection is limited to designated routes. Pony Creek Road #666 is restricted year-long in the Revised Plan because existing road densities exceed the standard established by the management prescription. The District intentionally left the north end of the Big Holes slightly below the allowable road density so that closed system roads such as Pony Creek could be opened occasionally for wood cutting, hunting or other purposes.

Support Closures - Other - Teton

COMMENTS: Supports closure to trails: #039 and #052 and to Missionary Ridge.
643

RESPONSE: Commissary Ridge is on the Caribou subsection. Trail #039, the Indian Creek Trail, is in the same subsection but 10 to 15 miles from Commissary Ridge; however trail #052, North Fork Palisades, is in a different subsection. All trails in this subsection were evaluated in the Revised Plan. If a trail was needed and met open road and trail density standards, it was declared a designated route. BP

COMMENTS: Support management of Teton District (Prescription 3.2) to offer semi-primitive motorized and non-motorized recreation for hiking, horseback riding, mountain bikes.
389

RESPONSE: Thank you for your support. The Final Revised Plan refines this need by applying three slightly different versions of the 3.2 Prescription in order to provide an array of recreational opportunities and respond to polarized comments on the recreation access issue. MB

ACCESS - SITE-SPECIFIC

COMMENTS: Supports two miles or less of roads per square mile with more restrictive standards dependent on specific prescriptions on Teton Basin Ranger District, the northern portion of District specifically.

389

RESPONSE: Thank you for your support. All prescriptions in this area provide road densities of two miles per square mile or less.

COMMENTS: Wants access to the following areas: Teton Ranger District Trails #43, #44, #49, #50, #51, #53, #54, #56, #62, #63, #64, #66, #75, #76, and #77.

262

RESPONSE: Trails #43 and #44: Burbank and Mail Cabin are closed to maintain the wilderness and roadless character of the Palisades Wilderness Study Area.

Trail #49: Mikesell-Mail Cabin trail dead ends in the wilderness. Since no loop opportunities are available, the Forest closed them to prevent an enforcement problem of motorized use in the wilderness.

Trail #50: Sheep Driveway trail is open for summer access.

Trail #51: Pole Canyon is open for summer access.

Trail #53: A motorized trail along the Big Hole crest is open for summer access.

Trail #54: The Patterson Creek trail is open for summer access.

Trail #56: Big Hole Crest trail is open for summer access.

Trail #62: Elk Flat - Relay Ridge trail is open for summer access.

Trail #63: Canyon Creek - South Fork trail is open for summer access.

Trail #64: North Fork Canyon Creek is open for summer access.

Trail #66: Garns Mountain trail is open for summer access.

Trail #75: The Liar's Peak trail is closed to motorized travel for summer access. This closure was needed to allow the route along the Big Hole crest to stay within the road density standard in the prescription. The Final Revised Plan increases the density standard in that area from 1.0 to 1.2. Comments were polarized about motorized access in the Big Holes. The Liar's Peak trail is an expert level trail. The Forest responded to the Idaho Trail Machine Association's request that they would rather have the Crest Trail open than Liar's Peak.

Trails #76 and #77: The Red Creek and Corral Creek trails have not been maintained for years, receive minimum use by skilled riders (Corral Creek gets more use than Red Creek), are poorly located in creek bottoms, have steep slopes, are difficult to ride and are difficult to maintain for motorized use. Both trails are connectors that could provide additional loop opportunities but are not necessary to provide general access. The trails were closed to motorized use to meet density standards and to open other trails with better potential as motorized trails. MB

COMMENTS: The same prescription as at Henry's Lake should apply to the west slope of the Tetons in the Sorenson Creek development area.

1360

RESPONSE: There are five prescriptions which border the Henry's Lake private inholding. The Sorensen Creek "development area" is adjacent to the Winter Range Prescription 2.7 (a). All 2.7 (a) are critical winter range for big

ACCESS - SITE-SPECIFIC

game animals and need the standards and guidelines included in that prescription. Site-specific decisions for projects which may affect adjacent landowners are subject to the requirements of the National Environmental Policy Act (NEPA). MB

COMMENTS: Pole Canyon Road (one map shows it as #060 another shows it as #051) should be closed because it leads to non-motorized areas where people use trails illegally.

725

RESPONSE: Pole Canyon Road (051) is an open motorized trail in the Final Revised Plan. The Pole Canyon route is half of a motorized loop trail that leads to a large network of non-motorized trails. The prescription is well below road density and meets the demand for some motorized trail routes in this area. The loop of the road makes the management of the trail system more feasible. MB

COMMENTS: Concerned about developing site specifics for area 7.1 (b) due to proximity to the Henderson Canyon Road. Concerned about fire burning (supports burning), logging, exploration, access, recreational use, visual appearance, wildlife. Wants opportunity to be informed and comment prior to site specifics being approved.

708

RESPONSE: The Revised Plan changed the block of 7.1 (b) to 5.1.3 (b) because Prescription 7.1 (b) was unclear in several respects. Prescription 5.1.3 (b) is similar to 7.1 (b). Site-specific projects are subject to NEPA and will include public involvement. Public involvement opportunities are sent out in a NEPA quarterly report to any requestors. MB

Mapped "Comments"

The following responds to requests for road and trail changes submitted on maps without dialogue.

COMMENTS: Road 922 Wright Creek - Bleggi Gooseneck Road should remain closed. Missing Letter #

RESPONSE: This is a two-track road accessed across private lands or from the Grandview Main Road, the primary road into the north Big Holes. Road 922 does not connect. If it was open, it would encourage users to create a new, nonsystem connecting road. MB

COMMENTS: "Road 657" is not a road but is the Carlton cut-off Trail.

RESPONSE: Road 665 is the new road which provides vehicle access to the same area. This trail will remain open as a trail, since it is not passable with a jeep.

COMMENTS: Open the Spur road off Pine Creek Road on D-4.

ACCESS - SITE-SPECIFIC

RESPONSE: Most roads off Pine Creek Highway are open and will remain open under the Revised Plan. BP

ACCESS - SOCIAL CONCERNS

General

COMMENTS: Oppose any or all road restrictions for reasons regarding quality of life, such as: access supports local economics; future trends and growth indicate need for more access; and, concerned that the Targhee National Forest is locking the public out. Access to the Forest should increase, or at least remain at current management levels.

24, 25, 26, 35, 46, 63, 124, 182, 229, 250, 259, 262, 300, 309, 316, 318, 319, 330, 391, 413, 439, 447, 512, 607, 1321, 1332, 1390

Restrict access for reasons regarding quality of life such as: access regulates human contact with ecosystem; protects the environment; and, reflects social access needs.

12, 23, 318, 333, 407, 640, 694, 1197, 1370

RESPONSE: Access was one of the most polarized issues during the planning period. Each watershed on the Forest is delineated by management prescriptions. Each prescription has a road density standard. The road density standard provides a cost effective road system that integrates human needs, wildlife needs (specifically elk and grizzly bear), and other resource values. A few existing roads will be closed to meet the road density standard. Most of the main roads and trails on the Forest will remain open on designated routes and only seven percent of the Forest will remain open to summer cross-country travel. In most prescriptions the road density standard is about 1.5 miles per square mile.

Social concerns were considered in arriving at the final decisions on motorized and nonmotorized access on the Forest. The Revised Plan is a balance between competing interests, protects resource values and still provides sufficient access for users. The Access Appendix in the FEIS details the access analysis used in the Revised Plan. LAB/CMM/MLB

ACCESS - SOIL

COMMENTS: Discuss what soil erosion factors restrict OHV use.

413

RESPONSE: The soil erodibility factor (K-factor) is a measure of the susceptibility of soil particles to detachment and transport by rainfall and runoff. Soil properties considered in developing the soil erodibility factor include: soil texture (especially percent of silt plus very fine sands), percent sand greater than .1mm, organic matter content, soils structure, soil permeability, clay mineralogy and coarse fragments in soil layer being evaluated.

Rainfall intensity, distribution, amount, length and steepness of slope, vegetative cover (or lack of cover) and erosion control practices all influence soil erodibility. Chapter III of the Revised Plan includes Forestwide guidelines for slope steepness and stability to identify situations where the soil erodibility factor would be accelerated on a trail system. DM

ACCESS - SOIL

COMMENTS: Disagree that rutting or displacement of soils is caused by ORV use. It is caused by design and maintenance of the trail, not the type of use.

629

RESPONSE: Rutting and displacement of soils occurs on numerous non-designated OHV trails that traverse steep slopes. On designated routes, the above comment is basically correct. A portion of the designated OHV trails are not designed or adequately maintained to reduce resource damage. DM/TEM

ACCESS - TIMBER MANAGEMENT

COMMENTS: The OROMTRD in Timber Management Areas of ≤ 3.0 miles per square mile allows a high open road/trail density which exhibits no attention to wildlife needs and should be drastically reduced.

1273b, 1361

RESPONSE: The Timber Management Prescription that has the OROMTRD of ≤ 3.0 miles per square miles is 5.1 (b). There were some changes from the Draft Plan to the Final Revised Plan and Prescription 5.1 (b) was not used. The concern of a high open road/trail density in timber management areas was taken into account. CMM

ACCESS - TIME FRAME

Road Closure Implementation in BMUs

COMMENTS: Provide a time-specific plan which describes the prioritization scheme for implementing road closure programs within BMUs. Specify implementation of road closures within one year of ROD, and completion in three years. Complete it sooner than the proposed three years.

(CROSS REFERENCE: Wildlife, Grizzly Bear)

127, 643, 695, 766, 1273b, 1361

Provide a time-specific plan which describes the prioritization scheme for implementing road closures. Recommended time frames for completion include five, three and sooner than the proposed ten years.

127, 643, 690, 695, 766, 1194, 1361, 1401, 1407, 1446

RESPONSE: The Forest will implement road closures after the Record of Decision (ROD) is signed. The BMU road closures are the first priority and will be completed within the first three years of the release of the Revised Plan. How the roads are to be closed will require site-specific NEPA documentation and public involvement. LB/CMM

Nonsystem Roads

COMMENTS: Revegetate all nonsystem roads, in accordance with NFMA, within ten years. (CROSS REFERENCE: Access, Process)

1361

RESPONSE: Many of the nonsystem roads are designed for re-establishment of vegetative cover and will conform with NFMA requirements within ten years.

ACCESS - TIME FRAME

Some of the nonsystem roads will require special treatment which will be directed by the site-specific NEPA document. Not all roads need to be revegetated. If access is removed from roads, many will revegetate naturally. The Revised Plan provides for restricting or reclaiming roads not needed for future management as determined in site-specific analysis, at the end of project use. LB/CMM

COMMENTS: Nonsystem roads must be closed within ten years of their creation, or they must be added to the road inventory. Publicize a list of nonsystem roads and what decisions the Targhee has regarding them. (CROSS REFERENCE: Access, Analysis Process)
1273b

RESPONSE: NFMA requires all roads to be planned and designed to re-establish vegetative cover on the disturbed area within a reasonable period of time, not to exceed ten years after the termination of a contract, lease or permit, unless the road is determined necessary as a permanent addition to the National Forest Transportation System. The Revised Plan designates the open roads. How the other roads will be closed will be determined in a site-specific analysis. The public will be notified of the road closure through the analysis process. LB/CMM

COMMENTS: Revegetate all logging roads within a ten year time frame.
1347

RESPONSE: All logging contracts require that logging roads are revegetated at the completion of the timber sale if they are no longer needed and are removed from system roads. LB

ACCESS - TRAILS

COMMENTS: Oppose the proposed trail restrictions or closures in Alternative 3M and support more non-motorized and motorized trail access to the Forest. Concerned about having less trail access to enjoy the outdoor experience. Increase trail numbers for the public, particularly to please mountain bike users. (CROSS REFERENCE: Access, Road & Trail; Access, Site Specifics)
17, 25, 35, 36, 49, 53, 54, 63, 156, 182, 211, 262, 265, 285, 286,
288, 290, 306, 310, 313, 315, 324, 330, 367, 375, 413, 477, 488, 514,
629, 640, 659, 669, 697, 728, 1202, 1240, 1241, 1259, 1314, 1332,
1339, 1376

RESPONSE: The Revised Plan has many opportunities for both motorized trail use and non-motorized. Trail closures are necessary to protect various resources including wildlife habitat, water quality and fisheries. During implementation trails may be reconstructed to accommodate various uses. Most trails are open to mountain bikes. CC/AM/JR

COMMENTS: A better trail design would prevent erosion and maximize protective cover between wildlife and OHVs.
629, 1365

ACCESS - TRAILS

RESPONSE: During implementation of the Revised Plan, it is likely numerous trails, particularly in the area of the Big Hole Mountains, could be reconstructed to a better design. The Revised Plan has an objective to assess 5-10% of open trails on a yearly basis to determine rehabilitation needs. CC

COMMENTS: Define what "resource" means on Page III-60 of the DFPR in the sentence, "Trails are maintained to protect the resource."

1277

RESPONSE: Resource refers to wilderness values, since that is the prescription area involved. LAB

COMMENTS: Better address the Continental Divide National Scenic Trail. The motorized vehicle restrictions to that trail system applies to mechanized bikes as well. However, the Plan as written fails to provide the outdoor experience sought by hikers and horseman and recognized as a goal in the Trail Act. At a minimum, the Plan should identify an acceptable level of use and then provide monitoring and evaluation.

345

RESPONSE: Direction is not duplicated for management of the Continental Divide Trail as that was included in a separate environmental assessment completed in cooperation with the Northern Region of the Forest Service. Our intent is to complete construction of the few remaining segments of the trail on the Targhee National Forest as soon as funds permit. For example, a segment in Targhee Creek was completed in cooperation with the Gallatin National Forest in 1996. Directions for management of the experience along the Trail is provided in the specific management descriptions.

The Revised Plan does not address acceptable level of use. However, it does distinguish between which trails are open for non-motorized or motorized uses. Five to ten percent of the trails will be assessed to determine if any rehabilitation needs are necessary and trail use will be monitored during implementation of the Revised Plan. LAB/JR

COMMENTS: Develop a trail system which designates specific trails for specific trail users (bikes, OHV, 4-wheelers, hikers, horseback).

5, 12, 345, 1457

RESPONSE: In general, our policy is to encourage multiple use of trails. That way, as many people as possible can enjoy the trail experience. In practice funds do not permit construction of separate trails for everyone. However, such management prescriptions in the Revised Plan provides access tables which lists whether trails are open to motorized use. In some areas motorized use is allowed and in others it is not. This may help some people to select a particular trail for their recreation needs. In particularly high use or conflict areas, trail users are separated. For example, the Palisades Creek Trail is one trail that only allows hikers, non-motorized bikes and horseback use. Such designations will be done on a project-specific basis when the need exists. LAB/JR

ACCESS - TRAILS

COMMENTS: Restrictions on access should be based on an evaluation of impacts or damage to resources by each user group.

351

RESPONSE: We agree. For details of the analysis for the Revised Plan, refer to Process Paper D in the Supervisor's Office and the Access Appendix in the FEIS. JR

COMMENTS: Prefer dispersed OHV trail use; support better trail maintenance; adopt some trail rules like other National Forests have; trail numbers are adequate; share trails with various user groups; and, support closing trails to add in prevention of non-motorized illegal use.

F-G-1(475), 7, 24, 262, 306, 313, 371, 525, 725

RESPONSE: We agree. Thank you for your comments. The Forest improved the trails management guidelines in the Forestwide goals, objectives, and standards and guidelines. We hope to devote increased attention to trails as we implement the Revised Plan. LAB/JR

COMMENTS: Restrict motorized access to the maximum extent.

631

RESPONSE: The Forest restricted motorized access to the extent needed to protect resources and provide a variety of recreational experiences and other uses as required by the Multiple Use Act. The net effect was to reduce motorized access. Fewer roads and trails are open to motorized use in the Revised Plan than currently. Only 7 percent of the Forest is open to summer cross-country motorized use in the Revised Plan. LAB/AM/JR

ACCESS - USER CONFLICTS

COMMENTS: Off-highway motorized recreational activity and non-motorized recreational activity occurring in the same areas pose safety hazards. Also, the noise and air pollution of those vehicles displaces non-motorized users.

1365

RESPONSE: This is acknowledged in the EIS analysis documentation. OHV use is limited in the Revised Plan to designated trails except for seven percent of the Forest where summer cross-country travel is permitted. Safety is important in recreational activities. Education of users is also important in developing courtesies and safety along the trail. There are many prescriptions where non-motorized travel can take place, just as there are many prescriptions where motorized travel is acceptable on designated routes. LAB/CMM

ACCESS - WILDERNESS, ROADLESS, RESEARCH NATURAL AREA, & WILDERNESS STUDY AREA

Access In RNAs

COMMENTS: Do not allow motorized use, including mountain bikes, within Research Natural Areas; however, non-vehicular recreation should be allowed except when the activity threatens RNAs.

ACCESS - WILDERNESS, ROADLESS, RESEARCH NATURAL AREA, & WILDERNESS STUDY AREA

For recreation, utilize access restrictions or closures under CFR Subpart B. (CROSS REFERENCE: RNA)

612

RESPONSE: Motorized use is not prohibited by law in Research Natural Areas. Motorized use is allowed in the Revised Plan on designated routes in some RNAs. This use is allowed to continue where it does not compromise RNA objectives. Similarly, other human recreation use is allowed where it does not compromise RNA objectives. JR

Access In Wilderness Study Areas (Palisades)

COMMENTS: There should be no motorized vehicle use in WSAs; support winter access only. (CROSS REFERENCE: Wilderness)
150, 161, 171, 189, 206, 280, 396, 443, 491, 611, 643, 666, 692, 739, 1245, 1270, 1273b, 1365, 1381, 1401

By allowing any motorized use in Wilderness Study Areas, future designation to wilderness will be difficult. (CROSS REFERENCE: Wilderness)
157, 174, 209, 242, 252, 273, 278, 280, 392, 632, 643, 727, 1206, 1270, 1276, 1388

RESPONSE: The Wyoming Wilderness Act of 1984 states that motorized access is allowed on designated routes only in this Wilderness Study Area. These routes are located in the Indian Creek Area. The Revised Plan follows the direction of the Wilderness Study Area (WSA) for this area and prohibits motorized vehicles over 50" in width while allowing OHVs under 50" wide on designated routes only. The Act also states snowmobiling shall continue to be allowed in the same manner and degree as was occurring prior to the date of the enactment of the Act in the Palisades WSA. Therefore, snowmachine use is allowed in the Wilderness Study Area. This will not preclude designation as wilderness if the Congress so chooses. BBP/LAB/JR

COMMENTS: Clarify and define the statement for WSAs: "Roads are allowed only to the extent they already exist." Explain specifically: if roads are closed or open; if roads are sources of sediment; if roads then open loop roads; is obliteration scheduled for closed roads; and, if "already exist," are they on final road inventory. (CROSS REFERENCE: Wilderness)
1273b, 1361

RESPONSE: The Wyoming Wilderness Act limits roads to those that currently exist. No plans exist or are proposed in the Revised Plan which allow new road construction in the WSA. Road closures are shown in the travel plan; those identified to be open are shown on the Revised Plan inventory; those not identified to remain open will be closed. All roads differ as to the extent they cause sediment. This is evaluated in the Revised Plan and the results are shown in the travel plan. BBP/LAB

Access In Wilderness

COMMENTS: Support motorized use in wilderness or recommended wilderness.
F-G-2(2), 22, 28, 30, 42, 55, 63, 270, 280, 311, 344, 358, 366, 367, 381, 385, 386, 413, 476, 638, 645, 664, 702, 737, 738, 1183, 1332, 1375

ACCESS - WILDERNESS, ROADLESS, RESEARCH NATURAL AREA, & WILDERNESS STUDY AREA

Oppose motorized use in these areas. (CROSS REFERENCE: Wilderness)
F-B(4), F-G-1(475), F-H(8), F-J(3), 34, 73, 150, 157, 161, 162, 165,
168, 170, 171, 174, 175, 179, 180, 185, 189, 201, 206, 209, 212, 213,
226, 242, 273, 278, 280, 331, 351, 376, 377, 382, 392, 396, 398, 400,
405, 424, 439, 441, 444, 491, 516, 607, 609, 611, 613, 620, 622, 632,
636, 640, 643, 644, 650, 653, 656, 662, 666, 690, 695, 725, 727, 731,
739, 1194, 1202, 1205, 1206, 1243, 1270, 1273b, 1275, 1276, 1313,
1327, 1330, 1360, 1361, 1365, 1382, 1388, 1395, 1443, 1458

RESPONSE: The areas already designated as wilderness by the Congress are closed to motorized and mechanical access by law. In recommended wilderness, Forest Service responsibility is to retain the wilderness character until the Congress makes a decision about whether to add them to the National Wilderness System. Motorized access is provided in some recommended areas in the Revised Plan. JR

Access In Roadless Areas

COMMENTS: Roadless areas should exclude all motorized vehicles, and be managed for trails not roads. (CROSS REFERENCE: Wilderness)
382, 396, 400, 408, 430, 491, 492, 611, 622, 643, 695, 1202, 1365

RESPONSE: No specific legal requirement prohibits motorized use in roadless areas. In the Revised Plan the vast majority of the roadless country will remain roadless throughout the life of this Plan. The Revised Plan provides motorized access on trails in several roadless areas to provide quality recreation opportunities for motorized users. JR

COMMENTS: Motorized use in roadless areas recommended for wilderness is incompatible and contrary to the intent of management prescriptions. Existing roads should be scheduled for closure and eventual obliteration. (CROSS REFERENCE: Wilderness)
643, 1273b

RESPONSE: Forest Service responsibility in roadless areas recommended for wilderness in the Revised Plan is to protect the wilderness character of the area until Congress makes a decision whether to designate the area as part of the National Wilderness System. Motorized use on trails or snowmobile use is not prohibited unless the Congress makes that determination. Management direction in the Revised Plan protects the wilderness character of these areas pending a decision by the Congress. JR

Access In Special Management Areas

COMMENTS: Objects to new road construction in any special management areas because fragmentation is a problem that needs to be reduced.
1369

RESPONSE: Fragmentation is addressed in the Revised Plan. The open road and open motorized trail density standard is a result of this analysis. (See Process Paper D available in the Supervisor's Office and the Access Appendix

ACCESS - WILDERNESS, ROADLESS, RESEARCH NATURAL AREA, & WILDERNESS STUDY AREA

in the FEIS for more details). The net result is that fragmentation is reduced in the Revised Plan. Collectively, the OROMTRD Standards result in a reduction of roads and trails to motorized use. Only 7 percent of the Forest remains open to summer cross-country motorized travel. Any new construction is included in the open road density figure for the particular prescription area and will conform to the OROMTRD standard. Site-specific analysis may also address fragmentation prior to project implementation for any new road construction project. BBP/JR

ACCESS - NOXIOUS WEEDS

COMMENTS: Deal with weed control through road access. Limiting access will help reduce distribution of new weed infestations; however, completely closing roads will make it difficult to control existing weed infestation problems. (CROSS REFERENCE: Range, Noxious Weeds)

432

RESPONSE: Motorized activity can aid in the spread of noxious weeds, but this is dependent on many factors such as season-of-use, species of plants, suitable opportunities for establishment, or duration of use. It is impossible to calculate how much road use causes the spread of noxious weeds. The Forest will use some roads for administrative access to handle some noxious weed problems. LAB/WG

ACCESS - WILDLIFE

For issues about elk and access; grizzly bear and access; wildlife general and access, see wildlife, elk; wildlife, grizzly bear; and wildlife, access.

Big Game Winter Range and Access

COMMENTS: Protect big game winter range through the use of road closure and restrictions on motorized access, both cross-country and road/trail. Support access restrictions to minimize impacts of winter recreation; to decrease development of adjacent private lands; and to protect crucial big game winter range. Manage cross-country skiing in these areas. Use Wyoming Game and Fish Department's "crucial" designations. Keep winter access at current levels.

7, 9, 150, 185, 189, 195, 201, 206, 213, 227, 265, 339, 359, 389, 645, 669, 1183, 1202, 1247, 1311, 1316, 1345, 1456

RESPONSE: The winter range boundaries in the FEIS were cooperatively determined by the Targhee and State fish and game agencies. Motorized access is limited in big game winter range to designated routes year-round. CC

COMMENTS: Prescription 2.7 should be changed to big game winter range, to include moose and bighorn sheep.

1247

RESPONSE: This management prescription is developed primarily for elk security while also allowing for other multiple uses. The habitat conditions provided by this prescription are suitable for a variety of other wildlife species, including big game animals like moose and deer. Bighorn sheep are

ACCESS - WILDLIFE

also protected through other prescriptions for roadless and wilderness areas where they are generally found. MO/AM

Access Disturbance to Wildlife

COMMENTS: Bird populations and their habitats are negatively impacted by cars on roads because of noise, vibration, visual stimuli and exhaust.

1367b

RESPONSE: We agree that bird populations and their habitats can be negatively impacted by cars on roads. Road density standards for elk and grizzly will reduce the number of roads open for motorized use thus indirectly benefitting other wildlife such as bird populations. AM

COMMENTS: Change DEIS language: "Where possible, open road density should be zero," to "in goshawk nesting and post-fledging areas it will be zero."

1273b

RESPONSE: On a forestwide basis, the average open road and open motorized trail density is less than two miles per square mile. This change was not made in the Revised Plan because in some cases open roads will be needed in goshawk nesting and post-fledging areas. CC

General

COMMENTS: Oppose restrictions on access because there is no evidence to support the belief that motorized traffic effects wildlife any more than non-motorized. Closing the forest to public use is not the answer for protecting game animals.

28, 226, 313, 488, 1320, 1332

RESPONSE: There is research which shows that higher road density results in less elk security and higher elk vulnerability. Process Paper D contains numerous citations. Most of the Forest remains open and accessible through motorized use on designated routes. CC

COMMENTS: Close big game areas to OHVs during hunting seasons.

157, 174, 181, 204, 278, 357, 511, 1270

RESPONSE: Only 7% of the Forest is open to summer cross-country OHV use. The game retrieval provision was dropped from the Final Revised Plan due to concerns regarding enforcement, administration and monitoring and potential impacts to other resources. CC

COMMENTS: Support closing roads, trails and off-road traffic to protect wildlife. Prohibit motorized access if it conflicts with a goal of providing and protecting big game habitat.

136, 162, 168, 226, 242, 271, 389, 390, 437, 448, 634, 652, 655, 658, 735, 1313, 1361, 1367b, 1466

ACCESS - WILDLIFE

RESPONSE: Only 7% of the Forest is open to summer cross-country OHV use. The Forest is closing some roads and trails to protect wildlife and maintain habitat. CC

COMMENTS: Recommend allowable summer motorized route densities \leq mile per square mile for areas providing crucial winter and summer big game habitat.
766

RESPONSE: Open motorized road and trail density is two miles per square mile in winter range and densities are 1.25 miles per square mile or less in summer range. CC

ALTERNATIVES

Alternative 1 - Support

COMMENTS: Prefer the previous management plan (Alt. 1); prefer Alternative 1 for the level of access or the amount of wilderness proposed. Alternative 1 has an acceptable Bear Management plan; Alt. 1 is better for elk.

F-G2 (2), 6, 24, 25, 30, 31, 33, 39, 40, 41, 43, 44, 46, 47, 48, 49, 50, 52, 53, 54, 265, 293, 316, 319, 1252, 1357

RESPONSE: Your comments were noted and considered. AS

Alternative 1 - Non-Support

COMMENTS: Do not support Alternative 1 because the access is too high; not adequate for elk security; unsustainable ASQ; negative impacts to wildlife from access; Ecosystem Management is impossible under this alternative; and lack of information on ASQ in the alternative.

38, 41, 61, 166, 457, 658, 664, 690, 731, 1333

RESPONSE: The Forest acknowledges your comments. After examining all alternatives and public comments, the leadership team chose to remain with the revised, middle-of-the-road, Alternative 3M. For a thorough explanation of the rationale for selecting Alternative 3M, see the record of decision. AM

Alternative 2 - Support

COMMENTS: Supports Alternative 2 because of access concerns: does not want area, slope, or date restrictions on access and other alternatives restrict favorite areas for recreation access, such as the Island Park area. Alternative 2 keeps the Forest open to the public; it permits access for firewood gathering. Alternative 2 might help open roads closed in the past five years.

7, 18, 21, 22, 28, 29, 31, 33, 35, 36, 47, 50, 51, 53, 56, 63, 67, 297, 300, 306, 316, 330, 346, 363, 413, 488, 529, 607, 635, 646, 717, 1205, 1259

Alternative 2 provides a better balance between commodity use and resource protection; provides better for the economy of local communities; does not detract from income and way of life; and it will not harm the livestock industry.

F-A(344), 369, 378, 454, 464, 478, 1240, 1248, 1341, 1386

Alternative 2 meets resource and wildlife protection goals while maintaining an acceptable level of harvest; it is logger friendly; it would clear out areas of extreme deadfall and density; and it is sustainable. Supports Alternative 2 because it doesn't bow to environmentalists or misuse NEPA and ESA; it addresses concerns of the local people; it considers people as well as wildlife, or doesn't favor wildlife over people; it supports the needs of the innocent; favors the human factor; and is the most fair for the most people. It offers some protection to grizzly bears but with a larger degree of use; or grizzly bears are not important.

Supports Alternative 2 because it is a better compromise; a better choice for the ecosystem; better for forest health, especially fire danger. Alternative 2 is better for range improvements and AUMs should not be reduced. Alternative 2 is less restrictive and meets resource objectives;

ALTERNATIVES

supports recreation, local communities, productive use of resources, and protection of resources; is less disagreeable; is the needed direction; allows enjoyment of Idaho resources; reflects the needs of the Forest; creates no more wilderness areas; favors sportsmen; is better for elk herds because elk populations are high. Agree with the proposals in Alternative 2 for wilderness, logging, wildlife, grizzly bear, elk, grazing, and riparian areas. Alternative 2 is the better alternative for multiple-use. It is also the alternative supported by local communities according to a referendum held in six local counties.

Alternative 2 is a better option; things will get worse at a slower rate with Alternative 2; too much change is bad therefore choose Alternative 2.

Letter numbers that Support Alternative 2:

F-A(344), F-C(13), F-F(6), F-I(4), F-M(5), F-N(6), F-O(4), F-P(2), F-Q(447), 1, 2, 4, 7, 8, 9, 13, 14, 15, 17, 18, 20, 21, 22, 25, 27, 28, 29, 30, 31, 32, 33, 35, 36, 37, 39, 44, 46, 47, 50, 51, 52, 53, 54, 55, 56, 57, 59, 60, 63, 67, 69, 70, 71, 72, 75, 89, 90, 97, 98, 135, 160, 188, 198, 216, 220, 221, 222, 234, 235, 256, 272, 277, 284, 287, 288, 289, 290, 291, 292, 296, 297, 298, 300, 303, 306, 309, 315, 316, 323, 324, 330, 344, 346, 347, 348, 355, 358, 363, 367, 369, 371, 374, 375, 378, 380, 385, 386, 387, 388, 397, 403, 406, 413, 423, 425, 426, 429, 431, 432, 435, 436, 439, 446, 454, 462, 464, 465, 466, 469, 472, 473, 474, 475, 476, 478, 480, 485, 488, 495, 497, 498, 499, 500, 509, 513, 514, 515, 517, 522, 523, 524, 528, 614, 626a, 628a, 629a, 633, 635, 641, 646, 648, 660, 665, 687, 688, 689, 693, 700, 702, 703, 709, 714, 716, 717, 718, 720, 724, 729, 733, 734, 737, 767, 1176b, 1179, 1182, 1189, 1190, 1191, 1193, 1198, 1200, 1202, 1205, 1239, 1240, 1248, 1253, 1255, 1259, 1260, 1265, 1306, 1308, 1309, 1310, 1315, 1317, 1320, 1321, 1323, 1329, 1332, 1334, 1335, 1239, 1341, 1346, 1350, 1353, 1363, 1372, 1375, 1376, 1377, 1378, 1386, 1389, 1390, 1448b, 1449

RESPONSE: The Forest acknowledges your comments. After examining all alternatives and public comments, the leadership team chose to remain with the revised, middle-to-the-road, Alternative 3M. For a thorough explanation of the rationale for selecting Alternative 3M, see the record of decision. AM

Citizens for a User Friendly Forest (CUFF) adopted Alternative 2, but recommend the following changes in an "Alternative 2M"

COMMENTS: Change Alternative 2 and create an Alternative 2M per the recommendation of the Citizens for a User Friendly Forest (CUFF) that would: amend summer OHV map for alternative per the enclosed map; remove the date restriction on snowmobile use; increase ASQ to 20 MMBF with >12 MMBF live and 30-50% lodgepole pine; change 20% nonstocked standard to 45%; change the mature percent stand from 40 to 30 percent; define Hydrologic Disturbance at less than 20 years; allow sustained harvest in roadless areas and no Non Interchangeable Component; allow harvest in all Bear Management Units with a Non Interchangeable Component in Situation 1; if 20 MMBF is not possible, look at departure; add 2 areas in Caribou to suitable timber base (on enclosed map); change large 6.2 (b) in Caribou to 6.1 (a); delete forestwide Guideline

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restricting Off Highway Vehicle use on slopes 25-40%; drop Targhee and Robinson Creeks from Wild and Scenic River eligibility; reduce the number of live trees per acre from 25 to 10; and change 5.2.4 (a) to allow cross-country travel from 6/15 to just prior to big game rifle season.

767

RESPONSE: The Forest considered but dismissed this proposal from detailed study for the reasons documented in Chapter II of the FEIS. A few of the key components of this proposed alternative are already depicted by Alternative 2 with a recalculated ASQ at 20 MMBF. Alternative 2M is therefore not substantially different from the maximum commodity production and motorized access alternative presented in the DEIS under the Alternatives that were considered but dismissed from detailed study. In addition, most of the constraint changes recommended by CUFF (see the following comments) are not advisable because they are outside the Desired Future Conditions (DFC) and Purpose and Need outlined in the EIS. Below are responses to each specific change requested by CUFF. AS

COMMENTS: Amend summer OHV map for Alt 2 per enclosed map.

767

RESPONSE: The Forest decided not to adopt the additional open motorized roads and trails proposed for alternative 2M because it would increase road densities to a level above the highest density sideboards. Levels of open motorized use above Alternative 2 are contrary to Desired Future Condition (DFC) for "habitat conditions contributing toward recovery of Threatened and Endangered (T&E) Sensitive wildlife." Also the Need for Change identifies the "need to meet goals for improving elk habitat and reduce human activities in grizzly bear habitat". Therefore, the Forest decided that increasing motorized access to levels identified for Alternative 2M would not meet the Purpose and Need as described in the DEIS. AS

COMMENT: Remove date restrictions on snowmobile use prescription 2.4, 2.5, 3.2c, 3.2d, 3.2g, and 5.4c in grizzly Bear Management Units.

767

RESPONSE: The Forest changed the December 15 date restriction to Thanksgiving weekend on all Districts except Palisades for cross-country snowmachine travel, and changed the April 1 date to June 1 in the Plan and FEIS. The April 1 date is not needed to protect denning bears. However, the Forest added a management direction guideline to the Forestwide Standard & Guidelines to allow site-specific closures if necessary to protect bears. The Thanksgiving date is intended as grizzly protection. Before Thanksgiving, most cross-country snowmachine use is limited due to minimal snow cover. This date also assists Fish and Game from having big game chased by snowmobiles during some of the late hunts. AS

COMMENT: Increase ASQ to 20MMBF with >12MMBF live & 30-50% lodgepole pine.

767

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RESPONSE: ASQ was recalculated in the alternatives. New Forplan runs indicate it is theoretically possible to achieve 20MMBF with alternative 2. Therefore, the Forest does not believe another alternative (proposed 2M) is needed to evaluate this option. This recalculation meets constraint needs to the fullest extent possible from non-ASQ lands. Doing this frees up more ASQ land for timber harvest scheduling. The prior formulation met constraints proportionally from both ASQ and non-ASQ lands. AS

COMMENT: Change 20% nonstocked standard to 45%.

767

RESPONSE: The Forest did not adopt this change because 45% nonstocked would violate the standards and guidelines established to meet the Desired Future Conditions outlined for sustainability, biodiversity, and ecosystem health as described in the Purpose and Need section of the FEIS. AS

COMMENT: Change % mature stand from 40% to 30%.

767

RESPONSE: The Forest has not made this change because 40% mature is needed to maintain habitat conditions for goshawk and other species and to meet the overall Desired Future Conditions of sustainability, biodiversity, and ecosystem health as described in the Purpose and Need section of the FEIS. A change in percent mature is not needed to reach a 20MMBF ASQ. AS

COMMENT: Define hydrologic disturbance in timber stands less than 20 years of age.

767

RESPONSE: The Forest updated the DEIS to include the following definition which is in the Glossary under the term "hydrologically recovered condition": "Vegetative life form where natural canopy coverage is achieved and subsequent streamflow quantities and character (timing and amount) reflect more natural conditions. Within the forested ecosystem this equates roughly with the sapling/early pole life form. This life form is achieved at approximately 20 to 30 years of age, depending upon cover type and inherent site productivity potentials."

COMMENT: Allow sustained harvest in roadless areas and no non-interchangeable component (NIC).

767

RESPONSE: A Forplan analysis was done on this basis with a NIC constraint and the Forest decided to change the sustainable harvest for alternatives 1-5. Not every roadless area contains prescriptions with ASQ. AS

COMMENT: Allow harvest in all bear management units (BMU) with NIC in Situation 1 only.

767

RESPONSE: In Alternative 2, the Forest did allow harvest in all BMU's with the exception of the Henry's Lake subunit #2 Two-Top. Harvest in less than 100%

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of the BMU's was considered essential to meet the stated Desired Future Condition for grizzly bear. The Forest did consider an alternative 2 that prescribed a significant part of the BMU situation 2 as non-NIC. AS

COMMENT: If 20MMBF isn't possible, look at departure.

767

RESPONSE: The Forest has not given any further consideration to this proposal, as it would represent the same situation (departure) that it has been in for the last 10 years. This situation resulted in the Need for Change and Desired Future Conditions listed in the Purpose and Need for FEIS. One of the key Desired Future Conditions listed is: "commodity production, such as timber, firewood, mining, and others are conducted at sustainable levels". Therefore, this proposal would not meet the Purpose and Need of the FEIS.

COMMENT: Add two areas, Black Mountain and Fall Creek in Caribou, to the suitable timber base in maps.

767

RESPONSE: The Forest did show the Black Mountain area in the 5.4 (c) prescription in alternative 3M which is a timber base prescription. However, in alternative 2, this area is in prescription 3.2 (f) non-timber base. This appears to be the reverse of the Forest's intent for the alternative design trend. The Black Mountain area appears suitable for harvest, so the Forest corrected this in Alternatives 1 through 3, but not in Alternative 3M through 6. However, the Fall Creek area does not have enough contiguous stands of timber to justify placing it in an ASQ prescription.

There would be significant adverse effects on wildlife winter range and unstable soils from development of roads and harvest units. These consequences are contrary to the Desired Future Conditions and Need For Change outlined in the Purpose and Need section of the DEIS i.e., "need to balance timber harvest with wildlife needs"; "need to meet goals for improving elk habitat"; and "a system of trails and support facilities exist which are compatible with resource capabilities". AS

COMMENT: Change large 6.1 (b) in Caribou to 6.1 (a).

767

RESPONSE: District and Forest staff reanalyzed this area and determined that such a change would be detrimental to unstable soils, wildlife spring/fall/winter range, and would not meet the Desired Future Conditions or the Purpose and Need. The 6.1 (a) prescription would allow cross-country travel to access the area. AS

COMMENT: Delete forestwide guideline restricting OHV use on slopes 25-40%.

767

RESPONSE: The guideline simply allows us to implement travel restrictions if soil erosion factors warrant them. It is not a blanket restriction. Therefore the Forest determines there is no need for a change. AS

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COMMENT: Drop Targhee and Robinson Creeks from Wild & Scenic River eligibility.

767

RESPONSE: The Forest did not adopt these changes. Forest policy direction is clear that all eligible streams must be protected in all alternatives until such time as suitability studies are completed. Since these streams were determined to be eligible in our final inventory, and since suitability studies are not being done as part of the plan revision analysis, there is no option to delete any of the eligible streams. AS

COMMENT: Reduce the number of live trees/ac from 25 to 10.

767

RESPONSE: No change is needed on our analysis. In areas where harvesting is allowed, the Forest is requiring 10 to 15 trees/acre be left for habitat. This is clarified in the prescriptions Standards and Guidelines. The Table in forestwide Standards and Guidelines shows varying percent of habitat capability. None of the prescriptions used actually require more than 10-15 trees/acre except for goshawk territories. Some goshawk areas require 80% (20 trees/ac) to 100% (25 trees/ac). AS

COMMENT: Change 5.1.4 (a) to allow cross-country travel from 6/15 to just prior to big game rifle season.

767

RESPONSE: The Forest changed the footnote to the applicable access tables to indicate that summer cross-country travel is allowed up to October 1. This was done to simplify administration and travel map preparation and improve public understanding and compliance. AS

Alternative 2 - Non Support

COMMENTS: Oppose Alternative 2 or the CUFF version of Alternative 2 because: it is a bad, or "unspeakably wrong" approach; it will contribute to resource damage from over-use; it is excessive resource extraction; it allows too much access; it will have negative impacts on wildlife; it does not consider grazing impacts, or elk and grizzly bear security; it is inconsistent with wilderness proposals on other Forests; it makes the forest fail in its obligation to fully protect the land; the ASQ in Alternative 2 is unsustainable; ecosystem management would not be possible; it is not balanced; the CUFF group has been misleading the public; the vote CUFF presented to local communities was inaccurate and misinformed.

46, 47, 61, 259, 357, 391, 413, 444, 496, 654, 658, 664, 667, 690, 1183, 1331, 1333, 1365, 1381

Change Alternative 2M; acknowledge that helicopter skiing is a past and current use on the Forest; open more trails to summer ORV use; and add more roadless areas; and recommend Winegar Hole and Italian Peaks as wilderness; manage some other areas as back country.

Clarify or change the DEIS regarding Alternative 2, such as: make the grazing write-up consistent with the tables; clarify the meaning of the NIC component of 237,137 acres listed in the DEIS for Alternative 2; change

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the large area on 6.1(B) in Caribou to 6.1(A), as was pointed out in a Cuff meeting and map.

53, 228, 292, 347, 413, 687, 693, 1373

RESPONSE: The Forest acknowledges your comments. Responses to specific recommendations for changes can be found in the subject area in Appendix A. After examining all alternatives and public comments, the leadership team chose to remain with the revised, middle-of-the-road Alternative 3M. For a thorough explanation of the rationale for selecting Alternative 3M, see the Record of Decision. AM

Alternative 3 Comment

COMMENTS: Need to show that Alternative 3 would eliminate much cross-country travel, not just 3M-6.

629a

RESPONSE: Page IV-39 of the DEIS clearly indicates that cross-country access would decrease from present levels in all alternatives and states: "Much of the cross-country use that is presently occurring would be eliminated by Alternatives 3-6." AS

Support 3M

General

COMMENTS: Supports Alternative 3M because it is the best choice, a significant improvement over the previous management plan, and superior to other alternatives. Approve of the shift in management from resource extraction to one that recognizes recreational and wildlife values. 3M is balanced or a good compromise between resource use and resource protection. 3M changes the course of forest management to fit current ecological, social, and economic needs; it is reasonable politically; it balances many perspectives; it doesn't change things too much; it is fair; it meets the interests of the local public; it supports multiple use; it at least takes some action. It protects the ecosystem; is a good start for ecosystem management; it proposes an adequate buffer zone; and it is the only alternative that may lead the forest to biological health.

7, 22, 23, 25, 27, 29, 30, 31, 37, 39, 40, 53, 62, 143, 156, 161, 173, 200, 211, 212, 215, 227, 242, 263, 266, 293, 305, 317, 339, 340, 341, 354, 357, 361, 370, 373, 413, 437, 453, 459, 479, 496, 502, 527, 610, 634, 636, 654, 659, 662, 664, 667, 669, 690, 708, 727, 730, 731, 1185, 1196, 1239, 1242, 1258, 1269, 1273b, 1277, 1311, 1312, 1314, 1322, 1333, 1348, 1360, 1367, 1381, 1392, 1399, 1400

Change 3M to include revisions of language or prescriptions in the Draft Forest Plan Revision; correct editorial or factual errors. Recommend more wilderness in 3M. Recommend less wilderness in 3M. Clarify how much timber will be cut in 3M. Restrict grazing allotments in 3M. (Note: Many comments which refer to "the plan," are addressed in the comments and responses section of the Revised Forest Plan.)

The preferred plan (3M) is acceptable but: requires better scientific foundation or more references/citations; the forest should be managed to be healthy, viable, and diverse; the needs and desires of the

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public must be fully addressed; 3M needs more restrictions. Prioritize goals and objectives in 3M so it will be clear how funding will effect implementation; clarify whether timber, wildlife, or recreation in 3M has priority. Combine the best attributes of Alternative 2 and 3; and adopt provisions for cutthroat trout outlined in Alternative 4.

Show how the preferred plan 3M will be implemented with inadequate funding and personpower. Give more attention to restoring degraded habitat. Explain how alternative 3M meets the goal of sustainability and why resource protection appears incompatible with timber harvest and providing jobs. Disclose publicly what quality of timber is to be logged in 3M. Explicitly address protection of riparian areas in 3M; address roadless areas in 3M; and describe management direction for Grand Targhee Ski area in Alternative 3M.

21, 159, 164, 200, 265, 282, 308, 340, 354, 362, 393, 444, 491, 625, 632, 637, 643, 658, 690, 695, 1206, 1249, 1276, 1307, 1324, 1360, 1364, 1365, 1368

Supports the limits 3M proposes on access, such as a good balance between human wants and resource protection; allow 1988 miles of open roads; 3M's closures are reasonable. 3M allows good amounts of cross-country, summer, and winter snowmobile access; and provides a generous amount of groomed trails. 3M does a good job of keeping access limited to designated roads and trails; doesn't restrict traditional horse use and access; and provides adequate trail access for backpackers. 3M is good because motorized access is not in the same management niche; approve of the amount of access in 3M on Sheep Creek and Red Rock Pass Roads.

22, 31, 37, 39, 40, 42, 44, 45, 49, 50, 52, 55, 143, 161, 193, 227, 325, 354, 359, 373, 526, 610, 645, 645a, 659, 662, 668, 690, 734, 735, 1185, 1245, 1250, 1257, 1269, 1360, 1392, 1399, 1402

Other reasons provided for support of 3M are: it provides adequate consideration of grazing, timber, riparian areas, wilderness, and wildlife; it strikes a good grazing level; it reduces grazing; it phases sheep out of grizzly bear habitat; permittees may use historic roads to maintain range; It protects rivers, streams, riparian areas, and aquatic influence zones (AIZ); it restricts riparian grazing. 3M is a good plan from the perspective of the USDA Sheep Experimental Station.

3M's ASQ level is acceptable or sustainable; 3M should provide priority on smaller cuts for local operators, which would improve watershed; the Forest Service should enforce restrictions and not give in to timber interests in 3M.

3M has good wilderness and wild & scenic river recommendations; other alternatives have inadequate recommendations.

3M does a good job of protecting wildlife and habitat; 3M protects elk, grizzly bears, and wolverines; 3M doesn't increase grizzly bear protection; 3M allows elk herds to build up.

3M restores fishing and hunting opportunities; 3M provides adequately for recreation.

Letter numbers supporting 3M:

11, 21, 22, 24, 26, 31, 32, 35, 36, 37, 45, 49, 51, 53, 54, 143, 181, 182, 193, 211, 228, 258, 325, 339, 351, 354, 359, 362, 370, 432, 479, 526, 610, 615, 632, 645, 645a, 658, 662, 690, 719, 731, 1180, 1185, 1226, 1245, 1250, 1269, 1276, 1311, 1324, 1348, 1360, 1368, 1374, 1392, 1398

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RESPONSE: The Forest acknowledges your comments. After examining all alternatives and public comments, the leadership team chose to remain with the revised, middle-of-the-road, Alternative 3M. For a thorough explanation of the rationale for selecting Alternative 3M, see the Record of Decision. AM

Oppose 3M

COMMENTS: Alternative 3M is too restrictive, excessive or discriminate against off-road users. It discriminates against the elderly, very young, and those physically unable to hike, cross-country ski, or ride horses. 3M is unfair; contrary to historic use; favors wealthy, out-of-area visitors; is unwise in the face of increasing population and demands; will lead to more concentrated use, more accidents, and negative impacts in unrestricted areas; is unnecessary for protecting resources or grizzly bears and other wildlife; will lead to illegal uses; or is unenforceable because of low budget. The statement in DEIS, Page IV-45, Lifestyles, on increase in recreation and associated income/employment is inconsistent with access restrictions in 3M. 3M restricts snowmobile use in specific areas; and extrapolates conclusions about road and trail use and impacts on wildlife with no evidence.

F-A(344), F-C(13), F-M(5), F-N(7), F-O(4), F-Q(447), 1, 20, 21, 26, 27, 28, 29, 30, 33, 34, 35, 39, 40, 44, 46, 50, 51, 53, 54, 55, 63, 98, 198, 202, 234, 258, 272, 288, 291, 292, 297, 303, 306, 309, 315, 319, 323, 342, 348, 352, 355, 367, 378, 380, 403, 406, 413, 425, 426, 431, 498, 499, 500, 505, 513, 517, 528, 629a, 633, 635, 645b, 646, 648, 661, 702, 713, 728, 1176b, 1182, 1185, 1187, 1190, 1198, 1239, 1240, 1252, 1253, 1255, 1256, 1262, 1264, 1316, 1317, 1320, 1321, 1330, 1335, 1341, 1348, 1355, 1359, 1363, 1365, 1367, 1375, 1390, 1447a

Oppose Alternative 3M because it allows too much access; has too high a road density for wildlife protection; lacks proper restrictions, does not apply appropriate OROMTRD standards; permits too much winter access; or allows game retrieval with ORVs. Concerned about the lack of enforcement and lack of funding for enforcement. (CROSS REFERENCE: Access-General, Access-Game Retrieval).

31, 143, 215, 340, 356, 615, 668, 713, 735, 1313, 1317, 1367, 1378

Oppose Alternative 3M because: of economics, especially to local communities; effects upon jobs, heliskiing, grazing and renewable resources which have not been adequately considered; and tax monies. Alternative 3M prohibits people from using forest products so they are left to rot or burn, then taxes people to control the catastrophic fires. Alternative 3M impacts multiple use industries through restrictions on motorized access and recreation (CROSS REFERENCE: Economics, Recreation.)

3, 152, 292, 296, 307, 311, 341, 393, 413, 472, 482, 499, 505, 642, 647, 689, 718, 1176b, 1189, 1248, 1325, 1341, 1377, 1378, 1448b

Alternative 3M limits timber sales and because the Forest can support a much greater harvest; less logging means an accumulation of older trees which are subject to catastrophic fires and insect infestations. Alternative 3M is a total abortion of scientific knowledge on how to manage lodgepole. Sustained yield would allow 3.5% of the forest to burn each year, which will add to air pollution and the constrained logging and let-burn policy violate the Clean Air Act, the Weeks Act of 1911, and the Clarke-McNary Act of 1924. 3M should allow comparisons of the social and economic effects

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due to the constraint on road development and timber harvest. (CROSS REFERENCE: Timber; EM).

F-A(344), 29, 34, 46, 55, 98, 176, 202, 275, 312, 341, 393, 406, 413, 432, 499, 688, 1198, 1256, 1335, 1341, 1390

Oppose 3M because it allows too much timber harvest; proposed levels are too great because of past excessive logging; doesn't limit logging enough; ASQ should be lowered to the level in Alternative 4, or to a sustainable level. 3M presents a biased assessment that less logging means greater fire risk since meteorology and weather are greater factors than fuels; 3M allows too much timber harvest in the Centennials; 3M's timber harvest is not tailored to address watershed needs; and there is too much room for unscheduled timber harvest under the guise of ecosystem management.

179, 325, 356, 668, 690, 1273b, 1313, 1330, 1364, 1370

Oppose 3M because of its recommendations for wilderness designation; too much wilderness is proposed. Since roadless areas are already being accessed and have historic uses, they cannot be designated as wilderness in 3M. A compromise between the wilderness proposals in Alternatives 3M and 2M would be superior. (CROSS REFERENCE: Wilderness)

F-C(13), F-O(4), 1, 20, 21, 28, 29, 34, 35, 36, 37, 39, 40, 52, 53, 54, 55, 314, 388, 413, 482, 513, 528, 648, 1182, 1187, 1190, 1198, 1265, 1335, 1363

Oppose 3M because it proposes too little wilderness, does not do enough to protect roadless areas, intends to log in roadless areas, and it should stipulate that roadless areas be off limits to development so they may qualify for wilderness.

31, 143, 165, 174, 242, 305, 317, 356, 610, 622, 652, 659, 664, 689, 1197, 1243, 1273b, 1337, 1367

Oppose Alternative 3M because it is not a sustainable plan; it fails to protect the ecosystem and resources for future generations; it doesn't go far enough to preserve currently pristine areas or restore damaged areas; it uses ecosystem management improperly and allows unsustainable timber harvest; it has patch size limits that are flawed or too large; or that 3M prefers timber harvest over sustainable activities; livestock grazing impacts have not been sufficiently considered; or that grazing must be controlled, reduced, or eliminated.

Other concerns are that stubble height, protection of riparian areas, water quality, cutthroat trout streams, aquatic resources, and wetland areas have not been thoroughly researched, discussed, and provided for. Nature can better manage itself better than humans can; 3M is a concession to extractive and recreation industries and is a compromise of scientific fact.

Alternative 3M fails to address the legacy of damage done by decades of excessive logging and roading, and doesn't protect resources, scenic values, or biodiversity. 3M has insufficient scientific basis or research in all components; it is too conservative and focuses on unnecessary goals; it is a weak compromise; and it is designed to pacify Fish & Game and user groups. Public interest is contrary to the Forest Service's mission to protect biodiversity. Multiple use in 3M leaves too much room for overuse and abuse.

3M causes concern for the spotted frog; 3M should separate bighorn and domestic sheep; fisheries, wildlife, migration corridors, winter range,

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and habitat need more protection than 3M offers. Research must detail existing conditions better and address habitat needs through standards and guidelines.

F-B(4), F-K(4), FS-7, 61, 136, 143, 161, 174, 184, 189, 242, 259, 266, 267, 275, 290, 292, 293, 308, 310, 325, 337, 351, 357, 496, 519, 622, 643, 652, 656, 659, 668, 690, 719, 735, 766, 1177, 1185, 1188, 1206, 1241, 1243, 1277, 1331, 1364, 1365, 1367

Alternative 3M does not apply the multiple use principle; it is in violation of sustained multiple use; it gives too much weight to a single use; it assumes one use group must preclude others. It eliminates multiple use; it will close the little remaining multiple use land in the Jackson Hole area; it is focused on lands favored for timber harvest; and it does not represent multiple use as outlined by a 1994 J.W. Thomas letter. (CROSS REFERENCE: Multiple Use, Ecosystem Management)

F-B(4), 12, 90, 135, 614, 642, 1189, 1332, 1369

Oppose Alternative 3M because of its wildlife prescriptions. Too much land is set aside for grizzly bears which eliminates use for summer and winter recreation; Alternative 3M makes grizzly bears more important than people; wolf and grizzly bear protections in 3M negatively impacts the ranching industry. There is too much emphasis on grizzly bear protection; because grizzly and endangered species habitat is favored, grazing and timber harvest are reduced; and elk security and vulnerability are given too much emphasis in Alternative 3M.

F-F(6), 1, 7, 28, 29, 30, 46, 47, 48, 50, 52, 55, 202, 267, 290, 293, 296, 298, 310, 413, 432, 1187, 1198, 1239, 1246, 1254, 1262, 1332, 1341, 1390

3M reduces resource development to unnecessarily low levels; limits recreation; reduces trails too much; and doesn't address mountain bikers.

Opposed to the plan and philosophically opposed to the ideas behind it; 3M is perpetuating a United Nations goal of an 80 mile zone of no use around Yellowstone; it sets precedent for more closures in the future; has negative impacts on logging, recreation, access, grazing, and local economies; restricts the public too much; is bad, a joke, seeks to eliminate families, or is a flawed concept; it does not adhere to various laws; it limits future management options; it is too harsh; and it does not represent the direction in which the forest should be moving. 3M favors special interests, environmentalists, preservationists, or groups who will litigate decisions. 3M lacks sufficient research or scientific basis, and the Forest Service will be sued if alternative 3M is selected.

The sentiments, rights, or opinions of the public or of local groups are ignored in 3M; 3M places too many limits on people; children should have same access as adults have had; personal freedoms are being denied; 3M was voted against in a referendum vote, and the Forest Service should listen to the majority. Oppose 3M without any specific reason given.

F-A(344), F-F(6), 1, 20, 21, 24, 30, 33, 90, 202, 222, 227, 262, 266, 267, 285, 290, 292, 296, 298, 304, 310, 316, 324, 355, 358, 397, 406, 413, 432, 435, 447, 488, 497, 513, 517, 607, 608, 614, 623, 628a, 629a, 633, 646, 661, 687, 688, 689, 714, 718, 724, 733, 1187, 1188, 1202, 1239, 1246, 1254, 1256, 1262, 1264, 1316, 1317, 1319, 1321, 1334, 1335, 1339, 1343, 1357, 1363, 1378, 1384, 1389, 1391, 1448, 1448b, 1456

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RESPONSE: The Forest acknowledges your comments. After examining all alternatives and public comments, the leadership team chose to remain with the revised, middle-of-the-road, Alternative 3M. For a thorough explanation of the rationale for selecting Alternative 3M, see the Record of Decision. AM

Alternatives 1, 2, 3, Non Support

COMMENTS: Does not support alternatives 1, 2, or 3.
690

RESPONSE: The Forest acknowledges your comments. After examining all alternatives and public comments, the leadership team chose to remain with the revised, middle-of-the-road, Alternative 3M. For a thorough explanation of the rationale for selecting Alternative 3M, see the Record of Decision. AM

Support Alternative 4

COMMENTS: Alternative 4 is superior to the others because of its emphasis on riparian, wildlife, and wilderness protection. Support the 6" stubble height in Alternative 4. Support the amount of motorized access and favor no restrictions on people entering the wilderness in Alternative 4.
42, 169, 171, 308, 643, 690, 719, 1276, 1277, 1311

RESPONSE: The Forest acknowledges your comments. After examining all alternatives and public comments, the leadership team chose to remain with the revised, middle-of-the-road, Alternative 3M. For a thorough explanation of the rationale for selecting Alternative 3M, see the Record of Decision. AM

COMMENTS: Change Alternative 4 to close more roads. Add additional 14,000 acres in wilderness designation to Alternative 4.
171, 690

RESPONSE: The Forest acknowledges your comments. After examining all alternatives and public comments, the leadership team chose to remain with the revised, middle-of-the-road, Alternative 3M. For a thorough explanation of the rationale for selecting Alternative 3M, see the Record of Decision. AM

Support Alternative 5

COMMENTS: Supports Alternative 5 because it protects wildlife and recreation; is superior for forest health; sustains multiple use; and is better for elk vulnerability, riparian condition, water quality, fisheries, DFC, and grizzly bears.
174, 175, 181, 331, 356, 1370

RESPONSE: The Forest acknowledges your comments. After examining all alternatives and public comments, the leadership team chose to remain with the revised, middle-of-the-road, Alternative 3M. For a thorough explanation of the rationale for selecting Alternative 3M, see the Record of Decision. AM

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COMMENTS: Alternative 5 would be better with an additional 100,000 acres of wilderness.

690

RESPONSE: Your comment was noted and considered. AS

Support Alternatives 4/5

COMMENTS: Supports Alternatives 4 & 5 because they have better access for the Centennials, there are fewer "patches," and because they have a lower ASQ.

173, 176, 325, 1185, 1348

RESPONSE: The Forest acknowledges your comments. After examining all alternatives and public comments, the leadership team chose to remain with the revised, middle-of-the-road, Alternative 3M. For a thorough explanation of the rationale for selecting Alternative 3M, see the Record of Decision. AM

Support Alternative 6

COMMENTS: Supports Alternative 6 because of its preservation of roadless characteristics or recommendations for wilderness, especially of specific areas such as the Medicine Lodge/Italian Peaks area; summer travel is best in Alternative 6. The proposals for wildlife, critical winter or key low elevation habitat, aquatic or riparian areas, water quality, and specific species such as elk or grizzly bear are best in Alternative 6. Support the low amount/lack of timber sales, fewer stream crossings, and reduced livestock grazing in Alternative 6. Alternative 6 is the best management strategy; would best heal the scars of prior overuse; has the lowest impact; and helps the economy of local communities.

F-K(4), 61, 156, 181, 207, 293, 304, 356, 382, 387, 609, 611, 625a, 631, 650, 652, 657, 659, 666, 668, 690, 727, 1185, 1270, 1325, 1330, 1331, 1348, 1367, 1387

RESPONSE: The Forest acknowledges your comments. After examining all alternatives and public comments, the leadership team chose to remain with the revised, middle-of-the-road, Alternative 3M. For a thorough explanation of the rationale for selecting Alternative 3M, see the Record of Decision. AM

Non Support Alternative 6

COMMENTS: Do not support Alternative 6 because it restricts people and access too much; has too many restrictions going into wilderness; has too many snowmobile restrictions; and has too many summer OHV access restrictions.

41, 42, 215, 1333, 1367

RESPONSE: The Forest acknowledges your comments. After examining all alternatives and public comments, the leadership team chose to remain with the revised, middle-of-the-road, Alternative 3M. For a thorough explanation of the rationale for selecting Alternative 3M, see the Record of Decision. AM

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Proposed Changes to Alternative 6

COMMENTS: Change Alternative 6 such as add 340,000 acres to wilderness designations; reduce cross-country travel on 90% of the Forest and ASQ to 7.5 MBF; recommend larger wilderness for Big Hole and Palisades Mountains; recommend more winter range; and add more ASQ.

659, 690, 695, 1270, 1348, 1365

RESPONSE: Comments noted and considered. As

Alternatives 5/6 Support

COMMENTS: Supports Alternatives 5 and 6 because they are better for the ecosystem, riparian areas, wildlife, and DFC; they are better for particular species, such as grizzly bears and deer/elk winter range; they have better restrictions on access and logging; they have more wilderness areas or better protect roadless areas; and they contribute to the long-term welfare of the area.

61, 176, 181, 212, 341, 359, 610, 631, 664, 695, 731, 1196, 1201, 1393

RESPONSE: The Forest acknowledges your comments. After examining all alternatives and public comments, the leadership team chose to remain with the revised, middle-of-the-road, Alternative 3M. For a thorough explanation of the rationale for selecting Alternative 3M, see the Record of Decision. AM

Alternatives 4-6 Non Support

COMMENTS: Alternatives 4-6 are not in the best interest of the general public, because they favor special interest groups.

215

RESPONSE: The Forest acknowledges your comments. After examining all alternatives and public comments, the leadership team chose to remain with the revised, middle-of-the-road, Alternative 3M. For a thorough explanation of the rationale for selecting Alternative 3M, see the Record of Decision. AM

Alternatives 4-6 Support

COMMENTS: Support Alternatives 4-6 because they appear environmentally sound; have better provisions for wildlife, especially elk, and winter range; and have better wilderness designations of Lionhead/Targhee Pass area.

658, 1185, 1239, 1348

RESPONSE: The Forest acknowledges your comments. After examining all alternatives and public comments, the leadership team chose to remain with the revised, middle-of-the-road Alternative 3M. For a thorough explanation of the rationale for selecting Alternative 3M, see the Record Of Decision. AM

Alternatives - General Comments

COMMENTS: Disappointed that specific management prescriptions are presented only for Alternative 3M; Alternatives 1-6 should represent a full range of

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alternatives for winter OHV use; public meetings and participants reflect only local concerns, which are usually proprietary views and narrow-minded. The county election on the alternatives in May 1996 was confusing and seemingly inaccurate, an "election fraud," and the Forest Service should do something.

282, 399, 1347, 1367b

The Forest Service has not fulfilled its legal obligation to consider and analyze an adequate range of alternatives or the range of impacts of various management activities.

1365,

RESPONSE: Specific prescriptions are identified for all alternatives in Chapter II of the DEIS. The Forest provided a full range of alternatives. Some alternatives were considered early on, but were dropped, as explained in Chapter II of the DEIS. Meetings discussing the range of alternatives had attendees from several states representing local, state, and national organizations and agencies. All public have a voice in the management of the Targhee and all views are considered during deliberations. Elections are outside the range and scope of a Forest Plan other than to indicate local preferences related to some issues.

The range of alternatives was sent out for review several times. The range was expanded twice to include two more alternatives in the DEIS and two others were considered but dismissed in the FEIS. The alternatives analyzed consider a wide range of possible management prescriptions and opportunities. A winter use travel plan was included for each alternative in the DEIS and represent a wide range of winter travel opportunities. AS

COMMENTS: The Forest filled out the range of alternatives based on proposals from participants in the public involvement process, rather than based on rigorous analysis of data on forest resource conditions. The Forest has violated the NEPA guidance on alternative development.

643

RESPONSE: The Forest developed alternatives in conformance with the Purpose and Need, all applicable laws and regulations, and within the context of an extensive review of existing resource conditions, to address the issues raised by the public during an exhaustive public involvement process.

After issues were received from the public and analyzed, a concentrated list of issues was developed to guide the development of the Forest Plan Revision. Concurrently with this effort, an extensive review of existing resource conditions was taking place. The effort culminated in the issuance of the Analysis of the Management Situation (AMS), which has since been updated periodically. This effort also contributed significantly toward the information base in the Forest Geographic Information System (GIS).

The first phase of the alternative development process incorporated work done on the Forest Service National Hierarchical Framework of Ecological Units. This geographic mapping effort provided a stratification of ecological units based on physiographic characteristics. The Forest filled out the descriptions of the seven ecological subsections overlaying lands managed by the Forest. Using this mapping system, and the extensive information in the AMS and GIS, the Forest built a proposed action, the so-called Ecological Unit Approach, which is now labelled Alternative 4. Several other alternatives

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were then molded around the proposed action. These addressed the issues in different ways using the information base.

It is true that the Forest entertained proposals from at least one Forest user group in developing an alternative that responded to their concerns. However, this proposed alternative was dismissed from detailed analysis. AS

COMMENTS: The Change By Advantage (CBA) decision making process used to select the preferred alternative is flawed. The value weighing system is wrong, placing Ecosystem Management (EM) at the top with a value of 100, with other factors rated 70-80 and wilderness lower. Use a different system, with support for local economy equal to EM, followed by elk security and access; motorized use, timber and riparian; grizzly bear and firewood; and wilderness. The CBA process is skewed in favor of environmental factors with little or no consideration for the local economy and social impacts of access and recreation.

317, 413, 767

RESPONSE: The CBA process is dropped from the FEIS, and the rationale for the final decision is contained in the Record of Decision (ROD). The value ranking in the original CBA process was the Management Team's best effort at matching factors with the Desired Future Condition identified with the public. The factors could be ranked and rated differently if different conditions or values are identified as more important. AS

COMMENTS: The Range of Alternatives presented at the top of page 8 of the Executive Summary presents the erroneous impression that reductions in timber harvest and livestock grazing is a result of increased wilderness designation. This creates a bias against higher numbered alternatives.

643

RESPONSE: The recommendation of wilderness in several alternatives results in some reduction in ASQ although there is not a direct, inverse relationship. The EIS does not intend to suggest such a relationship and the Alternative Continuum in Chapter II of the EIS is updated to clarify this. AS

COMMENTS: A section in the DEIS, page IV-10 last paragraph, uses Alternative 5 as a basis for comparing soil disturbance to other alternatives, which is at odds with NEPA.

413

RESPONSE: NEPA direction suggests using the no-action alternative as the comparison base, as it generally has the least impacts. In the analysis, alternative 5 has the least impacts to soils, and thus was used as the comparison base for ease of narrative presentation. AS

Greater Yellowstone Coalition recommended components for an alternative that was most like a mix of alternatives 5 and 6 which the Forest analyzed as "Alternative 5M":

COMMENTS: Consider an alternative with a mix of the attributes of alternatives 3M, 5 and 6 that would maintain the AUMs of 3M; maintain as much

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of the ASQ of 3M as possible on sustainable basis; recommend substantially more wilderness than even 5 or 6; modify 3M grizzly prescription in the Bechler area to provide harvest mitigation; and create a wildlife linkage corridor in the Centennials with no ASQ.

643, 695

RESPONSE: We considered but dismissed this alternative proposal from detailed study. (See Chapter II of the FEIS for additional information.) These proposals would potentially be within the Purpose and Need and Desired Future Condition (DFC) with the exception of the amount of recommended wilderness. The DFC did not call for recommending the majority of inventoried roadless as wilderness. Furthermore a "Maximum Wilderness" alternative was previously considered in Chapter II of this EIS and dismissed because it does not respond to the DFC and because not all of the roadless areas rated high enough in the analysis. Below are responses to each specific change requested by commentors. AS

COMMENTS: Maintain the AUMs of alternative 3M.

643, 695

RESPONSE: This proposal is workable as suggested and has already been analyzed. AS

COMMENTS: Maintain as much of the ASQ of 3M as possible on sustainable basis.

643, 695

RESPONSE: The loss of the 5.x prescription acres in 3M (to create the Centennials wildlife linkage corridor) would eliminate the potential to harvest a major portion (over 75%) of the available ASQ in that alternative. This is due to the fact that the majority of the remaining ASQ lands are in Management Area 5 of the current Plan, which would not be available for harvest because they are over the hydrologic disturbance limit. This would produce a result that would be contradictory to the objective of maintaining the ASQ level. AS

COMMENTS: Recommend substantially more wilderness than even 5 or 6.

643, 695

RESPONSE: As stated above, there is no Purpose and Need or DFC indicating this is a desirable thing to do. Furthermore, there has been no legislative action on the three areas recommended in the last Plan. Also, in the FEIS we have added documentation of the roadless analysis to show a wilderness characteristics rating. This rating indicates that some of Diamond Peak should be recommended for wilderness. Therefore, we added a large portion of Diamond Peak to Alternative 3M in the Final Revised Plan. Finally, recommending the areas suggested as wilderness would further reduce the ASQ potential which would be contrary to the overall objective of this alternative proposal. AS

COMMENTS: Modify the grizzly bear prescription in the Bechler area to allow ASQ as in 3M, but with tighter mitigation requirements on harvesting.

643, 695

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RESPONSE: We believe the standards and guidelines in grizzly bear prescription 5.3.5 provide the necessary habitat conditions to protect the grizzly bear. MO

COMMENTS: Place the Centennial Mountain in a set of prescriptions that would create a wildlife migration corridor through the area.
643, 695

RESPONSE: Placing this area in such prescriptions would significantly reduce the potential for obtaining ASQ as indicated above. As indicated in the EIS comment responses, the prescriptions identified for this area in 3M adequately address habitat connectivity concerns. AS

CENTENNIALS

Protect

COMMENTS: Support protection of the Centennials; preserve the roadless character; designate the Centennial Range as a wilderness area. Identify the Centennials as a migration corridor which provides genetic diversity for the grizzly bear, gray wolf, elk, and other wildlife species between the Greater Yellowstone Ecosystem, Central Idaho and Northern Montana.

Protect the Centennial Range from fragmentation occurring from too much ORV use, logging and road building.

F-B(4), F-G(475), 19, 60, 73, 136, 157, 158, 162, 165, 167, 168, 174, 175, 176, 178, 180, 181, 184, 185, 193, 194, 200, 203, 204, 206, 210, 212, 213, 244, 252, 274, 278, 280, 293, 325, 341, 362, 390, 396, 400, 410, 438, 444, 496, 615, 621, 622, 627b, 640, 643, 644, 652, 653, 664, 670, 690, 695, 697, 725, 739, 795, 1185, 1197, 1204, 1206, 1270, 1273b, 1275, 1277, 1314, 1327, 1331, 1348, 1369, 1381, 1387, 1392, 1395, 1443, 1448a, 1458

RESPONSE: The management prescriptions in the Revised Plan will maintain the potential for the Centennials to function as a migration corridor for wildlife. The Fish and Wildlife Service has asked Federal agencies to maintain this as a potential corridor, pending a study to determine whether such a corridor is feasible for grizzly bears. They recommend a timber/wildlife summer range type prescription with low road densities. The management prescriptions in the Centennials provide this direction at a minimum, and, in addition, provide extensive area in roadless, undeveloped prescriptions. Regarding wilderness designation, the Mt. Jefferson Roadless Area was studied in an earlier EIS and not recommended for designation. JBR

Range

COMMENTS: Use sheep as a tool to enhance the range resource in the Centennials.

432

RESPONSE: Within the limits specified by the respective prescriptions, this can be done. JBR

COMMENTS: Incorporate the U.S. Sheep Experiment Station Lands into managing the corridor.

643

RESPONSE: We considered the presence of the U.S. Sheep Experiment Station lands in developing the management plan for the Centennials. We conducted an adjacency study to coordinate our management with all adjoining Federal and State land agencies. DP/JBR

Mining

COMMENTS: Screen mining carefully. Withdraw the Centennials from mineral entry because it is an important corridor. (CROSS REFERENCE: Mining/Geology)

643, 1275

CENTENNIALS

RESPONSE: Any mining within the Centennials will be conducted pursuant to all applicable laws and regulations. Restrictions on mineral activities varies in the Centennials depending on prescription area. Mineral potential is limited except in localized areas and is not expected to significantly impact the area during the planning period. DP/JBR

Access

(CROSS REFERENCE: Access)

COMMENTS: Oppose new road construction; ATV/OHV use especially in spring; and suggest the Targhee National Forest limit recreation projects in the Centennials to protect corridor.

Expand summer motorized access in the Centennials.
136, 300, 345, 643, 652, 697, 1185, 1204, 1277, 1348

RESPONSE: The Forest Plan limits new road construction on the Forest to conform with the road density standards in the management prescriptions. ATV/OHV use will be restricted to designated routes. The Centennials have two designated routes: Keg Springs and East Dry Creek. All other routes have travel restrictions on them. Most recreation projects in the Centennials will be development of trailhead facilities or trail construction/maintenance or reconstruction of existing developed facilities. LAB/JBR

COMMENTS: Manage road access in Camas Creek watershed area.
1185

RESPONSE: Road access in the Camas Creek Watershed area will be managed by prescriptions. Motorized access will be allowed only on designated roads and trails within the road density standards in the management prescriptions. A net reduction of roads will occur in Camas Creek. LAB/JBR

COMMENTS: Give the Centennials the same OROMTRD of 0.0 - 0.5 mi./sq.mi., similar to that used for big game summer range.
1273b

RESPONSE: The OROMTRD varies in the Centennials depending on management prescription. In the higher portions of the Centennials, Prescriptions 3.1.2 and 3.1.1(a) have an OROMTRD of 0.0 mi/sq. mi. Other prescriptions for this area allow access only on designated routes, and they generally have an OROMTRD between 0.5 miles/sq. mile and 1.5 miles/sq. mile. LAB/DP/JBR

Timber

COMMENTS: Maintain the natural process of late seral coniferous/aspen stands in the Centennials. (CROSS REFERENCE: Timber, Aspen)
1185, 1348

RESPONSE: Natural processes will be used where appropriate to maintain vegetation composition and structure in the Centennials. Silvicultural treatments and prescribed burning, along with other treatments, will also be used. The particular treatments will be decided upon on a site-specific basis as projects are developed. JBR

CENTENNIALS

COMMENTS: Silvicultural prescriptions should be designed to help small, locally-owned logging companies.

1185

RESPONSE: Silvicultural treatments address the correct methods to maintain forest structure and regenerate timber stands. The layout of sales and their size often determines whether large or small operators bid on them. Large timber companies generally will not travel long distance to purchase small volume timber sales, therefore the small logging companies have an advantage for these sales. We typically provide a mix of small and large sales so all operators can compete. Also, the Small Business Administration, in conjunction with the Forest Service, has a "Small Business Set-Aside Program" where small businesses are guaranteed the right to purchase a pre-calculated percentage of all timber sales offered on each National Forest. This percentage is computed based on historical timber purchases on each specific National Forest for 5 year intervals. It is updated every 5 year period. If small business does not purchase its allotted share the first 6 month period of the year, then the share for the second 6 months plus the deficit for the first 6 months is "Set Aside." Large business is not allowed to bid unless small business fails to bid. JBR

COMMENTS: Prohibit unscheduled "EM" timber harvest in Centennials. Do not include the Centennials in the suitable timber base.

643, 1273b

RESPONSE: This was not adopted in the Revised Plan. The scheduled and nonscheduled timber harvest in the Centennials is provided in an appropriate balance with other resources uses. A ceiling of 20 MMBF/decade is placed on Forestwide ecosystem management timber harvest to address public concerns about extensive harvest on unsuitable lands. DP/JBR

COMMENTS: Change the current management prescription from 5.1 Timber - Management to 3.1 Non-motorized.

739

RESPONSE: This recommendation was not adopted in the Revised Plan. No significant resource concerns exist that require such a change and would limit the ability to manage stand structure over time. Eliminating scheduled timber harvest in the Centennials would also markedly reduce the Forest's first-decade timber production. The production levels specified in the Revised Plan are an important contribution to the livelihood of some area residents; and harvests will be sustainable over time. DP/JBR

COMMENTS: Oppose logging activities in the Centennials because they should be protected as a roadless, wildlife corridor. Timber harvest should be secondary to protection of wildlife and old growth harvest should be prohibited. Object to acreage proposed for harvest in Centennials as proposed in Alternative 3M. (CROSS REFERENCE: Wildlife)

F-G-1(475), F-H(8), F-J(3), F-K(4), 40, 167, 200, 212, 280, 325, 330, 376, 377, 379, 396, 398, 400, 405, 409, 411, 424, 438, 441, 4899, 491, 492, 519, 620, 621, 622, 640, 643, 650, 652, 655, 665, 670, 695, 697,

CENTENNIALS

1185, 1197, 1204, 1243, 1275, 1277, 1314, 1324, 1330, 1348, 1360, 1381, 1382, 1387, 1393

RESPONSE: Protection of the resource, including soil, water, air, wildlife, and vegetation, is a primary concern of Forest management. As a result of doing this well, various outputs and activities can occur. The management direction specified in the Revised Plan responds to the needs of the Forest and will also provide a wide range of uses and enjoyment for the people. Old growth standard and guidelines were added to the Revised Plan which will maintain this resource over time. Wildlife habitat is provided in the prescription and is a major focus of management in the Centennials. DP/JBR

COMMENTS: Provide data that explains, if past timber management activities have not produced a range of variation, that more timber activity will produce better results. (CROSS REFERENCE: Timber; Ecosystem Management)

1388

RESPONSE: The Range of Natural Variation merely shows the range of conditions that ecosystems evolved with and adapted to over time. The suppression of fire has altered the natural disturbance pattern in some parts of the Forest. Silvicultural treatment can be designed to move ecosystems out of balance back to a more sustainable condition. Any timber harvesting activities need to be conducted in a manner sensitive to the needs of the resource, using the best available information. The Forest has considerable work underway with Montana State University to help provide that information base which can be used to design treatments that sustain ecosystem functions. We will treat areas, monitor the results, and adapt to those techniques that prove most successful. DP/JBR

Wildlife

COMMENTS: Protect the Centennials for the benefit of goshawk nesting and forage; wolverine who rely on old growth in the Centennials and for the grizzly bear. Remove the fences in the Centennial Range to reduce the fragmentation that affects carnivores.

643, 1185, 1348

RESPONSE: The Forestwide standards and guidelines and the management prescription respond directly to habitat needs for the goshawk, grizzly bear and wolverine. JBR

COMMENTS: Manage the Centennials to avoid conflicts between the grizzly bear and humans.

1185, 1193

RESPONSE: In the Grizzly Recovery Area, the objective is to provide habitat to sustain a recovered population of grizzly bears. Part of that direction is to minimize conflicts between people and bears. Numerous standards and guidelines in the Revised Plan address this concern. JBR

CENTENNIALS

COMMENTS: The DFPR and DEIS should address the significance of the Centennials and Madison Mountain Ranges as biological corridors as well as other portions of the forest.

410

Establish the Centennials as a corridor for the grizzly bear.
643, 1273b

RESPONSE: The Madison Mountain Range is not on the Targhee National Forest, although it is in the general vicinity of the Forest. The Forest does not anticipate that the management nearest the Madison Range could adversely affect any interchange of species between these areas.

Habitat connectivity in the Centennials is important. Relevant information from the Grizzly Bear Recovery Plan (9-10-93) states:

"One factor that may affect the sustainability of grizzly bear populations in the future is the ability of individual animals to move between ecosystems." They identify the distance between the Bitterroots and Yellowstone as 240 air miles.

"In order to adequately assess the capacity for linkage, the Service initiated a 5-year process to assess the linkage potential between the various ecosystems. This process will be led by the U.S. Fish and Wildlife Service in cooperation with the States, provinces, and the various land management agencies. This evaluation also will address linkage potential between existing areas in Canada. At this time, very little is known about the potential for linkage zones. At the completion of the 5-year evaluation effort, a report will be available to the Interagency Grizzly Bear Committee (IGBC) on the potential for linkage between existing ecosystems. This report will be the basis for future actions regarding the linkage zone question. Linkage zones are desirable for recovery, but are not essential for delisting at this time.

"Future land management activities within these areas may be critical to maintaining their utility as linkage zones. It is essential that existing options for carnivore movement between existing ecosystems be maintained while the evaluation of linkage zones is underway. Management strategies that limit human-induced mortality and address access management will facilitate the maintenance of the potential of these zones during the 5-year evaluation period. On public lands, management prescriptions similar to big game summer range prescriptions that address access management would likely conserve any existing potential of these areas for linkage until completion of the 5-year evaluation process.

"The Yellowstone grizzly bear population is the only one of five grizzly populations that is completely isolated from populations in other U.S. ecosystems and Canada. The population has approximately 300 bears. The population's small size and isolation make it vulnerable to the detrimental effects of the loss of genetic diversity, and to environmental and demographic stochasticity. Connectivity between Yellowstone Grizzly Bear Ecosystem and other grizzly ecosystems is not likely to be realized in the near future because of the distance to other ecosystems and the intervening human development and alteration of landscape. Therefore, the recovery plan recommends that one grizzly be placed into the ecosystem from an outside population every ten years as an effort to maintain the genetic health of the population."

CENTENNIALS

When the grizzly bear corridor studies are completed we will review them. We will continue to work with the U.S. Fish and Wildlife Service to recover the grizzly bear and otherwise meet wildlife needs. We have no indication from USFWS that our proposed management of this area would interfere with the land's use as a corridor for wildlife--including the grizzly. We believe the management prescriptions for the Centennial subsection maintain future options should the USFWS study recommend a linkage corridor.

Chapter I of the Wolf Reintroduction FEIS states: "Wolf recovery will not result in wolf travel corridors or linkage zones being established. The Yellowstone and central Idaho areas are separated from northwestern Montana by enough human settlement (a social rather than physical obstacle that results in some level of increased wolf mortality) that it could take decades for population recovery to begin. However, once established in each of the recovery areas, enough wolves from each area would disperse that some would successfully travel through or live in areas other than those in Yellowstone National Park and central Idaho. The size and proximity of 3 areas where wolves will be managed for recovery are large enough, close enough, and have enough public land between them that additional areas (travel corridors) are not required in the foreseeable future to maintain a viable wolf population after the 3 subpopulations become established."

Based on this information, the blend of prescriptions the Forest identified for this area better meets the needs of both the resource and the public. DP

Wilderness

COMMENTS: Recommended Mount Jefferson in the Centennials as wilderness area. (CROSS REFERENCE: Wilderness)

F-B(4), F-G-1(475), F-G-P(1), F-G-P(5), F-H(8), F-J(3), 19, 136, 143, 157, 163, 165, 174, 179, 180, 1811, 185, 192, 203, 209, 226, 252, 273, 278, 356, 359, 362, 368, 377, 379, 396, 405, 424, 430, 441, 443, 444, 491, 492, 516, 519, 613, 621, 622, 640, 651, 652, 653, 664, 690, 695, 739, 1194, 1197, 1206, 1241, 1243, 1257, 1270, 1275, 1328, 1330, 1368, 1381, 1382, 1395, 1401

RESPONSE: The Mount Jefferson Roadless Area was studied in an earlier EIS and was not recommended as wilderness. For more details, refer to the process Paper on roadless areas. JBR

Monitoring

COMMENTS: Recommend the DEIS/DFPR provide evidence and monitoring data that supports the management proposal to harvest Douglas-fir in the Centennials; show how harvesting will not impact wildlife survival. Address how wildlife viability will not be significantly impacted in previously harvested areas.

1369

RESPONSE: We are familiar with the existing conditions in the Centennials and with what we expect those conditions to be under the various alternatives. We are familiar with the existing literature relative to wildlife needs and survival. We see our proposed management as being a good fit to the needs of

CENTENNIALS

wildlife. Effects on wildlife from any harvest proposals will be identified in a separate NEPA analysis with public involvement. DP

COMMENTS: Develop, fund, and implement a monitoring plan that addresses the Greater Yellowstone Coalition's goals for the Centennials as a corridor.
643

Create specific standards addressing the Centennials.
643, 1273b

RESPONSE: After carefully reviewing Greater Yellowstone Coalition's proposal for managing the Centennials as a corridor, the decision was that the fully Revised Plan addresses habitat connectivity concerns without additional changes. The standards and guidelines in the Centennial prescriptions are sufficient to meet ecological and multiple-use objectives. The monitoring plan addresses monitoring needs for the Centennials along with the rest of the Forest. DP

New Prescription

COMMENTS: Proposes a new management prescription for the Centennial Mountain Range as a critical wildlife corridor as follows: Goal: To protect and perpetuate the qualities and importance of the linkage corridor.

Objectives: 1) Insects, fire and disease are allowed to play their natural role in ecological succession without restriction. 2) Actively seek to incorporate the US Sheep Experimental Station lands into the overall management of the corridor 3) Develop, fund and implement a monitoring plan that addresses the goal of the corridor.

Standards and Guidelines: Forestwide Standards and Guidelines apply.

Ecological Processes

Fire/Fuels

Use only minimum impact suppression tactics. (S)

Prescribed fire, utilizing both management-ignited and natural ignitions, may be used to maintain fire dependent ecological processes and to provide for a natural range of fuels, understory vegetation, and successional stages. (S)

Physical Elements

Soils and Water

Watershed restoration will be done where deteriorated soil or hydrologic conditions are caused by humans and their domestic livestock. (S)

Promote natural healing where natural vegetation would return within two years. (S)

Use native plant species to reestablish vegetation where there is no reasonable expectation of natural healing. (S)

Permit emergency burned area rehabilitation only if necessary to prevent an unnatural loss of resources. (G)

Lands

Activities which may adversely affect the quality of viability of the corridor will not be allowed. (S)

No Special Use Permits or operating plans are allowed. (S)

Minerals/Geology

CENTENNIALS

Locatable-Withdraw from mineral entry, or remove from mineral entry through the notation rule. Valid, existing rights will be purchased by the federal government at fair market value. (S)

Mineral Material - This area is not available for mineral entry.

(S)

Heritage Resource

Remove structures that do not qualify for the National Register of Historic Places, or allow them to deteriorate naturally. (G)

Biological Elements

Wildlife: No wildlife habitat improvement projects are allowed. (S)

Forest Use and Occupation

Access (S) - 2.2.1(a) Same as 1.1.7.

2.2.1(b) Same as above except system roads 042 and 046 would be open for approximately 1 mile north of the Forest Service's southern boundary; system road 327 would be open south of section 32, T15N, R40E; FS system road 193 would be closed. System roads 185, 022, and 204 are to be closed from their junction in Section 22, T13N, R34E, Motorized use of trail 110 and its associated trails would be eliminated; cross-country snowmachining travel is allowed between December 15 and April 1.

2.2.1: Same as MP 2.2 except that there will be no Cross-country snowmachine travel before December 15 or after April 1. Roads and trails noted as open on Map 11 within the boundaries of this area, except Forest Service system roads 010, 019, 674 and 675 which would be closed.

Recreation

Trails - No new trails (S)

ROS - Primitive to semi-primitive non-motorized. (S)

VQO - Retention (S)

Production of Natural Resources

Timber:

Lands are not included in the suitable timber base. They do not contribute toward the ASQ.

There will be no unscheduled, ecosystem management timber harvest.

(S)

No vegetative management of any kind will occur. (S)

643

RESPONSE: This prescription by the Greater Yellowstone Coalition for the Centennial Mountains was not adopted because the Revised Plan addresses habitat connectivity concerns without making most of these changes. The standards, guidelines and management prescriptions in the Revised Plan are sufficient to meet the ecological and multiple-use objectives. See other detailed responses that address the Centennial corridor concern. JBR

DESIRED FUTURE CONDITION

Desired Future Condition General

COMMENTS: Support the direction in which the Targhee National Forest is headed as reflected in the section on Desired Future Condition (DFC); pleased that it de-emphasized resource extraction and livestock grazing and stresses biological health. In most cases, the DFCs provide a reasonable vision and philosophical position for the next decade, although in many cases the Forest has not made a strong commitment to DFCs. Supports the need for change section; the summary rationale is excellent, and the DFC section in the summary is comprehensive and unbiased.

489, 727, 1367b

RESPONSE: The goals, objectives, standards and guidelines in other parts of the Revised Plan flow from the larger-scope Desired Future Conditions (DFC's). The intent is to manage the Forest such that conditions show a trend toward or actually achieve the DFC's. The pace at which progress is made toward these conditions will depend on a number of factors including appropriations to the Forest. EF

Analysis Process

COMMENTS: The DFCs in the Executive Summary are too broad, lofty and unrealistic. Set realistic and specific goals that cover ecosystems, habitats, resources, and the social and economic values. The DFCs reflect two polar opposites with the Plan recommending a middle ground. The design is weak. The DFC is process driven, not people driven; driven by need for change, regardless of what percentage of people want the change. The DFCs have voids which will leave people guessing about the effects and impacts of forest management. The description of DFC in the DEIS consists of vague paragraphs where almost any activity could be construed to meet the goals; it could be argued that the Targhee National Forest already meets the DFC. DFC is so vague as to provide little useful management direction or goals to which the Forest can be held accountable. A failure to correct, coupled with increase in recreational use could permanently damage this critical component of the Greater Yellowstone Ecosystem.

393, 413, 618, 697, 1365, 1393

RESPONSE: DFC's are not intended to be an exhaustive statement of detailed conditions to be achieved. They are designed to provide a broad but clear picture of where we intend to be upon achievement of the stated goals and objectives of the Revised Plan. There are many ways to define and display DFC, all of which could be equally useful in communicating the vision for management on the Targhee. The current set of DFC statements are adequate and provide sufficient description of where we hope to be in the future. RR

Goals and Objectives

COMMENTS: The Plan demonstrates an overriding concern for preventing catastrophic fire and insect outbreaks despite the DFC acknowledgement that such things are within the Range of Natural Variation. There are no goals for soil conditions, erosion, air quality, caves, land management, or how

DESIRED FUTURE CONDITIONS

vegetation, wildlife, or riparian zones will be in ten years. The forest has shifted to a goal of DFC for riparian areas instead of standards and guidelines for watersheds. The standards and associated monitoring plan will not result in meeting the stated DFC for riparian areas, and the riparian DFC will not meet with essentially unregulated cross-country motorized access. Clarify what level of sagebrush is required for the DFC for vegetation. The DFC arbitrarily assumes a reduction in mature forest. A mosaic of age classes and types sustained through time, one objective of DFC, has never existed on the Targhee and will not without proactive management.

393, 489, 697, 766, 1368

RESPONSE: Forestwide, Subsection, and Management Prescription goals and objectives augment the DFC descriptions with more specifics on where and how the Forest will move forward in the different resource areas. These provide more detail than the DFC's alone and represent a composite of the total array of conditions the Forest aims for. RR

Structure and Design

COMMENTS: The DFCs are organized under three headings in the DFPR and four in the DEIS, even though the DFCs seem about the same. Suggests they be consistent, and that the stronger statements be used. Subsection descriptions are a very confusing place to include DFCs. DFCs violate ecological principles following watersheds. The statement for DFC's, "timber harvest, prescribed fire, and grazing are used as tools to achieve ..." is out of place in the DEIS and DFPR because these are tools, not conditions.

489, 695, 697

RESPONSE: The content and wording of the DFC's were changed to be consistent in wording and intent in the Final Revised Plan and EIS.

Desired Future Conditions are entirely appropriate at different ecological scales as long as they are consistent with those at other scales.

It is true that timber harvest, prescribed fire and livestock grazing are tools which can be used to achieve desired landscape and vegetation conditions. In the Draft Plan and EIS, timber harvest and grazing were included under the Economic Component and Production of Natural Resources component, respectively, to paint a broad picture of the experience which can be expected on Forest lands. In the same way we included statements about growing and diverse recreation needs and increased recreational opportunities. Further, the statement that these commodity uses of the Forest are used to achieve desirable vegetation conditions indicates a shift in the emphasis in these programs to more clearly line up with objectives for achieving sustainable resource conditions. EF

Wilderness

COMMENTS: Provide specific provisions for achieving 3rd DFC, and suggest wilderness designation is the appropriate method.

489, 643,

DESIRED FUTURE CONDITION

RESPONSE: The Final Revised Plan recommended a large portion of Diamond Peak as wilderness. Not all roadless areas score high in wilderness criteria. Therefore, it is inappropriate to recommend all roadless areas as wilderness. Other prescriptions, standards and guidelines can assist in achieving this DFC.

Timber

COMMENTS: Be more specific about how logging and grazing will be used to achieve DFC; discuss harvest methods and grazing systems employed to reach DFC.

489

RESPONSE: The method used to achieve the DFC presented in the Final Revised Plan is the subject of Plan implementation and project-level analysis. From a comparison of existing landscape conditions with desired conditions, opportunities for treatment are identified. Possible management practices on the ground are then listed, and individual project proposals are formed from these. Public review will be invited on these project proposals, which must either be consistent with Forest Plan standards and guidelines or be an amendment to them. EF

Recreation

COMMENTS: Develop a DFC for Forest Development Road System, and one for recreation.

FS-11

Include a DFC for developed downhill skiing. DFC has many voids and should use a finer scale of analysis.

618

Recommend user targets and DFC for both summer and winter recreation.

1342

RESPONSE: Desired Future Conditions (DFC's) are appropriate at broad scales for land conditions, user experiences, and so forth. They are intended to serve as targets to orient management and may be attained at some point in the future. Such targets when applied at finer scales or within defined time frames are termed goals or objectives. These can be refined and the Revised Plan amended based on subsequent watershed analyses, capacity studies, and so forth. EF

Time Frame

COMMENTS: Develop a clear and definite time frame for each geographic subsection to attain its DFC.

1446

RESPONSE: The job of the Final Revised Plan is to present the Desired Future Conditions and base management direction upon them. DFC's by their nature are designed to be attained at some undefined point in the future. It is difficult to assign a clear time frame to the achievement of such

DESIRED FUTURE CONDITION

large-scale target conditions since this is subject to limitations of budget and unforeseen circumstances. The DFC's present a solid foundation on which management is built, and thus serve the purpose for which they are intended. EF

Economics

COMMENTS: Traditional logging and grazing account for less than 1% of local jobs and income, and DFC should state that in 10 years economy will be growing based on various tourism and recreational opportunities.

697

RESPONSE: It is not the job of the Forest Service to set goals for areas outside of agency jurisdiction. The Final Revised Plan and EIS note the trend toward recreation and tourism in the area. Employment and income in the area of Forest influence is described in detail in the EIS in Chapter III. EF

Site-Specific

COMMENTS: The DFC for Caribou subsection (DFPR III-53 & 55) states that the area is being managed to provide high quality nonmotorized and dispersed camping recreation, which is in contradiction to an item in the recreation section about improving the quality of summer OHV use in this subsection. The DFC for Caribou subsection (III-53) leaves out motorized use which the area currently provides and will continue to provide.

The DFC for Lemhi/Medicine Lodge subsection needs to be expanded to create more ATV opportunities.

Page III-20, Table III-4: clarify how the Teton Range Subsection was determined considering the Aquatic Habitat Condition and Trend, and Vegetation Seral Stage and Trend are unknown. Modify document to explain source of numbers or change to status unknown.

389, 489, 629, 643

RESPONSE: The DFC for the Caribou subsection was rewritten to show the intent to manage for both motorized and non-motorized recreation uses.

The DFC for the Lemhi-Medicine Lodge subsection allows motorized use opportunities. Refer to the goals and objectives for the subsection. EF

Wildlife

COMMENTS: Suggest replacing words "sustained populations of all native and desirable species thrive" (Pages S-4, I-12) with "viable populations of all native and desirable species are sustained. "The meaning of the second DFC (native over non-native species) should clarify what undesirable is.

Include on Page III-45 the DFC objective of maintaining a population of at least 150-200 bighorn sheep; coordinate management with other agencies.

489, 643, 699

RESPONSE: We changed the wording to reflect the suggestion. The new wording provides a better link to direction in the NFMA implementing regulations.

DESIRED FUTURE CONDITION

The meaning of the word "undesirable" in the Biological/Physical DFC can be inferred from various sources including State lists of noxious plants. The purpose of the Desired Future Condition statement is to frame a large picture of the condition we would like to have on the Forest at some future point in time. The statement as written adequately does this and can be interpreted during Plan implementation. EF

DRAFT FOREST PLAN REVISION

(CROSS REFERENCE: Alternatives)

Support

COMMENTS: Supports DEIS and DFPR because they depart from past management practices, adopt sustainable ASQs, decrease road densities, limit x-country, protect riparian areas and watersheds, and provide greater wildlife security and increase wilderness area.

697

RESPONSE: Thank you for your comments. EF

Lack of Science

COMMENTS: Use current, sound science, and cite references used in developing goals, objectives, and standards and guidelines. Adequate consideration of recent, valid, peer-reviewed scientific studies should be applied to Plan development. Do not base management on cultural biases or politics. Lacking adequate science, the Targhee National Forest is unable to fulfill basic legal, ethical, or responsible mandates of National Forest and National Grassland management. Conclusions in DFPR contradict available research and indicate an effort to steer management in predetermined direction.

293, 393, 643, 697, 1364, 1365, 1369

RESPONSE: The Forest used the best science available to us through literature searches, results of research and studies conducted on the Forest and other sources. The Forest recognizes there are other sources with conflicting conclusions, but feel confident in our use of good science.

The Forest made good use of current peer-reviewed research in development of the Revised LMP. Examples include: Southwestern goshawk guidelines and research on the Forest; research by Idaho Fish and Game Department and U.S. Forest Service researchers regarding elk vulnerability and road access; Interagency Grizzly Bear Study Team studies concerning habitat needs and road density; and the hydrologic disturbance threshold study.

Use of the OROMTRD indicator is appropriate in the BMU's and represents application of the best available science.

The Forest acknowledges that contradictory opinions will always exist in the scientific community. EF

COMMENTS: Conclusions are unsubstantiated and often refuted by conclusions of on-going study by the Targhee and Montana State University as part of the Henry's Fork Watershed efforts.

643

RESPONSE: This study was conducted over a small area of the Forest, and was designed to test methodology, not to define conditions. The study is still in draft form, and any attempt to extrapolate its results at this point to larger areas of the Forest is premature and beyond the scope of the study or the Revised Plan. EF

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COMMENTS: Although there may be a dearth of recent, complete, accurate, or ecologically significant scientific data, a great deal is known about impacts of various management activities. Apply knowledge gained on other forests. The Forest Service is obligated to undertake research needed to fill in gaps in knowledge about impacts on species, habitat, and ecosystem; and until such research is completed the Forest Service must restrict any potentially harmful activities. A failure to do so is arbitrary and capricious, and a heinous violation of the public trust.

1276, 1365

RESPONSE: The Forest consulted current and applicable literature and research where available and needed, and adopted relevant conclusions on which to base proposed future management. The call to consult and integrate all of the best available research is neither feasible nor based in applicable planning regulations, which call for the use of high-quality scientific information and insuring scientific integrity in the analysis (40 CFR 1500.1(b), 1502.24; 16 U.S.C. 1536).

The Forest acknowledges there are research gaps in the information needed to fully support proposed management direction and to disclose the effects of this management. Further, there always will be gaps of this kind. The Forest has identified research needs in some of these cases, and has committed to taking an adaptive management approach which includes continuing current partnerships with the research and academic communities. The call to eliminate all existing information gaps prior to outlining and proceeding with management direction for the Forest is neither feasible nor based in applicable planning regulations, which call for identifying knowledge gaps where they exist and proceeding with the best available science (40 CFR 1502.22; 16 U.S.C. 1536).

COMMENTS: Specific areas cited as needing more scientific basis or research include, among others: issues of seismic potential; ground water concerns (Madison Limestone is a significant aquifer); watershed analysis; mineralization such as copper, silver, zinc, lead, granite, limestone, and phosphate; cultural resources; abundance, distributions, and ecology of species; and management impacts on wildlife and habitat, especially for threatened or endangered, sensitive, and globally imperiled G1, G2, & G3 species (Heritage Foundation ranking for extinction risk, 1 being highest).

389, 643, 1365

RESPONSE: Proposed management activities will not endanger or jeopardize any of these features. While more research and scientific investigation will probably always be needed to exactly describe management needs for these and other resources, the standards and guidelines are sufficient to protect them, and the goals and objectives provide restoration opportunities.

The issues of seismic potential and groundwater concerns are so large as to be beyond the scope of the Revised Plan. Objectives in the Draft Revised Plan for watershed needs analysis were supplemented with additional goals and objectives in the Final (see Chapter III, Ecological Processes and Patterns and Biological Elements). These provide opportunities to identify any program restoration needs.

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The protective measures currently in place for cultural resources are sufficient. Standards and guidelines for wildlife habitat needs more than adequately address the needs of species inhabiting the Forest. EF

COMMENTS: The AMS indicates the Forest has yet to undertake a rigorous spatial or temporal analysis of existing conditions. The Forest presents tables of data or conditions with little information as to how derived.

643

RESPONSE: The Analysis of the Management Situation (AMS) was developed over the last five years and represents a compendium of data concerning the current state of resources on the Forest. Reasonable inferences were derived from this data.

Legal Compliance

COMMENTS: In development and implementation of the DFPR, the Forest Service must adhere to the legal and policy requirements of: NEPA, NFMA, APA, RPA, the Organic Act of June 4, 1897 (30 stat. 35), the Transfer Act of 1905 (33 stat. 628, 16 USC 472), the Multiple-Use Sustained-Yield Act of 1960 (16 USC 528-531), Executive Orders 11644 and 11989 (on OHV use), FSM sect. 2670 (on Biological Diversity and Threatened and Endangered Species), 36 CFR 219.19, the Endangered Species Act (sect. 7(a)(1) and (2), 16 USC 1604 (g) (3) (b), 36 CFR 219.27 (a) & (g), 16 USC 1604 (e), 16 USCA 1604 (C) (1), 36CFR 219 concerning wilderness and roadless values, 36CFR 219.17, 60 Fed. Reg. 18931 S219.14 (b), or State water quality guidelines. The Plan either fails or only nominally adheres to these laws and policies because of lack of adequate referencing; inadequate direction or analysis for wildlife; air quality; wetlands; fire management; threatened, endangered, sensitive and indicator species; Archaeological and Historical Preservation; biological corridors; roadless areas to be proposed as wilderness; range of alternatives; or that the policy was not developed with open public participation but was crafted in the dark with the help of Greater Yellowstone Coalition et. al.

275, 341, 389, 393, 607, 689, 697, 766, 1273b, 1364, 1365, 1367b, 1369, 1446

RESPONSE: The Forest is aware of responsibilities under these and other statutes. The Forest has complied with all applicable laws, regulations and policies in the development of this Final Revised Plan.

Extensive public involvement was conducted for this effort, which stretched over five years. The mailing list of those requesting to be kept informed of the project includes the names of over 2,000 individuals and organizations. Numerous public meetings were held which generated many comments and information which was used in the development of the Final Revised Plan. The Forest fully met the letter and intent of all requirements for public involvement.

Executive Order 11644 authorizes the administrative designation of use and non-use OHV areas and provides for public participation and monitoring. E.O. 11989 amends it to authorize closures of areas for real or imminent damage caused by OHVs. The Final Revised Plan regulates OHV use extensively through prescriptions and Forestwide standards and guidelines.

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The monitoring plan includes an item monitoring seasonal trail use impacts including OHVs. The Revised Plan complies with the letter and intent of these Executive Orders.

The Final Revised Plan complies with the current NFMA viability requirement, NEPA, the Administrative Procedures Act, the Organic Act (June 4, 1897), the Multiple Use-Sustained Yield Act (MUSYA) of 1960, and other applicable direction.

The Organic Act deals with the reasons for establishing a National Forest, but does not require scheduled timber harvesting. The MUSYA is part of a broader spectrum of laws directing the management of the National Forests which includes the National Forest Management Act, the National Environmental Policy Act, and the Endangered Species Act. The timber output in the Final Revised Plan is at a level which can be generated consistent with the requirements of other direction Congress has provided. The Final Revised Plan represents a balance between often-conflicting wants and direction for resource management. EF

COMMENTS: Additionally, FSH 2409.13 requires the plan appendix to include items that were not included in the draft: Land Classification, Section 42.1; The average annual acreage to which the vegetation management practices shall apply for suitable lands during the first decade, Section 42.2; The Allowable Sale Quantity and Timber Sale Program Quantity of sawtimber and other products, Section 42.4; Allowable Sale Quantity and Long-Term Sustained Yield Capacity, Section 42.4; Present and Future Condition, including Growth and Mortality, Section 42.6; The 10-year Timber Sale Schedule, Section 42.7; and Timber Management on Unsuitable Lands, Section 42.8.

413

RESPONSE: All required items are included in the Final Revised Plan. EF

Analysis Process

COMMENTS: Analysis is incomplete or inconsistent; "flawed;" requires more analysis of past impacts; needs improvement in presentation; the process of analysis for developing or implementing the plan is inadequate; changes in the land may not occur in a narrow time frame but in 50-300 year cycles; many objectives are not measurable or followed by Standards and Guidelines to assure they will be met; the TNF's role in the Greater Yellowstone Ecosystem is not explicitly addressed in the DFPR goals and objectives, or in the DEIS.

309, 389, 413, 489, 643, 689, 697, 699, 766, 1369, 1395, 1446

RESPONSE: Between the Draft and Final Revised Plan, many of the objectives were changed to goals or time frames were added to many more objectives. Some of the time frames were changed to reflect realistic budgets and priority one monitoring items. A brief discussion is included on the Targhee's role within the Greater Yellowstone ecosystem however, much of this is already included in the Framework document for the GYE (Greater Yellowstone Coordinating Committee's Framework document, USFS, USNPS, September 1991) and does not need to be repeated. CC

DRAFT FOREST PLAN REVISION

COMMENTS: Time frames for undertaking important analyses are so long as to make them totally disjunct from management decision-making (i.e. RNV analysis by 2007, watershed improvement needs inventory by 2007).

643

RESPONSE: The time frames given for analyses are reasonable and necessary. They take into account personnel and funds available for conducting analyses, as well as the time needed to produce meaningful results. RSM

COMMENTS: Plan requires more analysis on: fragmentation caused by roads and timber harvest; old growth upon which many species depend and which might be eliminated under the Plan; firewood harvest and loss of biological potential; sensitive species, of which the Plan mentions only Goshawk and two owl species; and forest songbirds in lower elevation habitat, which has been seriously impacted by past management practices. Analyze potential environmental consequences of alternatives and of what could be an extensive logging program under the guise of ecosystem management. Place more emphasis on value levels and less on utilization levels. Clarify existing conditions; identify factors causing conditions, ensure standards, guidelines, and prescriptions will accommodate resources into the future.

643, 697, 699, 766, 1367b, 1369

RESPONSE: The Final EIS evaluates a range of alternative ways to address these and other issues. The selected alternative and the Final Revised Plan provide for restoration of past impacts and define future direction for the management of healthy ecosystems. The consequences of specific proposals to implement the Revised Plan will be evaluated in separate site-specific environmental analyses.

The cycle of planning-implementing-revising will always be with us because conditions and knowledge will always change. In developing the Final Revised Plan the Forest made use of the best available knowledge for current conditions; and it can be changed as conditions and knowledge evolve. EF

COMMENTS: Explain need for new plan and how adequate revisions will be in view of the extent 1985 plan has or has not been accomplished; explain how management emphasis delineations are made; include forest-wide direction for infrastructure management. The Forest Service should stick with the plans it makes rather than make new ones.

FS-11, 309, 699, 1395, 1369

RESPONSE: The need to embark on the Forest Plan Revision process is explained in the EIS (Chapter I) and the Revised Plan (Chapter I). The Final Revised Plan for the Targhee National Forest is supported by information in the Analysis of the Management Situation (AMS). Plan revisions are required periodically by current regulations governing National Forest management, and are appropriate when conditions in the planning area have changed or new information is available on which to base management decisions.

Many objectives of the original Forest Plan were implemented in whole or in part. The Forest intends to implement the Final Revised Plan to the best of our abilities consistent with appropriated funding. EF

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COMMENTS: Explain why Targhee National Forest has substituted goals and objectives for standards and guidelines, by what analysis they were developed, what legal context used for interpreting them, how they relate to policy for implementing NFMA and/or NEPA, how much consideration they are given, and how funded and applied.

643

RESPONSE: The role of standards and guidelines in the forest planning process is outlined in 36 Code of Federal Regulations Part 219; policy is articulated at Forest Service Manual Chapter 1920 and Forest Service Handbook Chapter 1909.12. The application of standards and guidelines in the Final Revised Plan is explained in Chapter III. Standards are constraints on management activities or practices; deviation from compliance with a standard requires a Forest Plan amendment with its accompanying public involvement. Guidelines represent a preferred or advisable course of action which shall be the general rule; deviation from compliance with a guideline does not require a Plan amendment but shall be explained with written rationale.

In developing the Final Revised Plan the Forest tried to be consistent in designating a measure as a goal, objective, standard or guideline. This was not always possible in individual cases, and some changes were made to provide Forest managers with flexibility to address changing conditions, knowledge and opportunities and to deal with unforeseen circumstances. Without this flexibility Forest personnel might spend more of their time in planning exercises and less in gathering field information monitoring, and implementing projects. The Final Revised Plan is unambiguous in its intent to give adequate protection and direction for restoration where needed. EF

Specific Sections

COMMENTS: In the introduction, last paragraph relating to emergency events, include a list of all potential events to give reader a better idea of what constitutes an emergency; appears to include only law enforcement, search and rescue, and fire.

1446

RESPONSE: It is impossible to foresee all of the emergency events that might occur over the next ten to fifteen years, and it is unwise to attempt to provide an all-inclusive list. The phrase in Chapter III of the Final Revised Plan indicates that emergency events "include such things as law enforcement, search and rescue, and fire." This adequately shows our intent as to what events might be considered emergency in nature and allows for unforeseen circumstances to be addressed. EF

COMMENTS: Page II-1, I. Introduction--Describes Chapter II as a summary of the Analysis of the Management Situation (AMS). A more comprehensive analysis of the management situation, particularly in relation to the extent that

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management direction in the 1985 Plan (see Appendix A) has or has not been accomplished, should be included in the Final Plan Revision or FEIS. This is needed to properly justify the need for revising the 1985 Plan and to evaluate the adequacy of proposed revisions.

699

RESPONSE: The Analysis of the Management Situation is a large compendium of information assembled over the last five years showing the status of many resources on the Forest. After each description, information is included showing the difference between the current situation and Forest Plan direction or projections; and changed conditions or the need for change in management. This information was important in confirming the need to revise the Forest Plan, and to focus on the areas where most change was needed.

It is true that this information can also serve as a check on how well we did our job in revising the Forest Plan. An honest accounting will show we emphasized the correct elements, provided adequate protection for Forest resources and provided opportunities for restoration where needed. EF

COMMENTS: Since only a summary of the Analysis of Management Situation (AMS) is given in Chapter II, a citation to the full AMS should have been included in the Introduction; i.e., (USDA Forest Service, Targhee National Forest 1992), as the AMS is listed in the References Cited section of the Draft Plan Revision.

699

RESPONSE: This was done. Thank you for your comment. EF

COMMENTS: Pg 1-6. Key issues missing: 1) jobs; 2) support local economy in wages/salaries; 3) summer x-country OHV use; 4) areas without snowmobile date restrictions; 5) firewood production.

413

RESPONSE: These concerns are shown in the Issues chapter of the AMS, in the Consequences section of the Final EIS, and in the larger-scope issues shown in Chapter I of the EIS.

COMMENTS: Goal statements Pg 111-20 imply wildlife is not a basic resource. Wyoming Game and Fish disagrees, and forage production should be considered before other consumptive uses.

389

RESPONSE: The Forest agrees that wildlife is a basic resource. Utilization standards apply to use by livestock and wildlife. EF

COMMENTS: Pg 1-4, last paragraph seems prejudicial because the Forest is not meeting 1985 Plan goals for timber harvest, summer OHV x-country use, grazing, and snowmobiles, but these are not discussed.

413

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RESPONSE: The Forest substantially met major goals for timber harvest and regeneration. Therefore the conditions under which the original Forest Plan was developed have changed. Increasing demand for summer and winter OHV use represents a changed condition and were recognized in the decision to revise the current Forest Plan. EF

COMMENTS: Concerned with prescription 7.1 because of wildfire potential.
325

RESPONSE: Prescription 7.1 was deleted from the prescription menu for the Final Revised Plan. EF

COMMENTS: Pg IV-50, 2nd Para.: Comparison between reductions in logging and livestock grazing implies that, although effects on livestock are bad, ranchers should feel good because at least effects aren't as bad as on logging industry.
413

RESPONSE: Thank you for your comment. The effects displayed in the EIS are best estimates of potential impacts for both the timber and livestock industries on a forestwide scale. An actual change in livestock AUMs can only occur with a site-specific analysis of each grazing allotment. Whether it is logging or grazing, on a site-specific basis, it is likely a rancher whose grazing permit is reduced could be affected as much as a logger whose wood supply is reduced. WG

Implementation, Monitoring, Enforcement

COMMENTS: Explain whether implementation and enforcement will be applied in broad prescription areas or individual polygons; the Plan allows few future management options; proposed changes are too radical or too sudden; and repercussions are not known, such as the impacts of wolf reintroduction on coyotes and foxes. Need information on what basis, besides legal requirements, certain management emphasis delineations are made; Monitoring and Evaluation chapter doesn't address those topics well. Develop specific, strict, enforceable standards to ensure DFPR goals are realized; develop a standard that any activity causing negative environmental impact be terminated until such time as it does not cause such impact. Change guidelines to standards to help Targhee National Forest meet goals. No plan will succeed because of human population explosion. A determination that Plan revisions have no significant environmental impact requires that ecosystem enhancement projects will be conducted, and authorized actions that have potential to harm resources will be monitored. Require commitment to adaptive management, a method that uses scientific experimentation to develop and modify management decisions, and is crucial to ecosystem management. Develop action protocols for when noncompliance is unavoidable.

6, 90, 166, 282, 305, 389, 643, 766, 1369, 1446

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RESPONSE: The Final Revised Plan contains management direction in the form of standards, guidelines, goals and objectives for the Forest as a whole; for ecological subsections; and for individual prescription areas. The Plan will be implemented and enforced based on the level at which these measures apply. The standards and guidelines are adequate to meet the goals and objectives to protect and enhance Forest resources, and the Forest intends to abide by these standards and guidelines with provision made for unforeseen circumstances.

The Final Revised Plan represents a change from the original Forest Plan in that it implements lesser amounts of intensive management over fewer widespread areas of the Forest. This approach presents opportunities for restoration where needed, as well as for adaptive management trials of new techniques in concert with the academic and research communities to identify ways of carrying out the mission of ecosystem management. In this sense the Monitoring and Evaluation Plan is one part of a larger effort.

No project decisions are made in the decision to implement the Final Revised Plan. Instead, resources will be committed in individual project decisions. EF

COMMENTS: There is lack of provision and funding, and indication of low priority for monitoring and enforcement. The plan doesn't identify how goals and objectives will be prioritized, and therefore how funding will effect implementation. The specific activities in the Plan to specific budgets, including reforestation, logging and riparian area restoration, enforcement of road and trail closures. Disclose what percentage allocated for each program, and whether funding is "constrained" or "nonconstrained."

766, 643, 1206, 1249

RESPONSE: The Forest Service operates on monies appropriated by Congress and the Administration. The mix of funding and priorities is subject to change from year to year. The Forest can not predict what the funding priorities will be. The Forest will endeavor to carry out the direction in the Final Revised Plan within the funding constraints enacted by Congress and approved by the Administration. Final budgets are a matter of public record and can be reviewed by any interested party. EF

COMMENTS: Develop specific, strict, enforceable standards sufficient to ensure that the DFPR goals and intents are realized. The Plan should articulate a standard that requires that any activity causing negative environmental impact be terminated until such time as it does not result in negative impacts.

1365

RESPONSE: This suggestion is not conducive to multiple use or in the best interest of the public owners of the National Forest. The standards and guidelines in the Final Revised Plan are adequate to protect Forest resources and promote restoration where needed. The extent to which goals and objectives are realized will depend to some degree on the will of Congress and the Administration as expressed in yearly appropriations. EF

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COMMENTS: Show that the "Forest User's Survey" is a valid approach to evaluate the effects of the Plan because it isn't designed to answer specific questions.

697

RESPONSE: The Forest Users Survey monitoring item provides Forest managers with an indication of the degree of satisfaction of Forest users with the direction of management under the Revised Plan and how that direction is being administered. It is written broadly and can be implemented using a variety of methods. Specific questions are asked of Forest users to identify areas of satisfaction or concerns. The survey is one possible tool that can gauge the satisfaction of the public with the management of their public lands. We are open to suggestions on other tools that might be more effective. EF

Change Priorities

COMMENTS: Priority 3 status for the Biological Diversity monitoring item (page V-13) indicates lack of commitment; should be assigned Priority Group I and a time line included in Implementation Schedule Chapter IV, plus must provide additional description for components.

643

RESPONSE: There is a difference between Forest Plan monitoring, which the Monitoring and Evaluation Plan is designed to do, and research on complex subjects such as biodiversity, which Forest Plan monitoring is not designed to do. Ongoing and future cooperative efforts will continue to gather information on elements of biodiversity, and Forest Plan standards and guidelines will be modified as needed based on this forthcoming information. EF

COMMENTS: Change Forest Priority Group ratings as follows: Detrimental Soil Disturbance to Group 1; Fine Organic Matter Retention to Group 2, Application and BMPs to Group 2, Biological Diversity Study to Group 2, Standing Dead Tree Habitat to Group 2, User Satisfaction to Group 3, Seasonal Trail Use Impacts to Soil & Veg to Group 1, Recreation/Wildlife Conflicts to Group 1, Jedediah Smith Wilderness LAC to Group 2, Authorized Use/Game Retrieval Use Level to Group 1, Road Closure Effectiveness to Group 1, Achievement of Road Density Standards to Group 1, Riparian Plant Use/Trampling to Group 1, AMP Planning Admin. Site Use to Group 2, Upland Forage Utilization to Group 2; Sage/Grasslands Canopy Coverage to Group 2, Maximum Created Opening Size to Group 2, Security Cover Retention to Group 2; and Large Forested Block Retention to Group 1.

1365

RESPONSE: The Forest reassessed the priorities of the various monitoring items based on comments from the public internally and externally. Several of the changes requested here were made, including the shifting to Priority 1 of the Road Closure Effectiveness, Achievement of Road Density Standards, and Riparian Plant Use/Trampling. EF

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Design & Structure

COMMENTS: Meanings are unclear or definitions inaccurate; references and citations are lacking; the DFPR and DEIS are inconsistent with each other; the text and maps are inconsistent with each other; and prescriptions, charts, maps, and columns are often not appropriately named or described. Add a code at the bottom of each page to identify DFPR or DEIS; expand readers guide at beginning of each chapter. DFPR and DEIS are inconsistent due to conflict between old production of goods emphasis and new ecosystem management focus. The DFPR is overly complicated, confusing, and time consuming to grasp; a waste of tax dollars; and marred by verbatim repetition.

282, 489, 643, 695, 766, 1200, 1276, 1446

RESPONSE: Based on public comments and internal review, the Forest brought more consistency to the Final EIS and Revised Plan, and used clearer language and graphics to describe proposed management and its consequences. Nonetheless, the subject matter is often complex; documents are written for a broad audience including lay persons and scientists; and there are limits to how much simplification can be achieved.

The Forest added more terms to the glossary and attempted to define these terms in non-technical terminology. We removed direction that is redundant in law, regulation or policy and cited this in the appendix. We included citations and references to technical documents and listed these in full in the back of the Plan and EIS. We reviewed the Plan and EIS for consistency of terms both within and between them. And we responded to a tremendous amount of public comment on the draft documents, much of which dealt with readability and consistency. The final documents are improved over the drafts, and we are open to suggestions on subsequent improvements or explanatory materials that might aid users in understanding them more fully.

Some commenters noted a conflict in the documents between ecosystem management and proposed management. Ecosystem management is an evolving concept. The Forest Service still has responsibilities to adjacent public and private landowners to minimize damage proceeding from National Forest System lands. Stewardship responsibilities on the Forest can present dilemmas in the form of conflicting species needs or other questions. These and other competing demands on Forest resources and lands may appear to limit the application of "pure" ecosystem management. The Revised Plan will preserve the pieces and provide for restoration where needed. EF

COMMENTS: Request changes or corrections, additions or deletions, explanation or clarification: provide clarification of prescriptions and maps in subsections of Chapter III as these are too complex; eliminate numerous inconsistencies in Section III pages 26-55 - the Figures list prescriptions and the attendant acres for prescriptions in a Table, but many of the prescriptions are not listed on the map or are listed on the map but not in the Table. The Desired Future Conditions do not list similar statements in the Standards and Guidelines section for Goals and Objectives. These two sections should support each other. There are no "core" or "security" areas shown for Henry's Lake BMU or "security" area for Bechler-Teton BMU. Page III-42 lists a prescription 1.1.1 for 10,664 acres, but there is no prescription 1.1.1 shown. Where do these acres belong? The entire section

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must be reviewed and the information adjusted to reflect consistency with maps, tables and narrative.

282, 1446

RESPONSE: Chapter III of the Final Revised Plan shows management direction at the Forestwide, subsection and prescription area levels. We acknowledge that the interaction between layers of direction is not easily grasped and will require some time working with it to become comfortable. We explained this system in more detail in the Introduction section in Chapter III, and cleaned up errors and inconsistencies in the places mentioned. Thank you for your comments.

The Desired Future Condition (DFC) statements in the subsection descriptions are based on conditions in, and are unique to, each individual subsection. The goals and objectives listed in the Forestwide Standards and Guidelines are broader in scope and pertain to the Forest as a whole. The DFC's for the individual subsections fall within the scope of, and are supported by, Forestwide goals and objectives.

There are no core or security area prescriptions for Henry's Lake BMU. Prescription 2.6.5 provides a security area in the Bechler-Teton BMU in addition to the extensive areas in designated wilderness. There are several other prescriptions applied to these areas that contain the needed attributes to serve as core areas, according to the Interagency Grizzly Bear Committee definition. These include designated and proposed wilderness, nonmotorized, research natural area and wild and scenic river prescriptions. A "core area" analyses is displayed for each BMU in the Final EIS that shows how much of each BMU meets "core" criteria. The grizzly bear habitat is adequately protected using this range of prescriptions. EF

COMMENTS: Define NIC.

697

RESPONSE: See Glossary in the Final Revised Plan. EF

COMMENTS: Pages III 66 & 97 use heading "Ecological Process," yet page III 75 uses "Ecological Events." Explain difference if any.

1446

RESPONSE: The correct term is "Ecological Processes". We made the change to be consistent. EF

COMMENTS: Subsection descriptions do not contribute any more information than could have been included under Standards, Guidelines, and Prescriptions. It is a confusing array of database and DFC's in the middle of strategies and methods for achieving plan goals. Describe what ecological analysis was used to form the basis of subsection descriptions.

643, 697

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RESPONSE: The Forest applied information from the National Hierarchical Framework of Ecological Units with particular attention to the subsection level. Viewing the ecosystem from different levels is a concept consistent with ecosystem management principles. By looking at the Forest from the Forestwide, subsection and prescription area levels, we gained some perspective on management that we otherwise would not have had.

Some of the information and analysis tools used to describe the subsections include the Integrated Resource Inventory, a professional agency effort which has mapped and described vegetation and soils on the entire Forest; the Geographic Information System (GIS) data storage and retrieval whose base was derived from commercial satellite data and Forest timber stand exam; and Forest specialist's knowledge of on-Forest conditions coupled with professional understanding of soils, vegetation succession patterns, visitor use patterns, and so forth. EF

COMMENTS: The boundary between the Teton Range subsection and the Madison Plateau and Island Park subsections is unclear (written and map). This could potentially lead to a miscalculation of potential/future timber outputs.

1311

RESPONSE: Harvest is not scheduled on a subsection basis. Individual timber harvest proposals are made on the basis of prescription direction and evaluated against standards and guidelines. The Forest does not foresee a problem with calculation of potential timber outputs based on subsection boundaries. EF

COMMENTS: On Map #10, Alt 3M Prescriptions, designation 7.1 (Intermingled Public/Private Lands) explain to people that the intention was to construct a fire break. The same situation should apply to the west side of the Tetons. Suggest using the same prescription as for Henry's Lake instead of #7.1 a&b.

1360

RESPONSE: Prescription 7.1 was deleted from the menu of prescriptions used in the Final Revised Plan. EF

Ecosystem Management

COMMENTS: Lack of ecosystem view is evident in the artificial separation of plant community dynamics and those of aquatic/riparian communities. Principles of ecosystem management are not readily discernable. DFPR is inconsistent or misleading in definitions of forested, created opening, late seral, and ages of tree stands; it is incorrect in its analysis of successional and climax communities; it uses too narrow a time frame to evaluate landscape and ecosystem changes; it assumes that logging and related silviculture activities are effective methods to restore ecosystem health, and fire and insects are undesirable; and time frames for analysis are so long as to be ineffective. Although the DFPR includes some excellent steps toward a sustainable future, it is seriously flawed, especially in the understanding of ecosystem management; and in allowing unscheduled or "ghost" harvests. Unlimited vegetative manipulation under the guise of ecosystem management may lead to extensive logging with no analysis of environmental consequences.

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Clarify if the Ecosystem Management process was subjected to the NEPA process. Others support the Draft Forest Plan Revision (DFPR) in the way it departs from previous management practices; or favor the section of Needs for Change (pages II 3-4) as commendable and needed.

607, 643, 695, 697, 766

RESPONSE: Ecosystem management was officially announced as policy for the management of the National Forests and Grasslands on June 4, 1992 by then Chief F. Dale Robertson. In his letter, Chief Robertson stated,

"...the Forest Service is committed to using an ecological approach in the future management of the National Forests and Grasslands. By ecosystem management, we mean an ecological approach will be used to achieve the multiple-use management of the National Forests and Grasslands. It means that we must blend the needs of people and environmental values in such a way that the National Forests and Grasslands represent diverse, healthy, productive, and sustainable ecosystems."

The Chief went on to direct that, as forest plans are amended or revised, they should reflect the new policy on ecosystem management. The policy is not to question under NEPA whether or not to implement it, except as it pertains to the No Action alternative. As such we comply with this national direction.

Management of ecosystems is a tremendously large and complex subject which necessarily must be broken into parts to facilitate description. This disaggregation can be termed an artificial separation of related components regardless of how it is done. We added direction for properly functioning condition (Forestwide Standards and Guidelines, Ecological Processes and Patterns) which applies to all ecosystems including aquatic/riparian areas. Such a large subject can be described only in its components. The direction in the Final Revised Plan is integrated and singular in intent despite being described in several parts.

The Final Revised Plan is built on a number of ecosystem management concepts, such as disturbance regimes, vegetation seral stage, properly functioning condition, and the allowance for vegetation manipulation in forested and sagebrush/grassland habitats to meet related objectives.

Ideally we will be able to reference a larger-scale analysis of the Greater Yellowstone Ecosystem in the future which would provide the basis for meaningful standards and guidelines defining the role of the Forest within it.

We used current accepted science to design standards and guidelines for hydrologic disturbance and grizzly bear and aquatic/riparian habitat which will protect and preserve the essential pieces and restore habitat where needed. In the Final Revised Plan we refined certain definitions and analyses related to successional and climax communities (Forestwide Standards and Guidelines for Vegetation), based on recent work by the agency to define old-growth characteristics (USDA Forest Service, 1993). We committed ourselves to gain further information through appropriate research and studies, and management will be refined as we learn more.

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Permitting the unfettered play of potentially catastrophic disturbance agents such as insects, disease and fire would be poor stewardship of increasingly scarce and valuable resources, and would recklessly threaten adjacent property. Ecosystem management can be carried out in a prudent manner which reduces risks to resource values and neighbors. Vegetation management tools including prescribed fire and timber harvest, used judiciously, can in many instances restore balance and healthy conditions where these are now lacking. Monitoring and adaptive management trials will confirm successful practices and help to develop new ones.

We added a standard (Forestwide Standards and Guidelines for Vegetation) capping timber harvest on lands not included in calculation of the allowable sale quantity (ASQ) at 20 million board feet (MMBF) per decade. This will give enough flexibility to manage vegetation where it is most needed to be consistent with ecosystem management principles, yet address the concerns about unlimited treatments. EF

COMMENTS: Explain why a major need for change for revising the Plan has disappeared. Timber harvest objectives and management were identified as major reasons for revising the Plan in early scoping, since bug and fire disturbances have passed. Development of plan appears to be top-down driven instead of locally developed.

1202

RESPONSE: This need for change is described in the Analysis of the Management Situation section of the Revised Plan, Chapter II. An intensive public involvement effort, primarily consisting of local participants has been ongoing since the revision began 6 years ago. RR

COMMENTS: In your discussion of need for change, explain why you feel the revised Forest Plan will be more sustainable than the 1985 Plan.

228

RESPONSE: The original 1985 Plan was never sustainable by intent, with respect to timber harvest levels. The driving purpose for the plan was to provide for aggressive, efficient harvest of dead and dying lodgepole pine stands as quickly as possible and begin renewing the forest with an aggressive reforestation program. These levels of harvest were unsustainable and were primarily salvage of a resource which would be lost if action was not taken. In contrast, the Revised Plan recognizes that the salvage era is over, and the new focus is to manage the lodgepole community type, which is virtually a "new" forest, at a sustainable level for the future. The ASQ level of proposed harvest is sustainable at low levels in this coming decade until the lodgepole becomes commercial size in the future. At this time harvest levels could increase to reflect the ingrowth of stands attaining harvestable size. RR

Desired Future Condition

COMMENTS: Clarify DFC goals, objectives, standards and guidelines because they are a hodge-podge of statements that are inadequate to set a clear

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direction for the future; are often confusing because standards and guidelines may appear in isolation rather than clearly tied to an objective; and are not in parallel form. The Plan is inconsistent in definitions of Desired Future Conditions. Methods are driving outcome in the plan; if the Forest Service defined "desired ecological conditions" first, an entirely different plan would have been developed. Develop methods for determining differences between current and desired conditions. The Plan needs better provisions for restoration. Move away from harvest and allow ecological recovery; adequate improvements be made to keep the area as an ecological system, not a maze of stumps and washed-out roads.

183, 489, 643, 695, 697, 1367b

RESPONSE: The Forest changed the organization of direction in the Final Revised Plan to better facilitate understanding. There are three levels of direction in the Plan--Forestwide, subsection, and prescription area. Each has goals, objectives, standards and guidelines. Since this layering was confusing, we explained the concept further in the Final (Chapter III).

Goals and objectives, and standards and guidelines at all three levels of direction were developed subsequent to establishment of Desired Future Conditions and flow logically from the DFC's. Standards and guidelines represent constraints on management actions. They may respond to goals and objectives in the Final Plan which are specific to conditions on the Targhee; or they may respond to standing direction for the management of all national forests, which is referenced in Appendix A. If the latter is the case, a standard may not appear to be directly related to goals and objectives in the Plan other than by subject matter.

The goals and objectives in the Final Revised Plan are well-stated and definable. The Desired Future Conditions and corresponding goals and objectives are consistent in their intent within the Final Revised Plan and FEIS. A major step in implementing the Final Revised Plan will be to determine differences between current conditions and desired conditions represented by goals and objectives. These differences can be characterized as opportunities for management and will form the basis for management actions over the next ten to fifteen years.

An objective look at the glass as half full rather than half empty will reveal that most harvested areas are regenerating adequately if not vigorously, thus achieving a major goal of the original Forest Plan. The programmed harvest over the next decade is one-tenth that conducted under the original Forest Plan. Occasional localized erosion problems on roads and trails are addressed in the Final Revised Plan through closure or rehabilitation.

The standards and guidelines in the Final Revised Plan adequately protect fish and wildlife habitat and plant species and meet the mandate of the NFMA. Direction for aquatic habitat and riparian areas is greatly improved over the original Forest Plan by using new information. The pieces of the ecosystem are preserved and restoration programmed where needed. The Final Revised Plan is unambiguous in featuring ecological restoration. EF

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More Protections

COMMENTS: Impacts from logging and intense recreational and motorized use must be better analyzed, and better standards and guidelines or more restrictive measures taken, to protect the ecosystem, wildlife, wetlands, riparian areas, indicator species, archaeological and historical artifacts, biological corridors, air and visual quality. Have fewer and smaller roads for wildlife security and visual impacts. The standards and guidelines should contain fewer exceptions or caveats because these indicate lack of commitment, and lack of confidence that compliance is feasible. Some guidelines be made standards; standards be more precise and better enforced.

643, 697, 766, 1365, 1367b, 1369, 1446

RESPONSE: Analysis shows that the standards and guidelines in the Final Revised Plan will be effective in meeting the goals and objectives and provide adequate protection for Forest resources. The road closures to be implemented under the Final Revised Plan represent a balance of needs for protection with other uses of the Forest.

A major factor in deliberations between standards or guidelines was to include a certain amount of flexibility to address changing conditions, knowledge and opportunities, and to address unforeseen circumstances. The intent of direction stated in Chapter III of the Final Revised Plan is clear with respect to standards and guidelines, as are the definitions in the Glossary. Adherence to standards is not optional and guidelines normally will be followed or a written rationale explanation given as to why they were not. Management direction is clearly stated and the intent is unequivocal. EF

COMMENTS: Page III-3-5, Caves: Guidelines 1, 2, and 3 should be standards.

Page III-6, Minerals: Standard and Guideline 2 should read, "The Forest is not open to exploration and development and production of locatable, leasable, and mineral material resources unless otherwise specified in the management prescriptions." The prescriptions should be altered accordingly. The default management provision should generally be the most conservative guideline or standard of those available.

Page III-8: This section should include standards and guidelines that will ensure the protection of special forest products and the habitats and species which their use may negatively impact.

Page III-56, Timber Management: Eliminate prescriptions 5.1.3a and 5.1.3b

Page III-70, Soils and Water; Lands: All four guidelines should be standards.

Page III-71: No motorized activity should be permitted, and especially cross-country motorized activity should be prohibited.

Page III-71, Roads: No new roads should be permitted.

Page III-71, Recreation: The ROS guideline should be a standard requiring primitive to semi-primitive nonmotorized.

Page III-71, Timber: The guideline should be a standard.

Page III-72, Range: The guideline should be a standard prohibiting grazing and associated developments unless it can be shown that negative environmental impacts will not and are not occurring.

Page III-73, Fire/Fuels: The MIST guidelines should be standards.

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Page III-73, Physical Elements: All the guidelines should be standards.

1365

RESPONSE: The Forest Leadership Team considered these proposed changes but decided not to adopt them.

With respect to protection of special forest products, habitats and species, the Forest has not experienced much demand for these products. If demand increases we will assess the pressure on resources at that time and can amend the Plan if needed.

The goal of these prescriptions, 5.1.3(a) and 5.1.3(b), is to manage vegetation and fuels to minimize fire risk for urban facilities within the interface zone on the Forest. Development has increased within and adjacent to Forest lands in Island Park, the Bighole Mountains and the Pallsades Reservoir area where this prescription is applied. It is unwise to hamper abilities to mitigate dangerous forest fuel conditions by removing this prescription from the Final Revised Plan.

The comments on pages III-70 through III-72 pertain to prescription 2.1.1, Special Management Areas. In the Final Revised Plan, summer motorized cross-country travel is prohibited on all but 7% of the Forest. This adequately protects the character of the areas where this prescription is applied. We believe the remaining proposed changes to this prescription are unwarranted and restricts the ability to manage these areas in the public interest. EF

Public Involvement Process

COMMENTS: The DFPR is biased against people; does not adequately address public opinion; proposes too much wilderness; and does not consider the needs of the local communities. The Plan implies that lawsuits reflect changing social needs and desires when they really only represent certain groups who take the time and effort to obstruct management. The Plan is biased against people toward wildlife; favors certain groups or special interests. The Plan must consider impacts to local communities and economy. No evidence on how public concerns are reflected. Even after making great efforts to attend public meetings and participate in the process, public opinion is not considered so it seems a wasted effort. My input was not considered. 90, 166, 229, 296, 413, 435, 689, 1368, 1369, 1389

RESPONSE: All comments from participants in the process were considered. It is incorrect to assume that, because a participant did not see the results they hoped for, their input was not considered. There has been a tremendous amount of deliberation regarding the competing uses of the Forest. Likewise, Forest specialists considered the implications of much recent scientific knowledge having a bearing on a number of these issues. Through it all, the Forest sought a reasonable balance between use and protection of National Forest System lands.

The FEIS describes demands on Forest resources, presents stewardship needs, and shows the consequences of implementing a range of alternatives. Effects to the economy of local counties are included in this

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assessment. The Final Revised Plan provides direction to meet a variety of demands as well as our stewardship responsibilities.

Appeals and litigation were but one measure of changing social conditions which called for a Forest Plan Revision. The myriad of public concerns considered in this effort are shown in several places. The Analysis of the Management Situation (AMS) contains a chapter detailing the issues raised during the initial scoping period at the beginning of the process. Records of public involvement meetings and expressions are included in the planning files. The Final EIS includes a synopsis of public comments on the Draft EIS and Revised Plan and Forest's responses to them, giving an indication of how public comment is reflected in the final documents. EF

COMMENTS: In using Change by Advantage (CBA) as a decision tool, decision factors seem skewed toward environmental factors and not enough consideration of jobs, Cross-country, OHV-use, snowmobile use without date restrictions, and firewood. These factors must be added as key issues to CBA.

413

RESPONSE: The Choosing By Advantages (CBA) process is an effective decision making tool. It was used by the Forest Leadership Team to pick a preferred alternative for the Draft EIS and Revised Plan. It was not used to select the final alternative. There is inherent subjectivity in the process, which can be both a strength and a drawback. The Leadership Team rated those advantages of each alternative the highest which were seen as most important. Rather than being purely a mechanical process, Forest managers could emphasize the importance of advantages as they saw them both from a resource and social standpoint. In this way the Forest harnessed the strength of the subjectivity of the process. EF

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Draft Environmental Impact Statement

COMMENTS: DEIS, Page III-66: Discuss how the Targhee National Forest can make dramatic changes in use and not have an economic effect.

602

Commodity production is overstated in the DEIS, 66 and 69, and is in direct contrast to the facts.

1368

Table III-19 and Table IV-13 put too much emphasis on forest grazing and timber to local communities.

1368

Include a reasonable range of Alternatives for Table IV-13, Summary of Forest Effects on Local Economy and reevaluate the analysis for this table because the same constraints are placed on all Alternatives producing a leveling effect.

413, 1202

Address how management decisions will not have the benefit of NEPA analysis and an alternative that reflects economic impacts of decisions since 1985.

393

Address the Targhee's role in attracting and retaining people and businesses to the area; how the economy of the area has changed over time; the benefits of non-consumptive uses to local economies; and how to provide for sustainable communities.

3, 228, 248, 314, 393, 413, 602, 640, 643, 697, 766, 1198, 1202, 1264, 1267, 1364, 1368, 1384

RESPONSE: Two changes the Forest made could probably be labelled "dramatic." The first is the sharp reduction in scheduled timber harvest from what was established in the original Forest Plan. The Forest could not generate that much timber and meet all the legal requirements under which it operates. The local industry has already downsized in response to that reduction in timber availability.

The second "dramatic" change is the sharp reduction in motorized access. Some of the reductions in motorized access simply reflect effectively closing roads that are already closed. In other words, the roads are currently closed but people have still been using them. The Revised Plan shows these roads as being closed--even though they were already legally closed.

Other roads targeted for closure were never part of the official system of roads on the Forest. Called "ghost roads", they were formed when people simply drove cross-country over the same route several times. Other closures are part of the official road system. Even after these closures, there will be adequate motorized access to the various parts of the forest. There will still be surplus capacity over the coming decade for increased usage on the remaining motorized routes. In later decades capacities will be reached on motorized trails.

The Forest finds no overstatement of commodity production. Those tables present information on forest grazing and timber in order to show differences among the Alternatives.

The alternatives constitute a reasonable range. The constraints used in the alternatives are those necessary to address resource needs like

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those associated with water and wildlife. Removing those constraints would be an interesting exercise, but it would effectively remove the alternatives from the decision space.

The FEIS estimates future environmental consequences with the selection of various alternatives. There is no attempt to present an analysis of the various decisions which have taken place from 1985 to the present. However, the Forest could not produce the outputs specified in the original Forest Plan and comply with all the national, regional and Forest Plan direction. DP

COMMENTS: DEIS, Page II-17, Number of Jobs: Comparisons are not accurate because contributions to total tax base of community was not considered.

432

RESPONSE: In response to this comment, the Forest added a discussion of the local tax base to the Final Revised Plan. The relationship of the job figures to the tax base is indirect. Tax bases are normally expressed in terms of property value--which can change based on locally prevailing market conditions, new industry or commercial developments, residential construction and the like. The tax base question is best addressed separately.

Property values may increase when a local economy grows. However, the electorate may decide to tax property at a lower rate--resulting in the same amount of taxes to local government. It's not a certainty (although a likelihood perhaps) that an increase in the value of a tax base will necessarily translate into more local government services and more local government employment.

Managing the Forest under the different alternatives would not significantly affect local property values and tax bases. The timber mills located in St. Anthony and Rexburg have already closed and much of their equipment has already been removed from their premises. That reduction in the local property tax base has already occurred.

Property values associated with recreational developments are expected to increase under every alternative. Much of this development would likely occur on vacant land or land used for farming or ranching. These developments will be taxed at higher rates than agricultural land. DP

COMMENTS: The Plan does not adequately address the huge social and economic growth of a worldwide ecotourism based economy. Recommend the Area Primary Forest Economic Influence (APFEI) in the DFCs address this growth for the next ten years.

697, 1327

RESPONSE: The FEIS shows that the Forest's primary contribution to the local economy is, and will continue to be, recreation-related. It shows that importance continuing to increase in every alternative considered. The FEIS focuses on items that vary by alternative. DP

COMMENTS: Address and evaluate the economic costs and benefits that could be gained by employing people in local communities in reclamation work including reforestation, watershed, and road restoration. The Targhee could implement a

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program to restore the ecosystem and use it as an opportunity to provide a stable economy.

1364

RESPONSE: Forest Service reforestation, watershed work and road restoration contracts are open to potential contractors within and outside the local area. Local contractors are free to bid on jobs outside the local area as well. Local contractors win some of the local contracts but there is no set-aside program to reserve contracts to them.

Scheduled activities for much of this kind of work (like road restoration) is the same for all alternatives. The Forest focuses on information expected to vary by alternative. DP

Site Specific

COMMENTS: Consider heritage resources in the Island Park area and added costs which do not go back to the forest.

697

RESPONSE: The Forest complies with all federal direction pertaining to heritage resources, as efficiently as possible. DP

Data

COMMENTS: The quality of experimental design and statistical procedures for reevaluating data should be stated.

384

The economic analysis should be subject to outside review when the resulting information may impact important decisions.

384

Analysis should include the regional Economic Information System of the Bureau of Economic Analysis-U.S. Department of Commerce.

1368

Data used for DFPR needs to be more recent.

444, 1368

Cost benefit analysis of economic damages is inadequate because areas considered needs to include more Idaho counties and some in Nevada and Utah.

275, 691, 1202

Use the DEIS, Table III-19, when assembling economic data along with Wyoming Department of Employment Data and self-employed information on non-laboring sources of income.

740, 1368

RESPONSE: In response to comments, the Forest expanded, updated, and corrected the treatment of social and economic effects in the FEIS. Information from the Regional Economic Information System is included. The FEIS is a summary of various analyses which were conducted. More detailed information on particular analyses is available on request, but is not included in the FEIS.

The Forest did not include estimates of "economic damages" on Nevada, Utah, and counties in Idaho other than those previously selected. The

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Forest did not identify just what those "economic damages" might be. Purchasers of local timber products who reside in those areas can buy timber products manufactured in the Area of Primary Forest Economic Influence (APFEI) or from other sources. The more removed a county is from the local area, the more substitutes are likely for any given commodity or activity. Enlarging the APFEI to the suggested proportions would reduce the significance of any change in Forest management, because as the size of the APFEI increases, the economic significance of the Forest in that APFEI decreases. DP

Tourism/ Recreation

(CROSS REFERENCE: Recreation)

COMMENTS: Support recreational opportunities such as; hunting, fishing, hiking, camping, snowmachining, and berry picking because they will provide more economic benefit to the economy than extractive commodity industries. Support recreation because it accounts for a large portion of the Forest Service contribution to the gross domestic products and provides jobs and supports local economies.

Jobs and economics related to forest commodities have decreased while economic growth from other factors has increased. Manage for the growing tourism market which contributes positive economic benefits to state and local economies, including Fremont County. Do not let forest restrictions affect tourism.

Oppose recreation because it will not compensate for the loss of revenue from timber and ranching.

F-G-P(1), F-H(8), 93, 98, 159, 204, 215, 248, 293, 413, 444, 506, 527, 621, 692, 697, 702, 718

RESPONSE: The Revised Plan concurs with the observations that the Forest's contribution to recreation is more important to the local economy than its contribution to timber processing.

The overwhelming bulk of timber harvest reductions occurred before the Revised Plan was put into effect.

The Forest estimates increased recreational use of the forest will counterbalance the losses suffered in the timber and livestock industries. Total jobs and total employee compensation are expected to increase--regardless of which alternative is selected. That does not mean that loggers and mill workers will necessarily desire, seek, or find new work in those sectors. They may be displaced from the area; they may have to take other jobs; or they may have to work multiple jobs.

The Forest expects per capita earnings to decrease in every alternative because we estimated that the replacement jobs associated with recreation will not pay as well as the jobs lost in the timber processing sector. DP

COMMENTS: Clark County should be an exception to the Inplan Economic Model because of low population and lack of tourism/recreation.

691

RESPONSE: The Revised Plan includes more economics information on Clark and all the other individual counties in the APFEI. It shows the real differences which exist from county-to-county. DP

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COMMENTS: Maintaining biodiversity for tourism should be given top priority.
F-H(8), 185

RESPONSE: The Forest must maintain biodiversity in order to respond to ecosystem needs and, as a result, remain attractive for tourism. DP

Recreation - Fees

COMMENTS: Fees generated from hunting, fishing, campers, boats, snowmachines, ATV's/OHV support the forest economically. Establish a more systematic or comprehensive system of recreational user fees when determining the economic value of the forest. User fees should go directly toward the forest to cover impacts.

735, 1194, 1239, 1365

RESPONSE: Most of the fees collected for these activities accrue to the state or county. Permitted outfitters and guides pay fees to the federal government for their business pursuits on the Forest. Establishing a systematic or comprehensive system of recreational user fees is beyond the scope of the Revised Plan. A user fee system would most likely result from a legislative initiative. DP

Range

(CROSS REFERENCE: Range)

COMMENTS: Oppose reducing or phasing out grazing allotments on the Targhee because of the negative economic impacts to the sheep and cattle industry, cultural traditions/heritage and local livelihoods.

Manage grazing allotments for the least amount of damage to the resource.

272, 481, 625, 663, 691, 718, 1187, 1354, 1364, 1381

RESPONSE: A substantial livestock grazing program remains in effect under the Revised Plan. It is consistent with our ecosystem management objectives. Livestock grazing is an outcome of proper management of the range resource. The projected levels of livestock grazing will allow us to improve the range resource. The gradual phase out of some sheep allotments is designed to minimize impact to individual operators as it is to be conducted on an opportunity basis. DP

Timber

(CROSS REFERENCE: Timber)

COMMENTS: Oppose logging limits because timber provides resources for the furniture industry; business opportunities; supports construction industry; raw materials; personal wages; balances the local economies; provides taxes and treasury receipts to counties. Restricting timber activities will have a negative affect on economy. Timber sales should be designed and offered to local operators rather than out-of-state mills. The Targhee should offer at least 5 mmbf to local operators. Private industry would be limited to implement sound management practices without a timber supply. Those who

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appeal timber sales should put up as much money as those who bid on timber sales.

Oppose below cost timber sales because they are not economically beneficial to taxpayers. Prescribed burns would be a better management tool because reforestation costs and erosion would be less.

F-G-P(1), F-H(8), 29, 64, 168, 204, 268, 269, 272, 394, 505, 525, 663, 693, 697, 718, 1202, 1242, 1259, 1339, 1365, 1368, 1386, 1389

RESPONSE: Timber harvesting is an important part of ecosystem management. In caring for the resource we provide a continuing supply of raw material for the various uses described above. All the alternatives provide a continuing supply of raw materials.

Changing the procedures for handling logging appeals is outside the scope of a Forest Plan Revision. The Forest has no authority to exclude nonlocal operators from bidding on, or purchasing Forest timber. Such a proposal would require a legislative initiative. Local operators are free to bid on and purchase timber from other National Forests.

The Forest is concerned about below-cost timber sales and is working to improve efficiency in operations, to reduce the costs of reforestation and road work. Prescribed burns are recognized as a legitimate management tool and will be employed where appropriate. DP

COMMENTS: Once sustainable harvest levels are achieved the economic benefits will occur.

1242

RESPONSE: None of the alternatives harvest timber at nonsustainable levels. DP

COMMENTS: Conduct a true economic evaluation with 20 MMBF ASQ.

1267

RESPONSE: Forest Service personnel conducted numerous reviews of the proposed timber harvest schedules. Harvests at 20 MMBF ASQ would put the Forest in violation of established Standards and Guidelines which are designed to protect the soil, water, and wildlife resources. DP

Wildlife

(CROSS REFERENCE: Wildlife)

COMMENTS: Oppose management efforts to protect wildlife and wildlife habitat because of the economic benefits they provide (i.e. hunting, fishing) for the future. The loss of some local commercial revenues is a nominal price to pay for wildlife protection.

185, 318, 328, 527, 1365

Do not support management efforts to protect wildlife and wildlife habitat, (i.e. grizzly bears, wolves, bighorn sheep) because people's values, interest and livelihoods are more important.

1, 59, 447, 525, 663, 1187, 1354, 1381

RESPONSE: The Forest can simultaneously protect the resource and provide valuable recreational opportunities in the form of hunting and fishing. The

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two are not mutually exclusive. All the alternatives provide for a continuation of abundant habitat for various wildlife species. DP

COMMENTS: Develop an alternative to show the social/economic costs of meeting elk security and measures used to mitigate the issue.

393

RESPONSE: The alternatives displayed in the FEIS show a wide range of management and corresponding changes in elk vulnerability, budgets, Present Net Value, jobs, employee compensation, and social information. DP

COMMENTS: Address the amount of money the forest would save if we protect species by preserving habitat and attempt to pre-empt their listing under Endangered Species Act.

1364

RESPONSE: The broad thrust of Forest wildlife management is to provide adequate habitat for all species. The Region maintains a listing of sensitive species we hope to keep off the threatened or endangered lists.

Any estimates as to the amount of money saved by such actions are highly speculative. Indeed, there is no assurance that such actions save money at all. Conducting such a study is outside the scope of a Forest Plan Revision. DP

General

COMMENTS: Recognize and manage for local economic opportunities; consider industry as a source of local economic/social well being; differentiate between publics who are more impacted by Plan decisions; consider local taxpayers needs; don't limit local economy because of past corporation abuse.

F-A(344), F-C(13), 61, 168, 663

Recognize and manage to the highest possible standard of natural resource health and do not be influenced by other economic interests; balance the commercial use of the forest with protection of wildlife and people for all Americans and their heirs.

271, 393, 625, 1365

RESPONSE: In order to better respond to these concerns, the Forest expanded the amount of information in the FEIS. All the alternatives are designed to adequately address ecosystem concerns such as those described above. Differences in the alternatives vary in their respective emphases but adequately respond to ecosystem concerns. DP

COMMENTS: Ecosystem management provides local economic benefits as well as a unique ecosystem. It should receive high priority funding and implementation.

61, 159, 196, 393, 1380

RESPONSE: Ecosystem management provides for the needs of the ecosystem and provides local economic benefits. The Revised Forest Plan reflects our commitment to fund and implement its provisions. DP

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Alternatives

(CROSS REFERENCE: Alternatives)

COMMENTS: Oppose Alternative 3M because of the potential negative effect to local economies, specifically logging and recreation.

292, 402, 413, 429, 464, 465, 477, 628, 689, 702, 1189, 1271, 1335, 1339, 1389, 1448, 1448b

RESPONSE: The Forest estimates local businesses associated with recreation will generally continue to grow under all the alternatives because the Forest enjoys a general surplus of recreational opportunities (supply) in excess of existing and anticipated demand over the coming decade.

The closure of hundreds of miles of roads and motorized trails to motorized use and the closure of a great deal of forest to cross-country summer motorized use may drive motorized recreation users from the Forest. It is also possible that they will simply use the remaining open roads, trails, and cross-country areas more intensively. If they cease using the Forest for motorized recreation, it is possible others will take their place. It is also possible that those who enjoy nonmotorized recreation will increase their use of the Forest.

Motorized trail use is one of the very few categories of recreation in which we expect to see demand outstripping supply after the first decade of Plan implementation.

The negative effects from reduced logging levels have already been experienced in the local area. Mills in Rexburg and St. Anthony were closed and their lumber processing equipment removed. There is a small reduction in timber harvest associated with the Forest Plan Revision. Its effects are included in the FEIS along with those for the other alternatives considered.
DP

Access

(CROSS REFERENCE: Access)

COMMENTS: Support more motorized access because it provides economic gain in farming, logging, grazing, local business and recreational (profit) opportunities. Support access because resources should be made available to taxpayers; taxpayer dollars should not be used to close roads; taxpayers should be allowed access for economic gain.

F-C(13), 29, 392, 447, 455, 467, 468, 505, 524, 700, 704, 728, 1259

RESPONSE: Motorized access facilitates farming, logging, livestock grazing, and business uses associated with motorized recreation. Access for these uses is a valid concern. Motorized access provided in the Final Revised Plan is adequate for these needs. DP

COMMENTS: Use money from the Idaho Department of Parks and Recreation-ORV program which would allow better management of the forest and give users, "excellent return for fees".

348, 629

RESPONSE: The Forest works cooperatively with state agencies to improve the resource and recreational experiences. We have completed partnership-funded

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projects for trail reconstruction, construction of snow parks and boat ramps, and reconstruction of campground facilities throughout the Forest. We will continue to initiate cooperative projects of this nature, using state funding from the RV and ORMV funds. AS/DP

COMMENTS: Oppose ORV access into roadless areas because of the negative economic impact on my business. (CROSS REFERENCE: Wilderness)

392

RESPONSE: Motorized use can threaten other forms of recreation and recreation-related employment. The Revised Plan strikes a good balance between these competing needs. DP

PILT and 25% Fund

COMMENTS: Explain how PILT payments remain the same in all Alternatives, if the 25% Funds vary and if PILT payments are dependent on 25% Fund. Explain how PILT payments change with the decrease/increase in populations of affected counties.

If ASQ is dropped as proposed (25% Fund) the amount of monies returned to counties will drop significantly and have a negative impact on the forest and surrounding communities.

228, 413, 432, 689, 1384

Explain how reduced ASQ or grazing will lead to lower payments to counties. All the counties that receive payments from activities on the Targhee receive 25% Fund payments for below the minimum amount guaranteed to them by PILT. In 1994 25% Fund payments ranged from \$1.01 per acre to \$0.191 per acre, while the remainder was supplemented by PILT to \$0.75 per acre. Even if the 25% Fund were to drop to zero, counties would still receive \$0.75 per acre.

1365

RESPONSE: In response to these and other comments, the discussion on payments to local governments in the documents has been updated and greatly expanded. There is not a direct trade-off between PILT payments and the 25% Fund payments. That is, a \$1 reduction in 25% Fund Payments does not translate into a \$1 increase in PILT in every case. Depending on a county's population, area and other considerations, there may be no effect at all.

It is incorrect to say that counties would still receive \$0.75 per acre from the PILT program. Clark County for instance, has a PILT ceiling based on its population. For the foreseeable future, its PILT payments will only change as a result of recently-implemented changes in the PILT formula, funding, changes in the consumer price index, and the county's population. DP

COMMENTS: PILT payments made to Clark Country are low because population numbers are small. Dividends currently being distributed should remain the same.

691

RESPONSE: Clark County's PILT payments are low because of its small population. Future PILT payments for Clark County will only be affected by changes in its population, implementation of the legislative changes to the

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PILT formula, changes in the consumer price index, and congressional funding of PILT payments. Under the recent legislative changes to the PILT formula, PILT payments to Clark County will increase substantially if they are funded at the same proportions as in the past. DP

ECOSYSTEM MANAGEMENT - THE CONCEPT

Definitions and Goals

COMMENTS: Want the definition of EM to be clearer, changed, modified, or with additional information:

- Define EM as "managing multiple uses of Forest so that management does not disturb the intricate interrelationships" of Forest components; include EM as managing for all Forest values.
 - Clarify the term "EM" without using words like ecocentric, ecoregion, etc.
 - Provide a clear working definition of EM; define activities that can occur in EM.
 - Add adaptive management flexibility, human/social, and global factors to the definition.
 - Add Aquatic Influence Zones, riparian areas, fisheries to the definition.
 - Clarify difference between EM and silviculture (tree farming).
- 190, 252, 275, 280, 282, 384, 413, 489, 643, 665, 697, 734, 1257, 1264, 1276, 1364, 1341

RESPONSE: While there are many definitions proposed for EM in scientific literature, all of them incorporate similar core principles with differing emphases. The definition provided in the glossary states the fundamental concepts in applying EM as the framework for the revised Plan on the Targhee. It is taken from General Technical Report RM-246, An Ecological Basis for Ecosystem Management, May 1994. The definition is not intended to be comprehensive or exhaustive.

Some specific attributes of EM are discussed in the Plan and DEIS. We briefly define EM and show how we are implementing the core concepts of EM in plan direction for the next decade, while disclosing expected effects of permitted activities. We do not offer a treatise or literature search of EM concepts and definitions.

The Revised Plan provides an integrated, holistic approach to managing Forest resources in an ecological context. Because analyzing all ecosystem components is enormously cost prohibitive, selected critical components of ecosystems are evaluated as indicators of overall ecosystem health and sustainability. In some cases, this evaluation of effects occurs in a larger context, such as in an ecoregion. The Revised Plan is a significant departure from the traditional, narrow, single resource emphasis. Silvicultural and range management techniques which are valid scientifically will continue to be used where they meet ecological health and multiple use objectives.

Forest health is broadly implied in the definition of EM as "healthy ecosystems." We have added a section in Forestwide Standards and Guidelines on Properly Functioning Condition (PFC) which describes direction for maintaining or promoting forest health. PFC is a more specific application under the broader EM umbrella.

While not explicitly incorporated into the glossary definition of EM, adaptive management and flexibility are critical elements of effective EM implementation, especially in monitoring and evaluation and refining and modifying practices.

The EM definition includes language about "social, physical, economic, and biological needs and values", thereby including human and global

ECOSYSTEM MANAGEMENT - THE CONCEPT

factors in the equation. Public input and scientific review continues to be a routine, ongoing practice for EM and the Plan.

A definition of silviculture is included in the Glossary section of the Plan. It focuses on using principles of tree and forest biology to meet specific land management objectives, including furthering the health of non-timber resources.

The "productive, healthy ecosystems" language implicitly includes Aquatic Influence Zones, riparian areas, and fisheries in the definition of EM. RR

COMMENTS: Clarify, change, add to the goals of ecosystem management:

- Add to EM goals "the conservation of a unique and irreplaceable part of the Greater Yellowstone Ecosystem as a priority above all other considerations."
 - Make goal of EM to protect or improve the integrity biodiversity; "native biodiversity", entire ecosystem; "ecosystem function"; not simply to minimize negative impacts.
 - Base goal of EM on what citizens of US want from their lands: balanced use; meeting equal interests for people, companies, wildlife and other resources.
 - Add goals for restoring habitat; and/or health of the Forest by reestablishing missing wildlife populations; managing watersheds; providing long-term health; sustainability; protection of all species and their habitat.
 - Maintain Ecosystem for tourism as a top priority goal.
- 12, 23, 27, 73, 167, 173, 179, 215, 242, 266, 325, 370, 384, 399, 489, 643, 659, 695, 697, 1193, 1275, 1276, 1365, 1369, 1392, 1399

RESPONSE: The Targhee recognizes the uniqueness of the Greater Yellowstone Ecosystem (GYE). The Plan reflects that emphasis through specific treatment for grizzly bears, watershed, fisheries, etc. The Plan provides guidance to ensure that activities which produce commodity outputs, such as timber or grazing, do so in a fashion that maintains ecological integrity and function.

Management direction includes pro-active efforts in providing the ecological conditions and diversity which promotes healthy forests, not just mitigative actions to minimize adverse effects. The preferred alternative reflects a balance of competing interests and conflicting objectives in an even-handed manner.

Protection is a minimum threshold for permitted management actions. The Plan goes beyond protection to address desired conditions and to provide the means to move the Forest forward to healthy ecosystems.

The National Forests are principally concerned with providing habitat conditions conducive to sustaining endemic wildlife populations. Responsibility for re-establishing species extinct from their historic range belongs to the states or the U.S. Fish and Wildlife Service (FWS) where the species is listed as threatened or endangered. The Targhee cooperates with the FWS in establishing habitat conditions for recovery of the grizzly bear, bald eagle, and peregrine falcon. Region 4's sensitive species, such as the northern goshawk, receive specific attention to maintain favorable habitat conditions to sustain viable populations. Watershed boundaries are explicitly used as domains for management directions and guidance.

ECOSYSTEM MANAGEMENT - THE CONCEPT

Tourism is but one of many aspects of sustainability that EM considers. The Plan allows for a balanced approach towards resource sustainability that includes tourism. RR

COMMENTS: Establish a board of scientific advisors to help implement EM goals.

1276, 384, 643

RESPONSE: The Targhee employs highly qualified, resource experts who are active in the daily implementation of EM on the Forest. We will continue to participate in a number of partnership agreements with the scientific community to assist the Forest in implementing EM. We expect members of the scientific and research community to continue to provide input to project proposals. RR

COMMENTS: Integrate EM goals between subsections, the Forest and Greater Yellowstone Area.

643

RESPONSE: The Revised Plan does this through its ecological subsection descriptions, and its forestwide programmatic direction. RR

COMMENTS: Base EM on wildlife science and a full spectrum of regulations, not on logging dictates or practices.

179, 293, 643, 669

RESPONSE: The Revised Plan provides for a balance of considerations, including wildlife and wood production. RR

COMMENTS: Base EM on good science, not local cultural preferences or politics.

293

RESPONSE: By definition, EM includes "social, physical, economic, and biological" considerations, meaning that EM is based on good science, local cultural preferences, politics, and many other factors. RR

COMMENTS: Develop EM hypothesis through objectives and policies, test EM hypothesis, monitor EM effectiveness.

1249

RESPONSE: The Plan adopts the applicable concepts, objectives and policies available for implementing EM. Built into the Plan and EM process are "adaptive management" principles including a practical monitoring plan which provides feedback on project implementation and effectiveness. This yields important information on our overall success in implementing EM. RR

Support/Non-Support of EM Concept

COMMENTS: Support Concept of EM because it will restore health of Forest, prevents further damage and is "the right thing to do."

430, 643, 1242, 1276, 1312, 1365

RESPONSE: We agree that EM is the best approach to forest management. RR

COMMENTS: Do not support EM concept because:

- Not approved by Congress; not legal.
- Does not follow NEPA process for EM and FS uses faulty assumptions conditions and restrictions in its implementation of EM.
- Forest doesn't have a "solid understanding" of EM and needs to consult with more scientists; needs more citations, studies, measurements, "solid evidence", peer reviews, and scientific studies to justify EM.
- EM is not understood and is a "vague concept;" too philosophical; not enough known yet.
- EM provides "too much management."
- Ecosystem does not need improvements; current management approach "has been done well."
- EM is biocentric in design and application, based on value systems. F-G-2(2), 5, 6, 28, 38, 62, 161, 182, 211, 258, 265, 311, 319, 382, 388, 393, 438, 607, 689, 727, 734, 1202, 1276, 1317, 1448b

RESPONSE: An important foundation of legislation governing Forest Service management is the premise that "best science" will be used. Scientific advancement in natural resource management has led to the widely accepted conclusion that natural resources exist in ecosystems, not as independent entities apart from the processes that act on them nor out of context with other components that coexist with them in their native setting. Ecosystem management is the result of best available science and is fully consistent in meeting existing law and regulation.

EM is not a Federal "proposed action" which triggers NEPA, but a conceptual framework for natural resource management. Activities which implement EM, such as the Forest Plan Revision, are subject to NEPA and are analyzed and disclosed according to established NEPA procedures.

Because we use the EM process throughout the Plan revision, we included provisions for adaptive management which requires a checkup of our actions, an evaluation of the results, and a prescriptive action to correct, modify or affirm the original action. We use the developing and established scientific basis for EM in our proposed activities.

We have and will continue to consult with experts within and outside the agency.

A bibliography is provided in Appendix R-1 of the Plan. We have added some EM literature that is commonly used by land management agencies and universities. The Forest Service began a transition to EM about 1989 through its "New Perspectives" program, then adopted EM as the approach for the agency in 1992.

As a concept, EM is broad but not undefined. It becomes more specific when individual projects are proposed which implement the general EM principles. This revision adds substantial detail to how the Targhee will implement EM at the forestwide scale. See "Forestwide Standards and Guidelines, Ecological Processes and Patterns" section for more specifics. The Targhee made efforts to ensure continued local and national access and public participation in the management of public lands while protecting and maintaining resource values.

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An abundance of scientific evidence exists to support using EM at the level proposed in the Plan. (See references added to the bibliography in Appendix R-1, which includes peer review publications.) Granted, philosophy and politics can become involved in discussions about EM, but the Revised Plan attempts to prescribe land stewardship direction to meet a complex array of conflicting uses and demands in a balanced fashion.

Management activities are proposed in some areas of the Forest where a healthy ecosystem are not being sustained. Actions and decisions are made according to project level objectives, consistent with the Forest Plan. The ability to implement EM-based projects are subject to available funds and staff.

By definition, EM includes consideration of social and economic values in management proposals. Arguably, everything is based on value systems. The Forest addresses many differing values and interests while still realizing that EM is deeply rooted in scientific evidence. RR

Sustainability

COMMENTS: The Forest needs to ensure sustainability -- for the Forest; for the entire ecosystem (not just a few threatened and endangered, sensitive species); for wildlife, fish, recreation & forest products; for communities; and for economic benefits.

22, 33, 37, 48, 61, 174, 190, 227, 432, 659, 687, 1258, 1328

RESPONSE: The Revised Plan provides for sustainability; the Plan meets the requirements of the law and regulations to ensure sustainability of forest resources; and the Plan takes a broader look than a single species, a single resource, or a single socio-economic factor. RR

COMMENTS: Recommended ways to ensure sustainability - through road closures; revising trends of favoring timber industry; revising trends of soil damage and reduction of biodiversity; reducing roading, ORV use, grazing in riparian areas, snowmobiling in winter range, clearcutting, excessive predator management in wilderness and fire suppression; and defining "capability of the ecosystem, then eliminating activities that threaten that capacity."

37, 174, 244, 293, 444, 507, 697

RESPONSE: The Forestwide Standards and Guidelines section describes conditions that allow for a sustainable level of use consistent with resource and ecological maintenance, protection, and enhancement. The Plan considers issues of capability and sustainability and proposes protective or mitigative measures. RR

COMMENTS: Improve Sustainability Analysis by explaining how harvesting less than 1/5 the forest meets EM principles for the long-term; analyzing new alternatives that reflect proactive management; explaining how to sustain vegetation conditions; describing mitigation protection, and intensive management processes to achieve Desired Future Condition; showing how to avoid catastrophic fire w/current plan; and showing timber harvest as a sustainable goods and service.

393, 413, 697, 1369

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RESPONSE: The Forest completed additional sustainability analysis, especially as it related to timber, goshawk, and vegetation. Changes are explained in the Forestwide Standards and Guidelines, Ecological Processes and Patterns section (Revised Plan, Chapter I) and in various resource sections.

Wood fiber production is one aspect of managing complex forest ecosystems. Other resource management objectives may place higher priority on prescriptions which are incompatible with timber harvest. Much of the fastest growth occurring in the lodgepole community type is non-commercial sized, reforested plantations and will not be available as wood products for several decades.

NEPA requires analyzing a reasonable range of alternatives which respond to public issues raised during scoping and the Purpose and Need for the proposed action. The Targhee believes the alternatives reflect proactive management.

Using the Glossary, "sustainable vegetation conditions" would be those in which floral ecosystems maintain ecological processes and functions, biological diversity and productivity over time.

The revised plan provides comprehensive direction for mitigation, protection and management of ecosystems. Plan direction governs actions for the next decade, but establishes trends for achieving desired conditions for the longer term. Assuming no change in current law, the Plan will be revised at 10-15 year intervals and is expected to address successional conditions and management actions which could lead to catastrophic fire.

See the section in the Revised Plan which allows for sustainable timber production: "Production of Commodity Resources -- Timber Management", Chapter III. RR

COMMENTS: Supports Sustainability. Just do it. Sustainability is the direction the Forest Service must go to ensure future economic benefits for local economies.

22, 33, 48, 61, 227

RESPONSE: Your comments are noted. AM

Change the Assessment/Scale

COMMENTS: Enlarge scale of analysis. Enlarge scale of analysis to consider multiple ecological scales when evaluating temporal and spatial patterns and to more adequately consider fragmentation patterns (connections and dispersal pathways) both within and between subsections. Include ground truthed corridors.

643, 1365, 282, 690

RESPONSE: The selected scales for analysis were the most appropriate for a disclosure of expected outcomes and impacts, for each subject being considered. There is no one-size-fits-all geographic scale at which analysis is most appropriate. The issue at hand determines the most appropriate scale (Salwasser, 1994). The Forest Plan provides programmatic direction at the forestwide scale.

As part of the revision effort and ongoing business, the Forest coordinates with communities, agencies, and private organizations and individuals within the larger Greater Yellowstone Area (GYA), and will

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continue to do so. The public participation phase of the revision includes substantial public involvement and cross-boundary coordination in the GYA. RR

COMMENTS: Address forest stand age composition and diversity at a larger scale so that fragmentation patterns and cumulative effects of extensive clearcutting on patch size are given adequate attention.

643

Evaluate needs for proposed actions on a forestwide scale or in relation to the Greater Yellowstone Area.

489, 1368

RESPONSE: The scale selected is adequate to disclose the impacts and expected outcomes of the Revised Plan. (See previous response.) RR

COMMENTS: Use entire drainage or watershed, set DFC for area and decide what traditionally occurring activities are useful for meeting DFC, then eliminate those activities that do not help meet DFC.

1249

Consider ecosystem boundaries that do not follow forest, park, BLM, county, state or private property lines.

392, 719, 1395, 643

Integrate ecological function across boundary lines that address downstream conditions and ecological effects of management activities.

643

RESPONSE: These comments basically summarize the approach taken in the Revised Plan. Goals and objectives for the Plan establish desired outcomes, though at the Forest scale. Prescriptions and management direction describe the means to achieve these goals and objectives. Standards and guidelines define limits on activities to maintain a course for advancing the DFC accomplishment. The Subsection descriptions illustrate how the Forest did this where it made analytical sense. The drainage or watershed scale is used where appropriate to describe environmental consequences. At the site-specific project level, drainage or watershed scales are more critical as a context for project planning and implementation. RR

COMMENTS: Incorporate data/studies/science/findings from adjacent National Forests; Parks; Yellowstone; the Upper Columbia River Basin Study, "Henry's Fork Watershed, Idaho, A Comparison of Management Alternatives for the Targhee National Forest", (eg elk cover needs in the Centennials as compared to Gallatin, Beaverhead, Yellowstone NP).

643, 695, 719, 1343

RESPONSE: The proposed activities in the Revised Plan are based on the Purpose and Need at the forestwide scale. See Chapter I, FEIS. The effects analysis discloses anticipated environmental effects at the Forestwide scale. See Chapter IV, FEIS. The purpose of the Revised Plan is to develop management direction for the next ten years at the forestwide scale. Because direction only applies to Federal lands administered by the Targhee National Forest, lands beyond the Targhee administrative unit are not addressed for management action in the Plan. However, the effects analysis of the FEIS does consider environmental effects beyond the Targhee's borders, where they can be

identified, and when predictions can be extrapolated as a result of implementation of the Revised Plan. RR

Research findings from adjacent lands such as Yellowstone National Park are used in the development of this approach. The Upper Columbia River Basin (UCRB) ecosystem management project data and reports were used in the revision process and analysis, where available and relevant. Many studies were still in draft at the time the revision analysis was completed. The UCRB findings, when available, are useful for the larger regional scale of the Basin watershed but are not essential to disclosing effects or making a reasoned choice among the revision alternatives. See Literature Cited. DM/RR

COMMENTS: Enlarge scale of analysis to incorporate larger temporal and spatial patterns.

392, 413, 643, 690, 719, 1365, 1395

Analyze the larger temporal and spatial patterns of the region before concluding that the observed pattern in one or several subsections is in need of remedial attention. Put EM where large geographical areas are analyzed so that they will not be ecologically disjunct from the landscape in which they occur. 643

Enlarge scale beyond seven subsections because context and content considerations within the larger ecosystem may have been overlooked. The idea that a subsection is a complete system is not in proper context with the rest of the Forest or the Greater Yellowstone area.

643, 690

Use larger scale than watershed or subsection to analyze vegetation patterns and consequences to biodiversity, threatened and endangered, timber and so on.

413

RESPONSE: The Forest considers the scale of analysis for the seven subsections as adequate for the purpose of the analysis which was to disclose expected impacts from the different alternatives. Chapters III and IV of the FEIS address "Adjacent Land Use Patterns" and consider larger temporal and spatial patterns. The subject area determined the appropriate scale. RR

COMMENTS: Diversity treatment is needed at a regional scale. Improve the treatment of diversity issues by requiring a full landscape level analysis and address the size, structure, dynamics, spatial arrangement, function, integrity and connectivity of habitat patches up to a regional scale.

1365

RESPONSE: The scale used is adequate for the scope and resolution of this analysis. Landscape analysis is more appropriately used at the site-specific project level to provide an ecological context during project implementation. RR

Improve the Cumulative Effects Analysis

COMMENTS: Expand the Analysis of cumulative effects because they are based on unfounded assertions; incorrect information; unrealistic; unscientifically

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sound; and inadequate to evaluate the consequences of management alternatives.
1368

RESPONSE: The cumulative effects analysis adequately describes the interactive effects of the Revised Plan with past, present and foreseeable management actions. RR

COMMENTS: Take into account cumulative impacts to the entire ecosystem for all management activities and include future effects of natural disturbances since they may have an effect on the biological potential for primary cavity nesting habitat more than vegetation management.
1365

RESPONSE: Evaluating the effects of unspecified natural disturbances is highly speculative, given the uncertainty about location, timing, and nature of the disturbance. The cumulative effects analysis in Chapter IV, FEIS considers the effects of past, present and foreseeable management actions. Natural disturbances are not a foreseeable phenomena. RR

Range of Natural Variability

Improve Discussion and Application of Range of Natural Variability (RNV)

COMMENTS: Describe how you will establish the Range of Natural Variability by describing what characteristics (including aquatic) will be measured, how and at what frequencies these characteristics will be measured, and how many of each type of characteristic will be measured. There is no evidence this will be seriously addressed.
282

RESPONSE: These are implementation issues that are addressed upon completion of the Revised Plan. Techniques for establishing RNV vary depending on whether you are dealing with vegetation, aquatic systems, fire regimes, or other resource areas. RR

COMMENTS: Define historic conditions and time period used, and explain why historical conditions are ideal.
1369

RESPONSE: Historic conditions are not considered "ideal". They are simply one ecological record of landscape change and development. They represent a benchmark against which current conditions can be compared and inferences made about successional processes, ecological patterns through time, and predictions of future outcomes under alternative courses of action. Some argue that historic or presettlement conditions are desirable and should be a goal of future management. The Targhee does not use historic conditions as a goal but as a reference point. RR

COMMENTS: Explain how you are using RNV to ensure viability of all native species.
1369

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RESPONSE: RNV can be viewed as sideboards within which habitat conditions evolve through time. If plant and animal communities have historically occupied a region and the variation in habitat conditions can be determined, predictions can be made about how species may respond to artificial disturbances or alterations introduced by management actions.

Departures from the historic range of habitat conditions may introduce changes exceeding the adaptive ability of some specialized species. Conversely, if management activities alter ecosystems consistent with how they have fluctuated historically, the expectation is that the species will persist, because the changes are not substantially different from those for which they are genetically and behaviorally adapted. RNV provides a means to assess risk to sensitive species under different management scenarios. RR

COMMENTS: Consider fossil pollen records that indicate the relationship of climate on vegetational change as part of the establishment of RNV. This may explain the cause of Doug-fir encroachment as a consequence of human activities versus climatic change.

489

RESPONSE: This is an implementation issue that can be considered as the Forest develops specific approaches to identifying RNV. Pollen records are one of the many tools that establish historic conditions. They are not essential to this analysis nor the development of the revised Plan. RR

COMMENTS: Discuss the previous state you think the forest will return to in 50, 100, and 5000 years, and how the forest will reverse carbon dioxide buildup from global warming.

1360, 1314

RESPONSE: This is outside the scope of the Revised Plan process which focuses on development of management direction for the next decade. The goal is not to "return to" a particular state but to identify desired conditions in the future and progress towards them by implementing direction in the forestwide and management area prescriptions. As plant communities persist and change through ecological succession and artificial or natural disturbance, carbon sequestration and recycling will occur. Influence on global atmospheric carbon is unknown; it is not essential to this analysis, determination of environmental consequences, or a reasoned choice among alternatives. RR

COMMENTS: Discuss how you will manipulate RNV and over what time frame. Include estimations of soil changes.

1360, 1314

RESPONSE: The Forest does not manipulate RNV. RNV is identified through analysis of historical evidence and/or modeling. The time context for RNV is unknown. This process will be implemented after adoption of the Revised Plan. RR

COMMENTS: Include fungi, moss, insects, nematodes and other micro biota in the definition of Range of Natural Variability.

1360, 1314

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RESPONSE: If appropriate, insects, invertebrates or lesser plants are used to determine RNV on a small scale. It is impossible to measure or analyze every component of the ecosystem, nor is it necessary. Usually, a limited set of representative species can be used as indicators for other species. RR

COMMENTS: Use Yellowstone National Park studies to establish a scientifically defensible RNV.

1273b

RESPONSE: Refer to the "Properly Functioning Condition" section of the Forest Plan (Chapter III). Through an ongoing partnership agreement with Montana State University, the Forest is continuing to develop a scientifically defensible approach for landscape level analysis. Research findings from adjacent lands such as Yellowstone National Park are used in the development of this approach. Because this process is on-going, it is incorporated through reference. Once finalized, the process will be incorporated through the Forest's adaptive management approach to ecosystem management. DM

COMMENTS: Shorten timeline for completing the RNV determination and the inventory on native cutthroat trout populations. Long timelines do not enhance an adaptive management philosophy.

643, 695, 1369

RESPONSE: The Forest included additional direction on inventory of the cutthroat trout with expanded objectives. The timeframe was adopted, because it represented a realistic date for completion. The timeline for completing RNV was replaced by the Properly Functioning Condition section which includes RNV where appropriate. PFC is more complete in the criteria for analysis. RR

COMMENTS: Refrain from harvest until RNV is determined. Change the timeline for completion of the RNV for all subsections or include direction that states no large vegetation management decisions will be made until RNV is established.

690, 1273b

Refrain from harvest until landscape of RNV is completed and reviewed by scientific community and has gone through adequate public review.

766, 690

RESPONSE: Ceasing all vegetation management or timber harvest activities until RNV is established is not necessary nor desirable. The Forest has enough expertise and information to proceed with sound vegetation management activities while determining RNV. Internal and external scientific communities and research literature are consulted in the determination of RNV. RR

COMMENTS: Clarify the RNV of vegetation management on winter range and what outcomes can be expected, since excessive livestock grazing is often the single most detrimental cause of impacts to big game winter range. (CROSS REFERENCE: Range, RNV; Range, Vegetation; Wildlife, Winter Range)

643

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RESPONSE: Knowledge of the RNV for winter range vegetation is not necessary to provide best management practices, because the Forest has other information available such as condition and trend data, utilization studies, and actual use information for domestic livestock grazing. Proposed utilization standards are expected to meet the physiological needs for vegetation and provide for the protection and maintenance/improvement of uplands and riparian areas. The Revised Plan has been modified to better reflect the needs of wintering wildlife and the potential for conflict with domestic livestock on a forestwide basis.

The grazing utilization standard applies to all utilization on plants, regardless of animal species, and addresses maximum allowable use. Regardless of what animal species utilized the plants as forage, livestock will be removed once the desired utilization level is achieved. Issues such as AUM's needed for wintering wildlife and domestic livestock grazing are best handled within the framework of a site-specific project level or landscape level analysis. The Revised Plan serves as an "umbrella" document for the environmental analysis of proposed projects at the Forest or Ranger District levels and is not intended to analyze specific "how to's" of project implementation. WG

COMMENTS: Provide mandatory direction for site-specific projects that all activities will be planned to approximate historic vegetation patterns.

1365

RESPONSE: This is a site-specific analysis issue and not necessary for this level of programmatic analysis. The Plan establishes broad direction within which individual project proposals can occur. There is no need for preemptively requiring all vegetation manipulation activities to mimic a redefined set of patterns. Historical vegetation patterns are highly variable, and site-specific analyses consider this in the context of a number of desirable objectives and may depend on other considerations than historic vegetation patterns. RR

COMMENTS: Explain the reasoning of treating sagebrush when Forest has not established a RNV for sagebrush and why similar treatment are not proposed for the forested component. (CROSS REFERENCE: Range, Sagebrush)

766

RESPONSE: The Forest recognizes that there is an overabundance of mature component in the sagebrush community. The amount of manipulation through prescribed fire is fairly modest and is not expected to fall outside the RNV. Treatments proposed for forested ecosystems are consistent with the differences between these two communities -- forests can produce commercial wood products, sagebrush can not. RR

COMMENTS: Discuss how the forest will determine the RNV for AIZs. Use longer timeline instead of a snapshot which may not present a fair representation of conditions over time. (CROSS REFERENCE: Riparian, AIZ)

643

RESPONSE: Goals and objectives relating to the RNV for aquatic influence zone characteristics were deleted from the AIZ prescription. Direction on

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evaluation of ecosystem characteristics, including those within AIZ's, is now described in the Revised Plan, Forestwide Standards and Guidelines, under the subtitle "Properly Functioning Condition". DD/RSM

Improve Discussion of Fire's Role in RNV

COMMENTS: Include additional analysis of two historically proven fire cycles - massive cycle every 250-300 years and shorter cycle every 22-50 years. 1911 photos depict the forest after it closed canopy after previous short cycle fires in the mid 1800s. Need to capture larger role of fire.

275

Reexamine your conclusion that beetle infestation was not outside the RNV. It is a prime example of an ecosystem outside its RNV because of 60 years of fire suppression.

413

RESPONSE: Longer cycle fire regimes up to 300-350 years were addressed in the FEIS, Chapter III, "Fire - Scale: Vegetative Community and Subsection", specifically in the subalpine fir and whitebark pine fire regimes discussion. Additional analysis is not necessary, because these community types, while important, do not comprise a large component of the Forest's vegetation communities. This level of analysis is commensurate to the degree in which these types factor into the overall management direction of the Plan. A more complete discussion of fire regimes can be found in Bradley et al., 1992.

The importance of fire is incorporated in the expanded section in Forestwide Standards and Guidelines, Ecological Processes and Patterns, Fire, in which the role of fire management and suppression is clarified and described (Chapter III, Revised Plan).

Fire suppression policies of the last 80 years exacerbated the risk to bark beetle suppression and altered the natural successional process for maturing lodgepole forests in the West. The natural factors influencing successional development are similar to an extended period of fire exclusion or absence; this probably did not occur historically in Targhee lodgepole communities. However, the end of the successional pathway -- a large-scale bark beetle epidemic causing massive die-off of the mature component in a relatively short period of time -- is most likely within the RNV. Lodgepole is well adapted to large-scale disturbances and very effectively re-occupies sites after an epidemic or fire. RR

COMMENTS: Reconsider fire frequency intervals in the Range of NV. Several studies suggest longer intervals for Doug-fir and lodgepole pine. Assumption that the forest is more susceptible to catastrophic and low intensity fire may not be as severe as presented.

1273b

RESPONSE: Fire frequency is an important variable for identifying historic range of variability, because it provides indications of past disturbance and ecological response. See Revised Plan, Chapter III, Ecological Processes and Patterns. The Forest has conducted fire scar analysis and will continue to do so. RR

COMMENTS: Discuss effects of Yellowstone National Park fires on regional landscape patterns, especially in the proposal to treat aspen stands to reduce conifer. (CROSS REFERENCE: Timber, Aspen).

643

RESPONSE: The 1988 Yellowstone fires are outside the scope of this forestwide analysis and not essential to adequate disclosure of expected effects or a reasoned choice among revision alternatives. The Camas Creek Aspen Regeneration Project is a site-specific analysis being conducted in compliance with the existing Forest Plan and is also outside the scope of this analysis.

COMMENTS: Increase historic fire cycle to 200-300 years. This will change RNV from the current range that describes a much younger forest than was presettlement norm.

643

RESPONSE: Documented cycles of 200-300 years occurred in certain community types, while shorter cycles occurred in other types. These are described in the FEIS, Chapter III, "Fire - Scale: Vegetative Community and Subsection".
RR

RNV Will Require More Burning, Polluting of the Air

COMMENTS: Managing within the RNV you have established will require annual burning of 3.5% of the Forest. This is wasteful and will not offset our fossil fuel burning. Forest will use as much oxygen as it produces, and fires will produce as much carbon dioxide as the forest consumes.

275

RESPONSE: RNV is not a goal for management. It is a reference point for assessing ecological change and response. The Forest is not proposing to burn 3.5% of the Forest, which would be over 60,000 acres annually. RR

COMMENTS: RNV will require seven times the amount of burning than is currently occurring. This will reduce air quality and pollute the Class I airshed for Yellowstone National Park. (CROSS REFERENCE: Wilderness)

275

RESPONSE: RNV is a reference point for assessing ecological change and response and will not require any particular amount of burning. Air quality effects would be an important consideration for any proposal to burn near the Yellowstone National Park or Grand Teton Park airsheds. RR

Use a Different Time Window for Determining RNV

COMMENTS: Expand temporal scale to evaluate historical patterns. Snapshots from any single period are not likely to capture a full range of spatial patterns.

643, 690

Expand scale of analysis and time window for Range of Natural

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Variation. Appears the forest will use a preliminary understanding of RNV to create mega openings that have negative impacts on sensitive wildlife species.

643, 690

Use longer time window to establish the Range of NV to better represent a more accurate historical picture and better display the role of natural fire disturbance on vegetation patterns.

643, 695

Adopt broader time horizons of 50-300 years for RNV in order to meet realistic EM outcomes.

643, 690

RESPONSE: These are all very good suggestions and will be considered as the Forest develops the process for identification of RNV. RR

COMMENTS: Use 1860 to current day as the time frame for RNV to coincide with timeframe being used by USF&WS.

314

RESPONSE: This time frame is a reasonable option and will be considered along with others suggested in the research. RR

Eliminate Range of Natural Variability

COMMENTS: Prefer a more productive approach to understand change processes which are going on in the forest today, and use this information to predict different management scenarios for the future, rather than trying to return the forest to a previous state we know little about.

1360

RESPONSE: RNV is not the only approach to understanding ecological change. Successional pathways, disturbance frequency and magnitude, and historic records and photos are other types of sources for clues to ecological change. RNV is not an attempt to take the Forest back to a previous time period, although the Forest may want to reproduce natural processes or conditions artificially if that is an appropriate management objective. RR

COMMENTS: Eliminate the Range of Natural Variability. It has not been reviewed by the scientific community or the public.

1446

RESPONSE: The Final Revised Plan describes the principles and objectives of Properly Functioning Condition (PFC) which incorporates RNV but uses other criteria for identifying ecological systems at risk or in PFC. The concept of RNV originates in the scientific record and, although a relatively new concept, shows merit as one tool for implementing ecosystem based management. The specifics of identifying and applying RNV will be determined after adoption of the Revised Plan. RR

COMMENTS: Have Range of Natural Variability reviewed by scientific community for accuracy and application in resource management prior to plan

implementation. Cannot determine wildlife impacts or impacts to TES based on the present definition.

389

RESPONSE: RNV is a product of scientific research and has had considerable review within the scientific community. The Forest will continue to cooperate actively with the research community during Plan implementation. RNV is not intended to be an indicator of impacts to wildlife or Threatened and Endangered Species. Those effects are disclosed in Chapter IV, Environmental Consequences. RR

COMMENTS: Selecting a point in time to define the Range of Natural Variability is controversial and achieving a workable RNV by 2007 unrealistic.

7

RESPONSE: The Forest agrees that RNV is controversial. We have removed the objective to determine RNV by 2007 and replaced it with a set of goals and objectives for implementing PFC which we believe is a more useful and effective approach. See Revised Plan, Chapter III, Forestwide Standards and Guidelines. RR

Change Objective for RNV

COMMENTS: Change objective to read "Historical" Range of Natural Variability. Little if any vegetation landscape remains unaltered.

7

RESPONSE: There are several variations in the scientific literature. The concept of RNV as a benchmark or reference condition, rather than a desired 'past condition', remains the same. RR

Discuss How you Will Meet RNV Objectives

COMMENTS: Discuss how you plan to meet RNV objectives by the year 2007, a year after the ten-year plan is completed and three years before the DFC.

697

RESPONSE: RNV is replaced as an objective by the PFC section in Chapter III of the Plan. It is a reference condition the Forest will identify for selected ecosystems. The PFC process is undeveloped but will be after the Revised Plan is final. RR

COMMENTS: Consider Dr. Kay's presentation and slide program on historical vegetation patterns on the Targhee and discuss why Alternative 3M will lead us to that RNV.

1346

RESPONSE: Dr. Kay's presentation only spoke to portions of the Centennial Subsection. Refer to the Properly Functioning Condition (PFC) section of the Revised Plan, Chapter III. The Forest is adopting the regional concept of PFC and evaluating ecosystems against this criteria rather than solely utilizing RNV. Other issues raised within the Centennial Subsection (e.g. grizzly bear

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recovery area, goshawk) may limit the ability of the Forest to manage for PFC in portions of the Centennials. DM

RNV - Timber

COMMENTS: Clarify RNV for Aspen. Reevaluate succession conclusions regarding lodgepole pine, Doug-fir, and aspen that led the forest to conclude that aspen is outside RNV and thus is a reason for management intervention. Aspen is more abundant now than historically. (CROSS REFERENCE: Timber, Aspen)
643, 489

RESPONSE: The Forest's findings do not support a conclusion that aspen is more abundant now than in the past. The basis for the assertion that aspen is outside RNV is that fire suppression has virtually eliminated the primary disturbance regime responsible for perpetuating aspen communities in their historic range. In the absence of periodic fires, aspen is being replaced by other shade-tolerant community types such as Douglas-fir. RR

COMMENTS: Include livestock grazing impacts and fire suppression in your analysis that aspen is outside the RNV.
695

RESPONSE: Fire and fire suppression are discussed in the FEIS in Chapters II and IV. Research shows that grazing is not as significant an effect (refer to Camas Creek Aspen Rejuvenation Project NFMA/NEPA documents) in causing the loss of aspen as is conifer encroachment. The conifer encroachment is the result of removing the natural fire disturbance regime and continued fire suppression. Grazing is acknowledged as a factor in reducing or altering fire patterns. DM

COMMENTS: Explain the basis for the aspen guidelines and why you picked the target successional stage distribution as ideal.
1369

RESPONSE: The section on forested successional stages is expanded to include old growth guidelines (Chapter III, Revised Plan). These guidelines are consistent with research and professional experience (USDA Forest Service, 1993). The ages displayed in the table are not a 'target' nor considered 'ideal' but are representative ages of dominant individuals in a community type at which a block of forest vegetation would be considered late successional. This age is used to identify and maintain late successional or old growth patches to the specified guideline. The absolute number can be debated, but the ages displayed represent reasonable values based on science for purposes of this Plan and analysis. RR

COMMENTS: Evaluate proposed aspen management guidelines and objectives on wildlife and include impacts of a structured rotation age.
1369

RESPONSE: The forestwide effects on wildlife of vegetation management activities proposed in the Plan, including those associated with specific rotation ages, are disclosed in Chapter IV of the FEIS. The guideline for

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Forested successional stages is expanded to include old growth guidelines (Chapter III, Revised Plan). The effects of any specific proposal which harvests aspen is a site specific activity which is outside the scope of this analysis and would be conducted in a separate NEPA analysis with disclosure of effects. RR

COMMENTS: Apply RNV at a coarse level to capture the decline of old growth regionally.

643

RESPONSE: This is outside the scope of the proposed action. The level of analysis displayed in the FEIS is sufficient to disclose the effects of the alternatives and desired outcomes. RR

Improve Existing Condition Descriptions

COMMENTS: Include maps of the existing condition so comparisons can be made easily to the proposed actions.

1362

RESPONSE: Alternative 1, includes maps which describe the current condition. These are sufficient for comparison. Chapter II of the FEIS provides a matrix for comparing differences between alternatives. The project record for the Revised Plan includes additional maps. RR

COMMENTS: Illustrate general spatial patterns. Tabular presentations, especially of riparian areas, AIZs, and vegetation cover, do not present essential information.

1362

RESPONSE: The Forest acknowledges that graphic presentations might be more illustrative. Graphics were not used to display the requested information because: they are redundant to information presented in the documents; respondents generally have called for more detail in the documents, rather than more summary presentations; and the limitation of patch size has been dropped as an indicator of sustainability, fire, and natural disturbances. DP

COMMENTS: Describe how mature category relates to late successional ages given on Page III-3 in describing the existing condition of forest resources.

643

RESPONSE: The Forest expanded the discussion and direction on "Forest Successional Stages" to include standards and guidelines for old growth and late successional stages. RR

COMMENTS: Characterize the forest as a crown fire ecosystem with relatively few, infrequent fires and manage for a larger proportion in a mature age class.

489

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RESPONSE: Chapter III of the FEIS, Ecological Processes and Patterns, describes the fire regimes associated with the Forest and the Greater Yellowstone Area. RR

COMMENTS: Improve existing condition description by including specific categories which define elevation, canopy closure of stands, age of stands, etc. Overall implication that the Forest is dominated by relatively pristine conditions is inaccurate.

1369

RESPONSE: This level of detail is not essential to describing the Forestwide existing condition or the effects of the alternatives. The project record contains these types of detail. RR

COMMENTS: Identify extensive harvest at low elevations as part of the existing condition.

1369

RESPONSE: The Affected Environment chapter of the FEIS discusses extensive harvest in individual subsections. This adequately describes the existing condition, whether at high or low elevations. RR

COMMENTS: Correct description of existing condition to one that depicts a forest that is recovering from past disturbance (fire) rather than one predominantly exhibiting the effects of overzealous fire suppression. Past disturbance cycles created the now homogeneous age class over large areas. Aspen abundance is within past levels and is more plentiful now than in the past. Old growth and mature forest formerly dominated the landscape in greater degrees than currently. *

643

RESPONSE: Historic fire frequency and behavior have shaped the forest observed today. More recent fires, the Gallagher Peak 1979 and North Fork 1988, are discussed in the Affected Environment section. The Forest did not portray this as an either/or choice between disturbance scenarios. The most dominant influence on development of forested landscapes in the last 80 years has been the aggressive suppression of fire. The effects of fire suppression in altering successional development, vegetation patterns, structure, and diversity, and subsequent fire behavior is well established in scientific literature. The Forest does not agree that aspen abundance is greater now than in the past. RR

COMMENTS: Site data source for the statement that the Forest has more area in mature age classes now than the historical record indicates. This is not a reasonable conclusion on a forestwide scale given the sizeable area subjected to clearcutting over the last two decades.

643

RESPONSE: Data sources include: Camas Creek Landscape Analysis; Caldera Project (MSU); Old Henry's Lake Reserve (1912-1916) Vegetation Maps; and the Targhee National Forest GIS Data Base. All of these sources show more acreage in early age classes than what is currently present on the Targhee. LB

COMMENTS: Provide scientific foundations for conclusions regarding ecological structure and function, role of fire and fire suppression in creating existing vegetation and range conditions and trends.

690

RESPONSE: Scientific publications are listed in Appendix R-1 "References Cited" in the Revised Plan and FEIS documents. RR

COMMENTS: Provide existing condition of watersheds on the forest. Without defined existing conditions one cannot effectively compare alternatives.

1369

RESPONSE: The Forest used watershed components important to analyzing the effects of the alternatives, such as water quality and channel stability. Watershed conditions are described in Chapter III, Affected Environment in the FEIS. RR

COMMENTS: Include a discussion of the appropriate role of disturbances and succession to existing condition and those that existed historically.

643

RESPONSE: This discussion can be found in Chapter III Affected Environment in the FEIS, Ecological Processes and Disturbances. RR

Age/Class Delineation Portrays Inaccurate Existing Condition

COMMENTS: Age classifications used in the Plan obfuscate the stand age analysis and mislead the reader as to the actual existing condition.

643

RESPONSE: The age class distribution is sufficient for this scale of analysis. It portrays an accurate picture of the vegetation condition at the subsection or forestwide scale. A finer resolution of the data is always useful to have but is not necessary to assess effects of possible management actions and evaluate the differences between the alternatives. RR

COMMENTS: The supposed lack of age class diversity in subsections like the Centennials and Big Hole Mountains is due to bias sampling and data analysis more than an actual lack of diversity on the ground.

643

RESPONSE: The data standards and sampling methods are sufficient for this level of analysis, because they portray a reasonably accurate distribution of age classes at the forestwide scale. RR

COMMENTS: Reconsider the lumping of forest age classes for tabulation of existing forest conditions. Current presentation creates erroneous impression that much of the Forest is in an advanced stage and distracts attention from those areas that actually provide functional old growth. The Plan's

ECOSYSTEM MANAGEMENT - THE CONCEPT

definition of age classes biases the plan in favor of more harvest. The percent of trees in "mature" age class (78% mature) seems to be high in regards to wanting age class diversity.

643, 695, 432

RESPONSE: The Forest reconsidered the age class distribution and determined that it was adequate for this analysis and represented an accurate portrayal of the distribution of age classes Forestwide. The Forest expanded the guidance for old growth and late successional stages in Forestwide Standards and Guidelines, Chapter III. RR

COMMENTS: Classification ignores important structural distinctions among classes of "mature" timber, including stem exclusion, understory reinitiation and old growth structural classes. It is impossible to tell from Table how structural classes greater than seven-eight inches dbh are distributed on the Forest. Table should be redone to show size and age class distributions of stands larger than "pole."

1368

RESPONSE: The Forest added an expanded section on old growth, including forestwide goals, objectives, standards, and guidelines. The indicators necessary to describe existing conditions, assess effects of alternatives, and make comparisons were used in this analysis. Other indicators, such as those described in this comment, are more useful when evaluating projects at the site specific level and are not essential to a programmatic analysis. RR

COMMENTS: Descriptions of the Forest as mostly "mature" in the plan bear little resemblance to the reality of high grade stands and massive clearcutting over many parts of the Forest.

1277, 1369

RESPONSE: Subsection descriptions provide a clearer picture of forested community types, including differentiating between those with higher levels of past harvest and those unharvested. Those that had little harvest show the highest proportion of mature component. RR

Need Standard for Restoration

COMMENTS: Incorporate language that stipulates compulsory management action to repair, upgrade or enhance watersheds and ecosystems.

389

RESPONSE: The Revised Plan provides for action to restore aquatic and ecological systems not meeting properly functioning condition. See Forestwide Standards and Guidelines section, Chapter III, Properly Functioning Condition of the revised Plan. See also Management Prescription 2.8.3, Aquatic Influence Zone, Chapter III. DM/RR

COMMENTS: Initiate and fund an educational campaign and include this requirement in each alternative. Address public misconceptions regarding the biological role of fire and the implications of returning natural fire to the

ECOSYSTEM MANAGEMENT - THE CONCEPT

ecosystem, the biological role of insects and disease, the biological impacts of continued road building, recreation, logging, grazing and mining.

1364, 389

RESPONSE: Education and information about ecological processes remains an ongoing part of Forest Service activities, especially during public participation opportunities related to site-specific NEPA documents. Some of the agency's activities include maintaining a library of literature and videos; conducting field trips; working with the local media; visiting schools; leading scouting and youth projects; and developing and distributing literature about management of natural resources, including fire and ecosystem management, as money, time and personnel availability allows. It is inappropriate to place an ongoing education program in the allocation alternatives of a land management plan. AM

Commit More Resources and Funding to Research and Monitoring EM

COMMENTS: Commit more resources and funding to broad research and associated monitoring needed for adaptive management.

643, 690

RESPONSE: The Forest will commit as much funding as possible, given workload, budget, staff availability and the broad array of management commitments that must be met. The Forest will continue to pursue partnerships and cost/share programs that mutually benefit universities and scientific organizations and Revised Plan objectives and goals for ecosystem management. AM

ECOSYSTEM MANAGEMENT - BIODIVERSITY

General Comments on Biodiversity

COMMENTS: Maintain biodiversity, for without it, the human race is lost. Implement methods to restore and recreate diversity, because past habitat destruction/past management activities and status quo continue to reduce biodiversity.

F-H(8), 293, 1275, 1365

The best plan to conserve biodiversity is to recognize the role of natural disturbance without human intervention.

1368

RESPONSE: The Forest agrees that maintaining biodiversity is key to maintaining healthy ecosystems and that healthy ecosystems are needed to support a high quality of life. The Revised Plan recognizes the ecological roles that natural disturbances play in ecosystems and sets direction for promoting the proper functioning condition of ecosystems. Whether to allow natural processes to regulate ecosystems or to initiate active management will be based on the management prescription of the area, as well as the site specific ecological, social and economic considerations. DD

ECOSYSTEM MANAGEMENT - BIODIVERSITY

Explain Management Strategy/Discussions About Biodiversity

COMMENTS: Explain how preferred management strategy will meet long term biodiversity since the current proposals reduce the creation of young seral stages and retain older age classes.

413

RESPONSE: The Revised Plan provides for the maintenance of biodiversity through improved goals, objectives, standards and guidelines using the best available knowledge. The Revised Plan provides direction to manage forested ecosystems for age classes within limits representative of similar ecosystems in properly functioning condition. DD

COMMENTS: Discuss strategies and methods for maintaining genetic and species diversity. Don't lose native plant and animal species and manage watersheds instead of political boundaries.

697

RESPONSE: The Revised Plan contains goals, objectives, and guidelines to maintain genetic and species diversity. This provides a framework for the protection and recovery of many threatened, endangered, sensitive, and rare plants, animals, habitats, and ecosystems. DD

COMMENTS: Ensure biodiversity by creating a variety of habitats and a mosaic of age classes because different species will use different age classes and vegetation types; providing adequate early seral stages; reducing clearcut patch size because this reduces the number of species that need early seral stages for survival and other species that prey upon them.

413

Providing for and maintaining connectivity between and within landscape fragments.

1365

Reducing roading, clearcutting, ORV use, snowmobiling on winter range, grazing in riparian areas, excessive predator management in the wilderness, and fire suppression because of sustainability.

293

RESPONSE: The Forest considered all these items in the development of the various Revised Plan alternatives. The selected alternative incorporates all these items, where appropriate. DD

Recommend Changes to Biodiversity Objectives

COMMENTS: Make conservation of biodiversity an objective for each subsection. Tier conservation objectives to community level and correlate to subsection.

1368

RESPONSE: The Revised Plan emphasizes the conservation of biodiversity for a variety of plant and animal species and communities at a variety of geographic scales. The Revised Plan contains goals, objectives, standards, and guidelines to conserve biodiversity for native cutthroat trout (at the

ECOSYSTEM MANAGEMENT - BIODIVERSITY

watershed and forestwide scales); eight species of primary cavity excavators (at the prescription area and forestwide scales); late successional/old growth related species (at the watershed scale); and a variety of plant communities (at landscape and forestwide scales). DD

COMMENTS: Consider preserving some areas as gene banks, model ecosystems, and examples of pristine watersheds.

1443

RESPONSE: The Revised Plan includes direction to coordinate with the States of Idaho and Wyoming to: identify population strongholds of native cutthroat trout; protect their habitats; and to assist in protecting the genetic integrity of these populations. The Revised Plan identifies 17 of the 39 primary watersheds on the Forest as Native Trout Watersheds, which are areas of high aquatic integrity where research and recovery efforts are focused. DD

COMMENTS: Add to biodiversity objectives, objectives for aquatic biodiversity in AIZ and ecosystem function and process. Currently objectives only address terrestrial components as they relate to vegetation. Include specific direction for maintaining biodiversity, riparian function, and standards of rare and management indicator aquatic species. (CROSS REFERENCE: Riparian, AIZ; Fisheries)

643, 1273b

RESPONSE: The Revised Plan includes new goals, objectives, and guidelines adapted from the Inland Native Fish Strategy (INFISH). These address the conservation of aquatic biodiversity, riparian structure and function, and the recovery of native cutthroat trout populations and habitats. DD

Better Define/Improve Biodiversity Discussion

COMMENTS: Define and link the relationships of forest habitats to biodiversity. Include present age, basal area, average dbh, and canopy cover.

1369

RESPONSE: The Revised Plan provides direction to manage ecosystems, hydrologic regimes, animals, and soils in proper functioning condition (PFC). The process used to assess PFC evaluates the structure, composition, disturbance regime, and patterns and considers the factors in the comment above. DD

COMMENTS: Explain the role of patch size and connectivity in biodiversity and how these are incorporated into biodiversity objectives.

1369

RESPONSE: Patch size and connectivity are addressed in the section Ecological Patterns and Process, Properly Functioning Condition. Patch size and connectivity are not used as measures of biodiversity, but as measures of "patterns", one of four criteria used to assess PFC. DD

ECOSYSTEM MANAGEMENT - BIODIVERSITY

COMMENTS: Include the role of natural disturbances and their relationship in creating biodiversity.

695

RESPONSE: The role of natural disturbances is addressed in the Revised Plan in sections about Properly Functioning Condition; Insects and Disease; Fire; Fisheries, Water and Riparian Resources; Wildlife; and in a variety of management prescriptions including wilderness, aquatic influence zones, and special management areas. DD

COMMENTS: Discuss the aquatic environment in biodiversity, including whether beneficial uses for aquatic life are fully supported in Idaho water bodies.

1362

RESPONSE: The aquatic environment is discussed within the Revised Plan under the section Biological Elements, Fisheries, Water and Riparian Resources. The EIS states that the selected alternative meets State water quality standards which means that beneficial uses for aquatic life are fully supported. DD/RSM

COMMENTS: Acknowledge the role of fungi in the ecosystem; provide for the inventory of fungal flora in various regions using various tree and plant species of various age classes; monitor fungi with a mycologist rather than a plant pathologist. Some fungi help trees and are needed to provide food sources for small mammals, and indirectly, they are important for raptors.

731

RESPONSE: The Forest acknowledges the role of fungi in the ecosystem. The Revised Plan contains language to: retain higher levels of snags, green replacement trees, and down woody materials; increase protection of aquatic influence zones; and emphasize conservation of biodiversity. DD

COMMENTS: Demonstrate to the public how biodiversity is going to be measured.

1369

RESPONSE: The method of monitoring biodiversity is described in Chapter V (Monitoring Item - Biological Diversity) of the Revised Plan. DD

ECOSYSTEM MANAGEMENT - FIRE

Fire Management Direction Planning, Goals and Standards

COMMENTS: Include a fire management plan that gives forestwide direction for how the forest is to manage fire from both human-caused ignitions and natural causes.

1273b, 1368

Discuss the fire management plan that was in effect prior to the 1988 Yellowstone National Park fires and your current fire management approach.

1204

ECOSYSTEM MANAGEMENT - FIRE

Change the goal of fire management to provide well-planned and executed fire management programs that mimic natural fire regimes, are efficient and are responsive to Forest goals and objectives.

389

RESPONSE: Refer to Objective #1 under fire, which addresses the development of fire management plans within the Revised Plan. Previous to 1988 the Targhee had three fire management plans in effect: the High Country Plan (areas above 8,000 feet); the Big Hole Plan; and the West Slope Tetons Plan. After 1988 these plans were reviewed, and it was determined that they needed to be updated. Work began and is almost complete on the fire management plan for the Jedediah Smith Wilderness. DM

COMMENTS: Replace the guideline on III-129 (5.2.1) with a standard requiring that such practices related to fire suppression must be of the minimum impact possible.

1365

RESPONSE: Refer to the glossary for the definition of a guideline ("preferred or advisable course of action that is generally expected to be carried out"... "Deviation requires documented rationale"). Suppression methods will be determined on a case-by-case basis, depending upon the resources at risk and potential dangers. DM

COMMENTS: Provide some examples of before and after treatments in various community types (mini-Camas Creek). Simplistic table values and percentages on connectivity, patch size etc. are not helpful.

1311

RESPONSE: The Camas Creek and East Beaver Creek landscape analysis will serve as future demonstration areas for the Targhee's approach to ecosystem management. These landscape efforts have not been fully implemented at this time and do not provide information that can be incorporated into the Revised plan other than theory. DM

COMMENTS: Clarify contradictions regarding fire as an important force in shaping the forest versus fire as something that needs to be suppressed.

695

RESPONSE: Refer to Goals 1-3 and Objective #1 under fire within the Revised Plan. These goals provide guidance as to how fire will be managed and/or suppressed. Further guidance would appear within individual site-specific fire management plans which will determine how fires will be managed, based on a number of site-specific variables. DM

COMMENTS: Discuss the schedule and expected funding for completing fire plans.

695

Discuss forestwide direction for how you propose to manage fire from both human-caused ignition and natural causes.

1273b

ECOSYSTEM MANAGEMENT - FIRE

RESPONSE: The schedule for completing fire plans will be developed once the Revised Plan is in place. Funding expectations, for the next ten years, would be speculative. RR

COMMENTS: Want more use of prescribed fire:

432, 1364, 1365, 1393

- to remove fire ladders, reduce fuel loads, reduce fire risks

432, 1364

- to treat a sufficient amount of acres.

1393

- to manage range resources where vegetation diversity is suffering from decadent stands of brush

432

- because fire is the most important secondary factor for the maintenance of the Forest

1365

- as a management tool for timber resources

432

- to reduce too many mature tree stands

432

- to increase in-stream flows.

432

- to reduce amount of waste of wood products.

432

RESPONSE: Use of prescribed fire to achieve a variety of objectives is addressed at the project level where specific fuel types, conditions and associated risks are considered. Also, refer to Objective #1, under fire, in the Revised Plan which addresses the development of fire management plans. DM

More Explanation Needed about Too Small Amount of Use of Prescribed Fire.

COMMENTS: Although prescribed fire is allowed on 1.2 million acres, explain why 2,000 acres a year will be sufficient. At that rate it will take 600 years to treat 1.2 million acres.

1393

RESPONSE: The Forest realizes this may not be sufficient but is constrained by past activities or other resource needs. Managed natural fires may provide an opportunity to treat more acreage. Note that the 2000-acre figure is a minimum. Refer to Objective #1, under fire, in the Revised Plan which addresses the development of fire management plans. DM

COMMENTS: Explain how harvesting only 1.7% of the mature component over 10 years will achieve historic fire intervals that will reduce suppression costs and resource losses from severe wildfires. Suggest you harvest 8-10% of the mature component over ten year period. (CROSS REFERENCE: Timber, Old Growth)

413

RESPONSE: This percentage (1.7%) is a result of meeting other resource concerns/objectives. We may need to continue aggressive fire suppression efforts in areas at risk. DM

ECOSYSTEM MANAGEMENT - FIRE

COMMENTS: Prefer prescribed fire in place of timber harvest because prescribed fire provides better health/habitat for amphibians, elk and other wildlife; reduces fuels; costs less than below-cost timber sales; causes less erosion.

20, 212, 643, 1360, 1364, 1387, 1393

Use fire as a management tool for timber resources. Lack of fire has resulted in more mature tree stands, higher fire risks, and decreased in-stream flows as well as a waste of wood products.

432

Against prescribed fire because burning is wasteful; reduces air quality; and negatively affects wildlife, watershed, and riparian areas.

275, 300, 1176

Refrain from using radical new programs like prescribed fire to improve forest health until some method is developed to assess the relative contribution of these management strategies and the prolonged drought to the current forest health "crisis".

1365

Wise removal of forest products is no more harmful than uncontrollable burning. To prohibit use of forest products so they can rot or burn and then tax me to fight fires is ludicrous.

296

Reexamine your assumption that the only approach to fire control is to reduce fuels and increase fuel diversity.

212, 643, 1257, 1273b, 1368

Consider other complex factors such as insect boom/bust population dynamics linked to fire dynamics, pathogens, and insectivores, birds, and mammals.

643, 1368

Vegetation management can control wildfire. Wildfires often occur at the landscape scale. Treating vegetation at the stand or individual site-level is ineffective.

1273b

The opening of forest canopies through fire proofing operations can dry forest understories earlier in the fire season; the disruption of soil by heavy equipment can reduce soil moisture retention creating drier conditions. Fine fuels left by slash contribute more to fire spread than large fires that are difficult to ignite.

643

Other factors such as climate, drought, weather are more important than vegetation in controlling fire. Logging only removes woody debris which often does not burn anyway.

1273b

Logging and salvage are no substitute for natural fire in an ecosystem.

212

Logging does not mimic the natural disturbance/regeneration regime.

1365

Large scale timber harvests cannot be justified and silvicultural systems must be evaluated in this context.

1365

ECOSYSTEM MANAGEMENT - FIRE

Remove any correlation between mature forests and elevated disturbance risks. This is a flawed contention and there is no evidence that intensive logging of mature stands will reduce disturbance hazards.

1368

RESPONSE: It is true that timber harvest by itself does not mimic the effects of fire. The heat-killing and nutrient-converting attributes of fire cannot be duplicated by timber harvest. Likewise, large and fine woody debris retention and distribution may be quite different between a fire and a timber harvest operation. Secondary effects from timber harvest such as, scarification, roads, skid trails, or compaction are not usually associated with a fire.

Depending upon the fire group, the use of silvicultural techniques and prescribed fire might be the best solution to developing sites that are both resilient and resistant to perturbations. Research silviculturists and fire ecologists are finding that a carefully selected combination of silvicultural techniques combined with prescribed fire is effective for restoring and maintaining forest cover that is resistant to severe insect, disease, and wildfire damage. The combination of silvicultural treatments and prescribed fire facilitate long-term stand maintenance because favorable burning periods (burning windows) are often limited. Weather, availability of personnel, and timing of funding make it impractical to implement safe burns in heavy complex fuel types. Combining silviculture and prescribed burning also has the advantage, at least initially, to reduce adverse burns, which can last for long periods of time and cause human health risks; timing or avoidance of sensitive amphibian breeding sites; timing or avoidance of elk calving areas; avoidance of highly erodible soils; and so forth. Proper application of fire, used with other management techniques, is often the best option for meeting specific objectives while creating the least amount of adverse environmental damage. After implementing prescribed fire and silvicultural techniques, it may be possible to maintain resilient and resistant stand structures with periodic prescribed burning alone. Within other fire groups, the use of prescribed or managed natural fires might be used. Refer to Goals 1-4 and Objective #1 under fire in the Revised Plan. Wildfires are not always favorable for various resource values depending on their intensity/severity and their aerial extent. DM

COMMENTS: Prefer prescribed fire over use of chemicals to reduce shrub invasion of grasslands.

1364

RESPONSE: This is best addressed at the project level scale and depends upon issues raised, goals and objectives of the project, and other resource concerns and site factors. Chemicals (such as Spike 20P) have not been extensively used on the Forest. DM

COMMENTS: Use timber harvest in place of fire as a management tool. It provides greater control of shape, size, location, timing, and level of tree removal.

386, 687

Consider harvest rather than prescribed fire because understory in mature stands is too thick and different in composition and could result in

ECOSYSTEM MANAGEMENT - FIRE

more intense fire. Too many people reside adjacent to the forest and homes and property would be put at risk.

1202

RESPONSE: Prescribed fire and timber harvest will be permitted by the Revised Plan. Project-specific objectives will determine which is more appropriate.
RR

Ecological Processes - Fire

COMMENTS: Include fire under ecological processes and patterns.

695

RESPONSE: Your comment is acknowledged. Fire is added to this section. See goals, objectives and standards/guidelines for fire under Chapter III of the Revised Plan. DM

COMMENTS: Let wildfire take its natural course; let wildfire burn; human control is futile; use minimum impact suppression in responding to wildfire; include beneficial factors of natural fire in the ecosystem; don't introduce fire into systems with long fire intervals; use suppression only to protect lives or structures.

24, 695, 1273b, 1312, 1330, 1364

RESPONSE: Refer to the Goals, Objectives and Standards/Guidelines for Fire in the Chapter III, Forest Plan. Fire management plans will determine how fires will be treated within a given area. Treatment is site-specific and depends on numerous variables such as resource values at risk or life and property risks. DM

COMMENTS: Fires do not require a rapid human response and in some cases, acting too quickly can create new problems. Federal fire policy has resulted in decreased fire starts and an increase in fuel accumulation. Suppression costs too much and no reduction in fire risk has occurred.

1364

RESPONSE: These factors are considered in developing responses to wildfire suppressing and fire management planning. The Forest intends to move from suppressing fires to reducing fuels by prescribed fire and vegetation manipulations. RR

COMMENTS: Establish forestwide standards and guidelines for fire that will allow natural fire to burn without intervention.

695

RESPONSE: Fire management plans will be developed for various areas of the Forest (refer to the Goals and Objectives for Fire in Chapter III, Forest Plan). How a fire might be handled depends on a number of site-specific variables and is best analyzed at a finer scale. DM

ECOSYSTEM MANAGEMENT - FIRE

Control Wildfire

COMMENTS: Prefer control of wildfire. Large areas of the Park burned and lie devastated and useless.

7

Prefer control of wildfire, but let insect and disease run their course.

35

Consider proactive management of wildfire to reduce runoff erosion. Yellowstone National Park experienced increased erosion after fires because of water repellent soils.

393

Let some fires burn if the disturbance of putting it out is greater than letting the fire go.

32

RESPONSE: All of these concerns are best handled through fire management plans that will be developed for various areas of the Forest (refer to the Goals and Objectives for Fire in the Forest Plan - Chapter III). How a fire might be handled depends on a number of site-specific variables and is best analyzed at a finer scale. DM

Discuss More about Fire

COMMENTS: Consider an alternative to recover natural wildfire regime without extensive mechanical thinning and salvage.

1364

RESPONSE: Mechanical manipulation of forest vegetation is permitted by the Revised Plan. Individual fire management plans will help determine appropriate actions within a particular area on the Forest. RR/DM

COMMENTS: Discuss the effects that wildfire may have on age class distribution.

228

RESPONSE: This type of discussion better applies to site specific landscape or project-level analysis versus forestwide analysis. Effects of wildfires are variable, even within the same fire group, depending on site-specific factors. Site-specific analysis and fire management plans will determine the best course of action and the effects that course of action will have on age class distribution. DM

Relate Fuel Types to Fire Behavior

COMMENTS: Discuss the types of fuels that exist on the Forest and their relationship to fire behavior. Fine fuels are an important source of fire spread while heavy fuels are an important source of fire intensity.

1273b

Consider that slash and fine fuels left behind by intensive logging can increase fire risks. Forest fragmentation and removal of older green trees, snags and down wood, which are habitat for natural pest enemies, reduce

capacity of biological control, creating more intense insect outbreaks and fire intensities.

1368

Fuel loads do not determine burn severity. Severity of a burn is a function of fire size, and fire size is a function of weather. Reduced fire severity in untreated stands is a result of the absence of logging slash, the lack of opening in forest canopy which reduces insulation, wind, movement near the surface and the associated drying of fuels.

643

Consider that fire suppression has had little effect on many areas of the forest, especially in ecosystems with infrequent fire like subalpine areas.

643

RESPONSE: General fuel types found on the Targhee are discussed in Chapter III & IV in the DEIS. Fire behavior depends on numerous variables (such as climatic variables such as wind speed/direction, temperature, relative humidity; and site variables such as slope, elevation, aspect) that would be difficult to discuss on a forestwide basis. These and other considerations are evaluated when developing burn plans or fire management plans on a more site-specific level. DM

COMMENTS: Include note that clearcutting and fire in aspen fire regimes and conifer encroachment have different ecological effects. Clearcutting removes organic matter and lowers pH while burning adds organic carbon and increases pH that allows aspen to compete with other vegetation. (CROSS REFERENCE: Timber, Aspen)

643

RESPONSE: Generally, the effects you describe exist. The degree of the PH effect depends on site-specific management. How aspen communities and conifer encroachment are treated within a particular landscape is best addressed at the project level. DM

Management Actions to Control Fire May Produce Unintended Effects

COMMENTS: Management techniques intended to control fire can exacerbate insect populations by removing natural predators and their habitat, i.e., predators like insects, wasps, ants and birds. Prescribed fire increases insect pest densities by eliminating nesting substrate for ants and destroying dead wood for nesting or foraging substrate for insect-eating birds and predatory parasitic insect species. Management actions (salvage, thinning, and logging which remove dead wood) reduce or eliminate the checks and balances to control insect pest populations.

643

RESPONSE: Refer to the woody residue requirements table under soils, and the goals under fire in the Revised Plan. These factors are best evaluated at the landscape or project level scale. RR/DM

COMMENTS: Use more Timber and Range Management to mimic the role of fire; to mimic and sustain natural ecologic processes to reduce fuel loads and prevent

ECOSYSTEM MANAGEMENT - FIRE

catastrophic fires; to achieve historic fire intervals; to provide a diversity of vegetation age classes; to provide for economic stability; to use forest products before they rot or burn.

296, 413, 432, 1364, 1378

RESPONSE: Vegetation management by timber harvest, mechanical methods, and grazing are permitted by the Revised Plan. RR

Timber Management Methods Do Not Mimic Fire

COMMENTS: Reduce or eliminate clearcutting/logging. It does not mimic natural fire because...

150, 212, 242, 643, 644, 695, 697, 1257, 1273b, 1331, 1364, 1368, 1446

- it causes erosion and weakens the ecosystem so it becomes more prone to disease

150, 242, 643, 644, 1331, 1364

- clearcutting removes organic carbon, while fire retains it

1273b

- clearcutting is not the same in terms of energy and nutrient movement in the ecosystem

1446

- logging does not restore landscape vegetation patterns to those that existed presettlement; logging fragments and cannot reproduce a cycle that occurs under a natural regime.

643

- it is the root of many Forest problems in riparian areas

697

- the Forest recovers quicker from natural disturbance than logging

1257

- it causes further fragmentation

1273b

- studies show that other factors (climate, drought, weather) are more important than vegetation in controlling fire; logging only removes large woody debris which seldom burns.

1273b

- not the only solution to fuels buildup and fuels diversity.

643, 1368

- no evidence that intensive logging of mature stands will reduce disturbance hazards.

1368

RESPONSE: It is true that timber harvest by itself does not mimic the effects of fire. The heat-killing and nutrient-converting attributes of fire cannot be duplicated by timber harvest. Likewise, large and fine woody debris retention and distribution may be quite different between a fire and a timber harvest operation. Secondary effects from timber harvest such as, scarification, roads, skid trails, or compaction are not usually associated with a fire.

Depending upon the fire group, the use of silvicultural techniques and prescribed fire might be the best solution to developing sites that are both resilient and resistant to perturbations. Research silviculturists and fire ecologists are finding that a carefully selected combination of

silvicultural techniques combined with prescribed fire is effective for restoring and maintaining forest cover that is resistant to severe insect, disease, and wildfire damage. The combination of silvicultural treatments and prescribed fire facilitate long-term stand maintenance because favorable burning periods (burning windows) are often limited. Weather, availability of personnel, and timing of funding make it impractical to implement safe burns in heavy complex fuel types. Combining silviculture and prescribed burning also has the advantage, at least initially, (to allow the use of measure to) reduce adverse burns, which can last for long periods of time and cause human health risks; timing or avoidance of sensitive amphibian breeding sites; timing or avoidance of elk calving areas; avoidance of highly erodible soils, and so forth). Proper application of fire, used with other management techniques, is often the best option for meeting specific objectives while creating the least amount of adverse environmental damage. After implementing prescribed fire and silvicultural techniques it may be possible to maintain resilient and resistant stand structures with periodic prescribed burning alone. Within other fire groups, the use of prescribed or managed natural fires might be used. Refer to Goals 1-4 and Objective #1 under fire in the Revised Plan. Wildfires are not always favorable for various resource values depending on their intensity/severity and their aerial extent. DM

Include Conditions for Fire in Grizzly Bear/Elk/Wildlife Areas.

COMMENTS: Be explicit about the use of prescribed fire and the conditions when human-ignited fires are permitted. State under what conditions a human-ignited fire is permitted. Include more meaningful standards such as the size or acreage of grizzly bear/elk security area allowed to be impacted by fire. Include a standard that once a certain percentage of acres of bear security areas has burned, then fire suppression would occur.

1273b

RESPONSE: This is an implementation issue to be addressed during the development of site-specific fire management plans. RR

COMMENTS: Use MIST whenever possible regarding wildfires and pre- and post-fire strategy. Replace the first guidelines with a standard requiring the use of MIST whenever possible.

1365

RESPONSE: MIST techniques apply to grizzly bear core areas (See Prescription 2.6.2). MIST techniques can be used in other areas, depending upon the nature of the fire and the values that are at risk. DM

Consider Grazing as Important in Controlling Fires and Sustaining Ecosystems

COMMENTS: Use fire to manage range resources. Vegetation diversity is suffering from decadent stands of brush, restricted ground water flows which cause livestock to seek riparian areas rather than the uplands. Fire can be used to gain proper use levels.

432

ECOSYSTEM MANAGEMENT - FIRE

RESPONSE: We agree. Many rangeland ecosystems have altered fire intervals (for instance, mountain big sagebrush ecosystems have a 10-25 year fire interval due to past suppression efforts). Fire is needed within these ecosystems to maintain their resiliency and resistance to future perturbations. Fire intervals may need to be restored at intensity/severity levels greater than historical. Refer to the Fire and Vegetation Goals, Objectives and Standards/Guideline section of the Revised Plan. DM

COMMENTS: Promote managed use of rangelands and use grazing as a tool to sustain resources. Allow appropriate tools to be used, like grazing, prescribed fire and timber harvest to sustain ecosystem.

432

RESPONSE: Refer to the Goals, Objectives and Standards/Guidelines for Vegetation within the Revised Plan. DM

COMMENTS: Review bias toward mature forest and strategies that convert old vegetation to young vegetation through prescribed fire, i.e. prescribed fire needs to be managed, a lack of roads and timber management options discourage the use of prescribed fire; therefore, more harvest is needed to encourage prescribed fire.

Missing Letter #

RESPONSE: Prescribed fire (natural and management ignited) is a management tool that can be used to achieve desired results such as returning vegetation in late successional stages to early- or mid-successional stages of vegetation. The lack of roads and timber management do not discourage the use of prescribed fire. There is no relationship between the amount of harvest and the use of prescribed fire. These two methods may be used in conjunction with each other to meet resource goals but are not dependent on each other. In some situations prescribed fire may be the only tool used to meet desired objectives. RD/DM

COMMENTS: Grazing does not mimic natural disturbances such as fire.

697, 1204

Discuss the benefits of grazing in the control of fires.

251

Consider fire as the most important secondary factor for the maintenance of forest conditions. Livestock grazing is the key factor in the widespread conversion of savannah to forest.

1365

Address grazing impacts on Doug-fir having small stems in forests that are dominated by non-lethal underburning. This consideration may influence management prescription for restoration of Doug-fir where fire suppression has disrupted fire cycles.

1273b

RESPONSE: Grazing can effectively reduce fine fuels and thereby aid in controlling wildfires. In the sage/grass ecosystem, contiguous dense stands of sagebrush are a concern and would not be modified through grazing.

The Targhee acknowledges that grazing does not mimic natural disturbances. Numerous factors play a role in the expansion or encroachment

ECOSYSTEM MANAGEMENT - FIRE

of conifers within a given area such as site conditions, fire suppression, or management emphasis. DM

COMMENTS: Review cumulative effects section for upland forested and upland nonforested ecosystems in that it seems to predict forest changes if fire is suppressed rather than being allowed to function in a natural role.

695

RESPONSE: Within ecosystems where there is a likelihood of having altered fire regimes, risks exist for experiencing fires of a higher intensity/severity than what historically occurred. Under these conditions, it is advisable to continue to suppress fires until various techniques (such as prescribed fire, combination of silvicultural techniques and prescribed fire, and so forth) can be used to restore a better balance. Then it could be possible to allow fire to function more naturally, depending upon the resources at risk. DM

Fire and Soils

COMMENTS: Risk to soils is not a justification for fuels management since studies in Yellowstone National Park show soils were heated only lightly or moderately and that soil and site productivity was not decreased.

1273b

Consider broadcast burning following a sale as well as increase the minimum amount of debris left on the ground to benefit soil objectives. Slash pile burning serves no ecological purpose.

625

Opening forest canopies through fire proofing operations will disrupt soil by use of heavy equipment, reducing soil moisture retention.

Missing Letter #

RESPONSE: Risk to soils is considered at the site-specific project level. Soil risks are evaluated, in the case of a natural fire, to determine appropriate burned area emergency rehabilitation measures. Within certain fire groups, where fire suppression has caused one or more mean fire intervals to lapse, there may be a realistic risk to the soil resource from fires burning at a higher intensity/severity than what occurred historically which may result in higher potentials for resource damage.

Broadcast burning is best addressed at the project level. Refer to the Table in Chapter III of the Revised Plan for minimum woody residue requirements needed to maintain long-term site productivity.

Secondary effects from timber harvesting (opening forest canopies) through scarification, roads, skid trails, or compaction are not usually associated with fire but they can adversely affect the soil resource. Soil quality standards and guidelines are identified within the Revised Plan to address this concern. Also, review the soils sections within Appendix A of the Revised Plan. DM/DD

ECOSYSTEM MANAGEMENT - FIRE

Seeding, Especially for Restoration after Burns

COMMENTS: Use native seeding for restoration, erosion control, and revegetation projects whenever possible. Change first guideline on Page III-8 to a standard.

695, 697, 766, 1276

Prohibit the seeding of exotic non-native species in burned areas. Exotic species do little to reduce erosion potential and inhibit the post fire development of populations of native species. Non-native species like Timothy and smooth brome do little to reduce erosion and prohibit the re-establishment of native species. Include sagebrush, forbs and native grasses in fire rehabilitation seeding mixtures.

489, 731, 766

Consider species variety in replanting. One or two commercially valuable species does not a forest make.

1396

RESPONSE: Refer to Objectives and Standard/Guidelines for Vegetation in Chapter III of the Revised Plan. Refer to the glossary for the definition of a guideline and its requirements. For burned area rehabilitation, native species are desirable if they have been proven effective in controlling erosion. Species recommended for seeding that are not mandatory for erosion control can be used within the seed mix provided they are paid for with program dollars. Emergency funds are not available to purchase species that are mainly beneficial for other purposes but are not needed for the immediate emergency such as loss of soil and onsite productivity, and/or loss of water control and deterioration of water quality. DM

Structures

COMMENTS: Discourage new or reduce the number of structures in fire prone areas by developing policies.

1364

RESPONSE: Refer to Goals, Objectives and Standards and Guidelines for Fire in the Revised Plan. Development on adjacent and/or private lands is beyond the control of the Forest Service. Refer to Prescription 5.1.3 within the Revised Plan which addresses Urban Interface Fuels Management. DM

Miscellaneous

COMMENTS: Consider the use of spot burning instead of burning one large area. Don't try to change everything at once.

219

RESPONSE: This is best considered at the project level.

COMMENTS: Use fire management to maintain a supply of post and poles.

293

RESPONSE: This is a project level decision. Refer to Goals for Fire in the Revised Plan.

ECOSYSTEM MANAGEMENT - FIRE

COMMENTS: Eliminate fire fuel standard.

1365

RESPONSE: The Forest retains a fire fuel standard because it is important.
RR

COMMENTS: Add a monitoring element to track the number of fire ignitions managed as prescribed burn and how noticeable fire suppression efforts are one year after the fire.

1312

RESPONSE: The monitoring program in Chapter V focuses on the most critical activities and is cost-effective and reasonably achievable, given anticipated staff and budgets. This item was considered for inclusion in the monitoring program, but was dropped, because it received a lower priority than other, more critical, activities. RR

COMMENTS: Allow prescribed burning in Research Natural Areas in accordance with the RNA's Establishment Record in that prescribed fire may be used to maintain fire dependent ecological processes and to provide a natural range of fuels, understory vegetation, and successional stages where specific direction is not provided, or modification is needed. Prescribed fire in these areas should be developed and approved by the Research Station Director.

1181

Add a guideline to prescribed fire section that prescribed fire plans for RNA's will be developed in conjunction with the Intermountain Research Station and approved by the Station Director.

612

RESPONSE: Prescription 2.2 (Research Natural Areas), allows the use of prescribed fire (guidelines under Fire/Fuels in Chapter III). Prescribed fires planned within Research Natural Areas follow proper protocol during the NEPA process. DM

ECOSYSTEM MANAGEMENT - FOREST HEALTH

Change Analysis, Definitions of Forest Health

COMMENTS: Reassess the Forest's health. Language is inflammatory and there is no scientifically proven answer to what constitutes a healthy forest. Provide basis for ecological analysis or vegetation data and analysis that form the basis for forest health descriptions found in the subsection write-ups. Reconsider subsection descriptions which identify forest health issues as crowding, insect and disease, and catastrophic fire as a basis for action or treatment.

643, 695, 1364

Define how forest health will be measured in quantitative terms.

Include wildlife in the definition of forest health.

1369

RESPONSE: See the "Forest Health" definition in Revised Plan Glossary. The aspects of forest health noted are not exhaustive or comprehensive. Opinions

ECOSYSTEM MANAGEMENT - FOREST HEALTH

about what constitutes a healthy forest vary, but substantial evidence supports the indicators of forest health identified in the Plan such as insect and disease risk, aspen decline, risk of catastrophic fire, lack of species diversity, water quality limited segments (WQLS), measures of hydrologic disturbance, and elk vulnerability. Most standards and guidelines include measures which will (likely) maintain or improve forest health.

Documentation of analysis and data used is included in the "References Cited" section of the Revised Plan and FEIS and in the analysis file at the Supervisor's Office. Some documentation can also be found in Appendix A-1, National Goals Relevant to Land and Resource Management.

The subsection descriptions present a representative portrayal of the ecological condition. The goals and objectives, and standards and guidelines provide management direction responsive to these conditions and that foster forest health in the aggregate. The Forest does not expect unilateral agreement with proposals in the Revised Plan, but adequate scientific basis exists for proceeding adaptively with implementation.

Forest health will not be measured quantitatively as a single item. An array of indicators described in Monitoring and Evaluation, Chapter V, will determine the overall health of the Forest and the extent to which desired conditions have been achieved. Other assessment tools such as Properly Functioning Condition will be used to determine ecosystem components that may be "at risk." Properly Functioning Condition assessments incorporates wildlife habitat. RR

Additional Causes of Poor Forest Health

COMMENTS: Consider that roads and management activity increase the risk of tree diseases such as the spread of fungal disease. Forest practices in Pacific NW have increased the incidence of soil-borne tree diseases caused by altering stand structure and composition and altering soil drainage patterns by the creation of logging roads. Roads used for harvest and fire suppression allow increased human access; 90% of all wildfires are human-caused.

643

RESPONSE: Damage from mechanical disturbances to individual trees or stands can increase risk of spread of pathogens. The degree to which this may have affected forest stands on the Targhee is unknown. This information is not essential to making a reasoned choice among alternatives for this analysis. Roads, by design, are intended to improve human access. The Revised Plan provides detailed direction for managing access in a balanced manner to provide for recreation opportunity, transportation, and services while protecting critical wildlife habitat, soil, and aquatic resources. There is a significant reduction of open roads in the Revised Plan. RR

COMMENTS: Discuss the proliferation of human-related disturbance as the principal cause for forest health problems. Undisturbed areas are surrounded by a sea of disturbance which have profound repercussions for forest ecosystems to sustain themselves.

643

RESPONSE: Human demands on ecosystems introduce a complex set of effects. The notion of human influence as a "principle" cause of forest health problems

ECOSYSTEM MANAGEMENT - FOREST HEALTH

probably enjoys no more consensus than many contentions in matters related to ecosystem management. However, these demands on public lands are a fact and condition of contemporary National Forest management. Provision for goods and services remains a mandate of public law and policy, under Multiple Use Sustained Yield (MUSY) Act, Resource Protection Act (RPA), NFMA, and other laws or regulations. The issue is, "how do we conduct public land management to meet human needs while maintaining the health, diversity, and productivity of ecosystems?" (Thomas and Huke 1996). Human induced disturbance does not perfectly replicate natural disturbance processes, and we do not contend that it does. However, artificially designed disturbance can achieve desired social, ecological, and economic effects while ecologically approximating natural disturbance, with mitigation for risk to undesirable adverse effects. Humans will continue to affect ecosystems. The Revised Plan provides for this in a manner consistent with maintaining sustainable ecosystems. RR

ECOSYSTEM MANAGEMENT - INSECT/DISEASE

Broaden Scale of Analysis for Insects and Disease

COMMENTS: Examine major past population fluctuations at a larger geographical scale. Population fluctuations of defoliators are driven by dynamic processes that sometimes operate at a regional scale.

643

RESPONSE: New language is included in the Revised Plan which recognizes the role insects and disease play in forest ecosystems. The Regional Office (Forest Health Protection) provides the Forest with annual reports on the status of insect and disease surveys and findings. Forest Health Protection also completes surveys periodically on the Targhee. This information is taken into consideration when planning and implementing project level work. Due to the temporal and spatial variances with insect and disease outbreaks, it is difficult to properly examine this within the context of a Forest Plan. DD/DM

EM Goals and Standards for Insects and Disease Treatments

COMMENTS: Expand Insects and Disease section and link goals of EM to ensure aquatic habitat protection is maintained throughout the Plan.

643, 1446

RESPONSE: New language is included in the final Revised Plan which recognizes the role insects and disease play in forest ecosystems. Refer to the Goals, Objectives and Standards/Guidelines for Properly Functioning Condition (PRC) in the Revised Plan, "Ecological Processes and Patterns", Chapter III, and to the Prescription 2.8.3 in the Revised Plan. DD/DM

COMMENTS: Consider an environmental assessment or watershed analyses for fire and insect and disease infestations.

1365

RESPONSE: The Forest will assess the properly functioning condition of various ecosystems using guidelines found in the report entitled Properly Functioning Condition Process-1996 (draft). Ecosystems strongly controlled by

ECOSYSTEM MANAGEMENT - INSECT/DISEASE

fire or insect and disease infestations, or have the potential to be affected, will receive priority for assessment. Plans are already underway to assess the condition of the lodgepole pine ecosystem in the Island Park Ecological subsection. DD

COMMENTS: Establish a standard that no damaged or diseased trees will be removed, and specifically state exceptions to this standard. Let natural disturbance play its role in ecosystem dynamics.

695, 697

RESPONSE: The Final Revised Plan includes direction for the management of snags and green replacement trees; dead and down woody material; and natural disturbances supported in scientific literature. Each situation will be evaluated on a case-by-case basis by an Interdisciplinary Team. Potential resource values at risk, endemic versus epidemic insect and disease evaluations, spatial and temporal considerations will be evaluated to arrive at a recommended course of action, including no action. DD/DM

COMMENTS: Disclose who will decide insects and disease goal compatibility, and the factors/measures that will be used; explain how conflicts will be addressed when insects and disease have benefits for wildlife but negative effects to vegetation.

1369

Include a discussion of how the Forest intends to prevent a recurrent of the insect infestations that have occurred in the past.

166

RESPONSE: The Forest will determine whether various ecosystems are in properly functioning condition (PFC) by using the procedures outlined in the report entitled Properly Functioning Condition Process-1996 (draft). This process evaluates ecosystems at the watershed and other geographic scales and considers the role that fire, insects and disease play in maintaining ecological integrity. Ecosystems not in properly functioning condition, or near their threshold, will be further evaluated as to the associated risks. If risks are significant, then alternatives will be developed and evaluated through an environmental assessment process to determine a preferred course of action, if any. Plans are already underway to conduct a PFC assessment of the lodgepole pine ecosystem in the Island Park Ecological subsection. DD

COMMENTS: Provide scientific references or analysis that support the implication that cutting mature trees should be favored to increase forest diversity and reduce the risk of insect and disease outbreaks. Provide clear proof that mature forest are more susceptible to insect and disease.

1368

RESPONSE: Bark beetles present the most serious insect threat to lodgepole pine (Amman 1975). The mountain pine beetle is by far the most significant insect pest of lodgepole pine (Amman 1978). The significance of the problem was thoroughly discussed in a symposium held in 1978 in Pullman, Washington (Berryman and others 1978).

Amman (1978) listed the following stand characteristics associated with epidemics: 1) trees more than 80 years old, 2) mean tree diameters over

ECOSYSTEM MANAGEMENT - INSECT/DISEASE

eight inches, 3) a substantial proportions of trees over 12 inches d.b.h. with phloem thickness of 0.1 inches or more, and 4) elevations where temperatures are optimum for brood development. DS

ECOSYSTEM MANAGEMENT - LANDSCAPE MOSAIC

Define/Clarify Mosaic You are Attempting to Achieve

COMMENTS: Define the mosaic you want to achieve for age and structural criteria such as age classes, dbh, canopy closure requirements, desired combination of age classes based on wildlife needs and current science.
643, 1369

RESPONSE: The scale used is adequate for the scope and resolution of this analysis. Landscape analysis is more appropriately used at the site-specific project level to provide an ecological context during project implementation.
DD

COMMENTS: Cite scientific references you used to define a desired mosaic of habitats that create adequate biodiversity and demonstrate how you will measure biodiversity based on that mosaic of patterns.
1369

RESPONSE: As we implement the Revised Plan, The Targhee will use relevant scientific literature and information from on-going cooperative research studies with several universities. Some assessments will use processes outlined in the following documents: Properly Functioning Condition Process - Version May 24, 1996; Riparian Area Management - Process for Assessing Properly Functioning Condition for Lentic Riparian-Wetland Areas. TR 1737-11, 1994; Riparian Area Management - Process for Assessing Properly Functioning Condition. TR 1737-9, 1993. DD

Discuss How You Will Maintain Mosaic

COMMENTS: Explain how you will maintain a mosaic of age classes and patterns if the forest only plans to harvest 1/5 of the growth of the Forest and how this approach protects forest health.
413

RESPONSE: A mosaic of age classes and patterns can be achieved by natural and prescribed fire, insect and disease activity, windthrow, timber harvest, and so forth, or a combination of these disturbances. The exact level of timber harvested will be determined through site-specific analysis aimed at producing timber and restoring ecosystem sustainability. DD

ECOSYSTEM MANAGEMENT - NATURAL DISTURBANCES

Address Ecological Consequences for Unmanaged vs. Managed Land Perspective

COMMENTS: Include studies like UCRB that indicate unmanaged lands are more

ECOSYSTEM MANAGEMENT - NATURAL DISTURBANCES

resilient and healthy and have more natural disturbances patterns and fire regimes than managed lands.

643, 695

RESPONSE: The Forest considered an array of scientific literature in completing the Final EIS and Revised Plan, including some of the available literature used for the UCRB. The Targhee will continue to use these and other science to plan and implement management activities. DD

COMMENTS: Discuss the broader ecological consequences of natural disturbance and suppression for long-term maintenance of biodiversity and sustainability.

643, 695

RESPONSE: The Forest considered the consequences of natural disturbance and fire suppression in more detail relative to sustainability and biodiversity during preparation of the Final EIS and Revised Plan. The Final Revised Plan includes more specific direction on this subject than did the Draft. DD

Modify Goal of Ecological Processes and Patterns

COMMENTS: Change goal for ecological processes and patterns from maintaining a mosaic of age classes and types of vegetation to one that focuses on preserving the full complement of native flora and fauna with maintenance of genetic species community and landscape diversity.

697

RESPONSE: The Final Revised Plan includes direction on maintenance of properly functioning condition of ecosystems at various geographic scales. It also includes new goals to maintain and restore biodiversity. DD

COMMENTS: Add to the ecological goal that you want to prevent new listings of Threatened and Endangered Species.

389

RESPONSE: This is implied within other goals and policies (such as sensitive species listing to prevent threatened and endangered status) involving properly functioning condition of ecosystems, biodiversity, fisheries, and wildlife. DD

COMMENTS: Change goal to, "provide well-planned and executed fire management programs that mimic natural fire regimes, are efficient and are responsive to resources and meet goals and objectives."

389

RESPONSE: The Forest included such a goal in the Final Revised Plan. DD

Include Beneficial Role of Natural Disturbances

COMMENTS: Review your approach to ecological processes. Provide more comprehensive discussion of the beneficial good that natural disturbances play in the ecosystem. Your emphasis is not to preserve and work with natural

ECOSYSTEM MANAGEMENT - NATURAL DISTURBANCES

ecosystem processes such as fire, insects and disease, but rather to suppress them. Document is full of these kinds of contradictions.

282, 489, 643, 1446

RESPONSE: The Final Revised Plan acknowledges the beneficial roles natural disturbances play in sustaining ecosystems and emphasizes restoration of these natural processes where feasible. DD

COMMENTS: Correct misconceptions about the role of natural disturbances and processes of succession which have led to erroneous conclusions regarding existing conditions and historical conditions.

643

RESPONSE: The Final EIS more clearly describes the role of natural disturbances, plant succession, existing vegetative condition, and historical vegetative conditions. DD

COMMENTS: Include possible future effects of natural disturbances. They may have an effect on the biological potential for primary cavity nesting habitat more so than vegetation management.

1365

RESPONSE: The Forest considered the possible future effects of natural disturbances on biological potential for primary cavity nesting habitat in development of the Final Forest Plan. This is reflected in the management direction relative to restoring ecosystems to properly functioning condition; the use of natural and prescribed fire; and retention levels of snags, green replacement trees, and down woody material. DD

Provide Direction to Allow Natural Disturbances to Function

COMMENTS: Let nature take its course.

42, 174, 175, 643, 1387, 1392

Let natural processes function in their unmanaged role and reap the outputs as they are available without seriously compromising natural processes.

695

Prevent the active suppression of fire or other natural disturbances. This is not good management for the long-term maintenance of diversity and sustainability.

174, 175, 181, 282, 643

Reassess goals, objectives, standards and guides for ecological processes and patterns. The way it is written, you will use silviculture and grazing techniques to manage forest ecology. Allow natural disturbances to play their unique role.

697

Include specific direction to require preservation of natural ecosystem processes such as fire, insects and disease and provide specific direction on how to maintain positive outcomes of these processes, especially in AIZs. Make intent of the forest clear so ground management conforms with EM philosophy.

643, 1194, 1401

ECOSYSTEM MANAGEMENT - NATURAL DISTURBANCES

RESPONSE: The Forest Service is mandated to use ecosystem management to maintain and restore ecosystem sustainability while producing a variety of goods and services. Simply letting nature take its course does not accomplish this mandate. Instead, the Forest will implement management activities which improve and restore ecosystems to properly functioning condition. Processes are outlined in the following documents: Properly Functioning Condition Process - Version May 24, 1996 Draft (Page 31); Riparian Area Management, Process for Assessing Properly Functioning Condition, TR 1737-9 1993 (Page 51); and Riparian Area Management, Process for Assessing Properly Functioning Condition for Lentic Riparian - Wetland Areas, TR 1737-11 1994 (Page 37). DD

COMMENTS: Include specific direction and standards and guides to maintain the positive outcomes of natural disturbances. Instead, emphasis is on limiting their influence.

643

Establish objectives, standards and guides that allow for natural processes such as fire, avalanches, floods and episodic outbreaks that provide for large and small scale disturbances as a means of providing ecosystem diversity.

1273b

RESPONSE: The Revised Plan acknowledges the roles that natural disturbances play in sustaining ecosystems and emphasizes restoration of these natural processes where feasible. DD

COMMENTS: Emphasize managing natural disturbances to protect structures and human safety, while allowing more of forest restoration to occur through natural fire.

1273b

Control fires and insect and disease outbreaks. We are opposed to letting these disturbances run rampant.

1261, 1457

RESPONSE: The Final Revised Plan acknowledges the roles that natural disturbances play in sustaining ecosystems and emphasizes restoration of these natural processes where feasible (in compliance to pertinent laws, regulation, and Forest Plan). At the same time, the Forest is mandated to use ecosystem management to maintain and restore ecosystem sustainability while producing a variety of goods and services. Always letting nature take its course does not accomplish this mandate. The Forest will use a combination of natural disturbances and prescribed management activities to improve and restore ecosystems to properly functioning condition. The processes the Forest will use are outlined in the following documents: Properly Functioning Condition Process - Version May 24, 1996 Draft (Page 31); Riparian Area Management, Process for Assessing Properly Functioning Condition, TR 1737-9 1993 (Page 51); and Riparian Area Management, Process for Assessing Properly Functioning Condition for Lentic Riparian - Wetland Areas, TR 1737-11 1994 (Page 37). DD

ECOSYSTEM MANAGEMENT - NATURAL DISTURBANCES

Incorporate Studies that Address Ecology of Greater Yellowstone Area

COMMENTS: Incorporate various peer reviewed studies that address the ecology of the Greater Yellowstone Area. None are cited and few assertions are supported with appropriate citations.

489

RESPONSE: In development of the Final EIS, the Forest used an array of scientific literature, including those that address the ecology of the Greater Yellowstone Area. Additional scientific literature will be used as the Revised Plan is implemented. DD

Clarify/Integrate Ecological Process and Elements

COMMENTS: Explain the difference between ecological processes and ecological elements. This is confusing unless they are the same. Be consistent in your use of terms.

1446

RESPONSE: Ecological process refers to a series of natural biological, physical, and social actions or events that link the growth and development of organisms (including humans) within their environments. In the field of landscape ecology, landscapes are characterized as to pattern. Patterns are often described in terms of ecological elements which are the discrete units or patches, including vegetative types, roads, buildings, fields, and so forth. DD

COMMENTS: Improve ecological view by linking biological components from ecological processes, e.g., fire, insects or other natural disturbances.

697

Integrate ecological function across boundary lines that address downstream conditions and ecological effects of management activities.

643

RESPONSE: The Forest improved the discussion of ecological processes in the effects analysis in the Final EIS. DD

ECOSYSTEM MANAGEMENT - OLD GROWTH

Old Growth and Disturbance Hazards are Inaccurate

(CROSS REFERENCE: Timber, Old Growth)

COMMENTS: There is no evidence that intensive logging of "mature" stands will reduce disturbance hazards.

1368

RESPONSE: Logging mature stands reduces disturbance hazards through the removal of species that provide ladder fuels or by reducing the density of trees. DM

ECOSYSTEM MANAGEMENT - OLD GROWTH

COMMENTS: No scientific evidence or analysis is offered in support of statements that the replacement of existing stands with younger trees reduces mortality caused by insect and disease.

1368

RESPONSE: Amman 1978, listed the following stand characteristics associated with epidemics: 1) trees more than 80 years old; 2) mean tree diameters over 8 inches; 3) a substantial proportion of trees over 12 inches dbh with phloem thickness of 0.1 inches or more; and 4) elevations where temperatures are optimum for brood development. DM

COMMENTS: Correct the DEIS's flawed assumption that "mature" forests are usually less susceptible to stand replacing fire than younger stands. Forest fragmentation and removal of older green trees, snag and down wood, can reduce the capacity for biological pest control.

1368

Provide evidence to support EIS contention that overstory removal and regeneration in mature stands will reduce fire, insect and disease hazards since intensive logging in mature stands would more likely exacerbate fire, insect and pathogen outbreak intensities and durations.

1368

DEIS (Page III-6) portrays an overriding concern that mature age classes are more susceptible to stand-replacing fires. If the Targhee National Forest is to move toward Ecosystem Management that more closely emulates natural processes, managing for a larger portion of mature forests would be appropriate.

489

Discuss your claim that the lack of old growth is due to ecological conditions which do not favor very old trees. Various studies dispute this conclusion.

643

RESPONSE: A write-up on old growth is incorporated into the Final Environmental Impact Statement (FEIS). Additionally, standards and guidelines pertaining to old growth are added to the Revised Plan under Biodiversity, Chapter III. Past information on old growth is derived from analyzing the permanent Forest inventory plots. Data from the plots was compared to the region's old growth definitions to better determine the amount of old growth that might be present on the Targhee. This information was extrapolated across the Forest, using the inventory plots as a representative sample.

Biological pest control will be evaluated on a case-by-case basis at the landscape or project level of analysis.

Through the removal of species that provide ladder fuels or by reducing the density of trees, the Forest may achieve levels of older trees higher than what historically occupied the site. DM

COMMENTS: In subsection descriptions, the plan's definition of old growth concludes these types of mature stands are more susceptible to large fires and insects and disease. Silvicultural systems that promote mature and old growth stands increase the risk of insect and disease epidemics. Characteristics of large diameter, low vigor attract insects and disease. To reduce

ECOSYSTEM MANAGEMENT - OLD GROWTH

susceptibility to insects and disease is to convert to a younger age class, thereby allowing for more harvest of old growth.

695

RESPONSE: Your comments are acknowledged. Refer to the additional standards and guidelines concerning old growth added to the Biodiversity section of the Revised Plan, Chapter III. The old growth component provides critical habitat for forest interior dependent species, many of which are on the Forest's sensitive species list. It is important to maintain and perpetuate old growth conditions on both spatial and temporal scales to meet the needs of these species. DM

ECOSYSTEM MANAGEMENT - PATCH SIZE

Human Management Not the Same as Natural Disturbances

COMMENTS: Consider that restoring patterns to the landscape does not necessarily have the same effect as restoring the processes that formerly caused the pattern, e.g., clearcuts to mimic fires versus fire in a natural role.

1273b

RESPONSE: The Forest acknowledges that the natural processes of fire, windthrow, insect and disease activity create the patterns seen on the landscape. These processes cannot be exactly duplicated through artificial means such as timber harvest. However, the Forest considers it as beneficial to attempt to restore patterns when accomplishing timber management and prescribed burning. DD

COMMENTS: A mosaic of age classes and types of vegetation sustained through time has not existed with proactive management. Natural disturbances have resulted in a pure, even-aged lodgepole pine stand.

393

RESPONSE: Within the Targhee as a whole, a mosaic of age classes and types of vegetation existed through time, even within the lodgepole pine type. While natural disturbances within lodgepole pine stands tend to perpetuate stands which are relatively large, simple and even-aged, measurable variation in patch size, plant diversity and age class exists and is reflected within the potential plant community for a particular site. Factors affecting site potential include topography, soil type, elevation, aspect, and annual precipitation. DD

COMMENTS: Consider that natural patches have rich internal patch structure where fragmented landscape has simplified patches; natural landscape has less contrast between adjacent patches and less intense edge effects; roads and various human activities pose specific problems to wildlife population viability.

1367

RESPONSE: The Forest acknowledges that natural patches tend to have richer internal patch structure and traditional timber harvest practices tend to

ECOSYSTEM MANAGEMENT - PATCH SIZE

simplify internal patch structure. The Forest will incorporate this information into future silviculture prescriptions. The Revised Plan provides goals to improve the management of biodiversity, snag and down wood retention, patch size and shape, age class diversity, and natural and prescribed fire. The Forest acknowledges that roads and associated human activities pose problems to some wildlife species. To reduce conflicts with wildlife, and to achieve other resource objectives, the Revised Plan greatly reduces open road and trail densities. DD

COMMENTS: Consider that species and habitats intended to be beneficiaries of habitat manipulation (patches) may not respond as predicted, while other non-focal species may be negatively impacted.

643

RESPONSE: Your comments are acknowledged. The Forest will use the best science available when forested habitats (created patches) are manipulated. The Forest will adjust future actions based on the results of monitoring. DD

Clarify Your Use of Patch Size

COMMENTS: Clarify confusion between forest patch size and opening size. They are not the same thing. Forest patches can be larger or smaller than catastrophic disturbances.

1368

Evaluate the distribution of patch size within the context of the entire forest and adjacent land. Any further fragmentation or reductions in patch size as a result of timber management must be carefully evaluated.

489

Fully explain the use of patch size as an indicator of sustainability. The idea is confusing. Explain how much and what kind of information you have that supports using this indicator.

325, 643

RESPONSE: Various plant communities are sustained over time through natural processes such as fire, insect and disease activity, grazing, flooding, and windthrow. These processes recycle nutrients, control plant succession, and provide habitats for wildlife species, many of which contribute to sustaining the very conditions that are necessary for the natural processes to operate. For example, insects and diseases often create patches and, in some ecosystems, provide the fuels necessary for fire to start and spread. These natural processes are reflected on the landscape in a characteristic pattern of patches of various sizes, shapes and structure. They are the "signature" of the landscape and give insight as to how individual landscapes have been sustained over time. For example, on a given landscape, if patch size caused by fire is generally 100-300 acres and fires begin to exceed 1000-2000 acres, it indicates that the system is not sustainable and is at risk of catastrophic damage from fire. This situation commonly occurs as a result of fuel loading in excess of natural levels. Excessive fuel loading is commonly caused by fire exclusion. When fire is excluded, patches appear to "grow together" into larger connected patches. Fuels build up in the form of dead trees through the processes of plant succession and insect and disease outbreaks. The result is larger, more intense fires.

ECOSYSTEM MANAGEMENT - PATCH SIZE

By regulation (36 CFR 219.27), a "created opening" is an opening in the forest canopy created by the application of even-aged silvicultural practices such as clearcuts and group selection harvest. A patch is an area of vegetation that is internally homogeneous, differing from the surrounding vegetation. Patches are recognizable at various geographic scales.

A complete discussion of how the Forest will use patch size as an indicator of sustainability is found in the draft document entitled Properly Functioning Condition Process - Draft 1996. In brief, vegetation "patterns" is one of four criteria used to evaluate properly functioning condition of ecosystems. Indicators of patterns include connectivity, patch shape, patch size, and patch distribution. Each of these criteria can be assessed at three geographic scales: regional, subregional, and landscape. The landscape scale is hundreds to thousands of acres. DD/LB

COMMENTS: Clarify how the forest will use patch size to manage within the range of natural variation (RNV). Forest acknowledges the nature and magnitude of the RNV but little is known at this time.

1273b

Consider the patch size is a narrow view of EM sustainability; however, past history of salvage logging may make this a pertinent parameter.

317

Tie historic patch size to planned management and state objectives in regard to patch size.

1369

Account for the relative representation of seral plant communities on the landscape with patch size indicator. Include relative abundance and distributions of differing patch compositions in patch size indicator. Exclusive reliance on patch size and vague biodiversity objectives will not ensure biodiversity is conserved.

1368

Patch size indicator alone may not be sufficient to ensure all habitat types are represented on the landscape in appropriate age and distribution patterns that approximate the RNV.

643

RESPONSE: The Forest will manage ecosystems in properly functioning condition. This entails an evaluation of four criteria: structure, composition, disturbance regimes, and patterns. Within properly functioning (sustainable) ecosystems, these criteria function within a range of natural variability. Patch size, patch shape, patch distribution, and connectivity can be used to evaluate the "patterns" criteria. The range in variation of patch size, shape and distribution can be evaluated against historic (100-400 years) ranges.

Percent seral stage and age class distribution can be used to evaluate the "structure" criteria.

The process used to assess ecosystem sustainability is described in a draft document entitled Properly Functioning Condition Process - Draft 1996. DD

ECOSYSTEM MANAGEMENT - PATCH SIZE

Consider Other Patch Size Related Indicators of Forest Health

COMMENTS: Integrate the difference between timber management induced patch sizes and naturally caused patches and the effects of the 30% hydrologic disturbance factor on patch size. (CROSS REFERENCE: Riparian, HD 30%)
1367a

RESPONSE: The 30% hydrologic disturbance factor does not have a direct effect on patch size. Calculating hydrologic disturbance involves measuring the amount of a watershed that has changed in natural streamflow quantities and character. The cause of the change may be either management induced or natural. DD/DM

COMMENTS: Include principles of island biogeography that include direct relations between species numbers, richness and refuge size, and a direct relationship between the relaxation rate and the distance from the continent or source populations. (CROSS REFERENCE: Centennials)
410

RESPONSE: The theory of island biogeography is relatively new and is largely untested for ecosystems such as the Centennial Mountains. The Forest protected the structure and function of the Centennials within the Preferred Alternative through the application of management prescriptions, standards, and guidelines. The concept of protecting the structure and function of the Centennial Mountains was addressed in NFMA and NEPA analysis entitled "Re-establishment of Aspen Plant Communities in the Camas Creek Watershed", 1996. In the future, the Forest intends to use information gained from a corridor analysis by the US Fish and Wildlife Service to help plan and evaluate other Forest projects in the Centennial Mountains. DD/DM

COMMENTS: Include forest patch sizes. Your indicator only describes the amount of land subject to clearcut limitations. Restrictions on clearcut size will cause a loss of large patches only if those patches become riddled with holes from over zealous cutting. (CROSS REFERENCE: Timber, Silvicultural Harvest Methods).
1368

RESPONSE: The indicator selected in the Draft EIS to measure "sustainability, fire, and natural disturbances" was titled "percent of the Forest with limitations on the size of created openings or patches" (Chapter II). This indicator is not used in the Final EIS. The Final Revised Plan describes a process for determining Properly Functioning Conditions which uses a variety of ecological indicators including patch size. DD

COMMENTS: Consider that landscape structure and patch size may be adequate for those species where patch size distribution is a primary determinant of population, but fails to address the complex mechanistic relationships that may cause declines in other species. No "fine filter" was used. (CROSS REFERENCE: Wildlife, EM)
643, 1368

ECOSYSTEM MANAGEMENT - PATCH SIZE

RESPONSE: The Forest used the habitat requirements of a host of "management indicator species", research study areas and unique areas identified by the State of Idaho as a "fine filter". The "management indicator species" include all of the threatened, endangered, and sensitive species. When management activities are proposed, planned, and implemented at the project level, the Forest evaluates the potential impacts to these special habitats and species as well as threatened, endangered, and sensitive species. DD/MO

COMMENTS: Discuss the impact of existing fragmentation and how this will change with selected alternative. (CROSS REFERENCE: Timber)

1369

RESPONSE: The existing condition of the landscape, including the level of fragmentation, is considered during effects analysis of the various alternatives. The level of fragmentation is also a consideration when setting road density standards, ASQ, and other resource objectives affected by forest fragmentation. DD/MO

COMMENTS: Not enough is known about historical landscape patterns and patch dynamics to attempt to depict landscape level patterns or justify various habitat manipulations.

Missing Letter #

RESPONSE: In the field of natural resource management, it is difficult to accurately predict outcomes; however, this is not an excuse to do nothing. The Forest will use the best science available to manage resources. Outcomes of management activities will be monitored and adjustments made based on monitoring results. DD

Change/Reanalyze Patch Size

COMMENTS: Supports 40 acre patch size.

1242

Reduce patch size because there is no evidence patch size is sustainable; because 20 acres is better; because clearcutting in small 5 to 40 acres irregularly shaped clearcuts provides 46.5 times as much nutrition per acre for elk than do forested acres; and because 16 hectares with good cover nearby, an absence of slash and high vegetation height provides the necessary forage for big game.

61, 175, 212, 275, 1367

Increase patch size to 3,000 to 10,000 acre over 20 to 30 years because this is more representative of historical patches and increases biodiversity. Increase patch size to reduce cookie cutter effect and fragmentation on the forest.

413

Increase 40-acre patch size and apply to all of the forest, not just 14%. Limiting this requirement will not remotely approximate disturbance regimes suggested in the Forest proposal. Make this a standard.

1365

Mandated harvest unit size or single species consideration should not be allowed to dictate ecological management that is outside the RNV.

432

ECOSYSTEM MANAGEMENT - PATCH SIZE

Standardize the maximum clearcut patch size and dimensions to adequately protect fish and wildlife.

1449

Stay within patch size limit set by NFMA and Regional Guide. Tier timber even-aged management patch size to regional direction which state created openings larger than 40 acres requires Regional Forester approval.

1273b

Determination of appropriate patch size should be peer-reviewed by scientific community.

731

Cite scientific data for established clearcut size and consider that light, wind, moisture regime, and vertical stratification of vegetation in an area may be such that the area is no longer a created opening.

1446

A 40-acre opening makes no sense and contradicts research that indicates canopy cover should range from 50 - 90% in the PFA. The PFA should remain unmanaged and undisturbed.

643, 1369

RESPONSE: The 40 acre "created opening" size limitation is a federal regulation (36 Code of Federal Regulations 219.27) based on the National Forest Management Act (NFMA). Forest Service policy allows for exceptions to this limitation as described in the Regional Guide. Many management prescriptions limit "created openings" to areas much smaller than 40 acres. This is prescribed only when necessary to achieve specific resource objectives such as for grizzly bear and goshawk habitat. DD/LB

COMMENTS: Evaluate the distribution of patch size within the context of the entire forest and adjacent land. Any further fragmentation or reductions in patch size as a result of timber management must be carefully evaluated.

489

Include natural or man-made gaps in any analyses for mean patch size. Forest must look at smaller openings as well as openings that remove the forest canopy over a large number of acres. Allow prescribed burning in highly fragmented areas. Logging has increased the mean number of patches and total perimeter. It has caused a decrease in mean patch perimeter, mean patch shape, mean patch size and factual dimension.

1273b

Complete a thorough landscape analysis on the effects of forest fragmentation including determinations of the amount of forest interior habitat, mean and median patch size, patch area/perimeter ratios, demographics, genetics, and connectivity between forest stands to evaluate the effects on biodiversity and on Threatened and Endangered Species. Only alternatives that do not contribute to further fragmentation should be considered.

1365

RESPONSE: The Forest will use all of the tools available to characterize present and historic landscapes. The Forest collaborates with universities and researchers to gain the necessary information needed to improve management of forested, shrub/grass, and riparian/aquatic ecosystems. The knowledge learned thus far is incorporated into the Revised Plan. The Forest

will continue to collaborate with the scientific community as it implements the Revised Plan. DD

COMMENTS: Use expanded fire cycles to determine the percent of average openness. If you use Yellowstone National Park fires, the average openness would be about 60%. Limit of 14% is abnormally low. If you used Yellowstone National Park average of 60% plus 14% you proposed from 1911 cover, the average openness would be about 37%.

275

RESPONSE: The Forest acknowledges that the 14% value estimated for the Preferred Alternative is much lower than what occurred historically. The lower value is the result of many factors including: 1) requirements to meet habitat needs for grizzly bear and goshawk; 2) requirements to protect scenic values; 3) requirements to protect our existing facilities and private property; and 4) the need to mitigate the effects of past timber management. DD/LB

Distance Between Patches

COMMENTS: Provide 40-acre patch size and distance between patches for the whole forest, not just for a small percentage of the Forest. Provide an assurance that when a 40-acre opening is cut, another 40-acre opening cannot be created immediately adjacent to the first.

58, 305

RESPONSE: The Forest will manage patch size based on the ecological character of the area, the management prescription within which the area lies, public input, and regulations. DD/DP

Change/Add to Analysis and Effect of Patch Size/Fragmentation/Connectivity

COMMENTS: Discuss cumulative effects of clearcutting on patch size and fragmentation. Include these in calculating the portion of the forest in mature stage or when evaluating treatments to reduce conifer encroachment in aspen. (CROSS REFERENCE: Timber, Aspen)

643, 489

RESPONSE: The Forest added discussion on fragmentation in Chapter IV of the Final EIS. The Final Revised Plan contains management direction to evaluate patch size, fragmentation, and other ecological indicators when analyzing potential timber harvest activities. Comparisons of natural patterns to those created by past clearcutting would be part of any assessment where it is determined to be a relevant issue. DD/DP

COMMENTS: Discuss the effects of patch size in environmentally stressed areas; especially regarding microclimatic and hydrologic changes as a consequence of harvest. Harvest leads to increased ground temperature, desiccation, soil erosion, etc.

1314, 1360

ECOSYSTEM MANAGEMENT - PATCH SIZE

RESPONSE: The Forest acknowledges that changes in microclimate and hydrologic function tend to increase as the size of a created opening increases. This will be taken into account when we prescribe silvicultural treatments. DD

COMMENTS: Consider that unscheduled harvests designed to bring patch size and stand characteristics into accordance with historical range of variation may have exactly the opposite effect than what was originally intended. (CROSS REFERENCE: Timber, Unscheduled Timber Harvest)

643

RESPONSE: Unscheduled harvest will occur on Forested lands that are not included in the timber base (ASQ). Volume harvested would be a secondary benefit of any proposed activity on unscheduled lands. Timber harvest is used where necessary to meet specific ecological needs, not to produce timber as a commodity. Unscheduled timber harvest is not mandatory and is subject to site specific NEPA analysis where effects are analyzed. DD/LB

Goshawk Constraints

COMMENTS: Reconsider conclusions that limitation on opening size, established in goshawk guidelines to maintain large forest patches, will move the forest away from its RNV and will create a threat to forest health. (CROSS REFERENCE: Wildlife, Goshawk)

228, 413, 1368

RESPONSE: The 40 acre "created opening" size limitation is a federal regulation (36 Code of Federal Regulations 219.27) based on the National Forest Management Act (NFMA) and applies to all areas of the forest, not just portions of goshawk habitat. A "created opening" is an opening in the forest canopy created by the application of even-aged silvicultural practices such as clearcuts and group selection harvest. Forest Service policy allows for exceptions to this limitation as described in the Regional Guide. The guideline to not create openings within the "nest area" is intended to protect specific habitat requirements for nesting. In many cases, uneven-aged timber management, which is permitted within goshawk habitat, can be used to restore large forest patches. DD/MO

Wildlife

COMMENTS: Discuss effects of openings on species other than those who appear to thrive in patches. Increases in edge species can dramatically alter natural community assemblages. (CROSS REFERENCE: Wildlife, EM)

1367

RESPONSE: The Forest uses a host of "management indicator species" in the broad-scale analysis of effects. The "management indicator species" include all of the Forest's threatened, endangered, and sensitive species. The effects of forest fragmentation on western coniferous forests is not well-defined and needs more research. Consequently, the discussion of effects of fragmentation in the Final EIS is quite brief. The Forest is currently involved in two research projects aimed at learning more about the effects of forest fragmentation on neotropical migratory birds and forest carnivores.

Also, the Final Revised Plan provides direction to manage forest ecosystems in properly functioning condition and outlines a process for doing so. DD/MO

Aquatic Zones:

COMMENTS: Use aquatic connectivity as an indicator of ecosystem patterns. Discuss how aquatic connectivity is measured; how critical values are determined; and why maintaining connectivity in 448,000 acres of aquatic zone is preferred choice.

1362

RESPONSE: As described in Process Paper-Key Indicators for Fisheries and Aquatic Ecosystems, aquatic connectivity was measured as "acres of aquatic influence zone managed to maintain connectivity." The rationale was: Habitat fragmentation/connectivity occurs both longitudinally and laterally and takes place within the aquatic influence zone. Connectivity is the inverse to fragmentation. The assumptions used were: 1) traditional roading, timber management, and livestock grazing tend to reduce aquatic connectivity; 2) the aquatic management prescription (e.g., buffer widths), standards and guidelines defined in Alternatives 3-M, 4, 5, and 6 will adequately maintain aquatic connectivity in the future; 3) narrower buffers provide less connectivity; and 4) other Management Prescriptions compatible with the aquatic prescription (such as wilderness or roadless) also maintain connectivity.

The Revised Plan proposes maintaining connectivity on 512,000 acres. This acre value resulted from adoption of the "full" buffer widths combined with those management prescriptions with compatible objectives (such as wilderness or roadless) found within the Preferred Alternative. DD

Use Fragmentation Patterns and Connectivity as the Indicator for EM Health
Along with a Patch Size

COMMENTS: State how patch size and connectivity will be managed in conjunction with other habitat factors. Use distribution, patch size and connectivity of habitats. You have devised an evaluation system which prevents meaningful analysis of habitat impacts or viability from your proposed management actions and further reducing forest-wide patch size will result in greater fragmentation than already exists. Include an analysis of fragmentation patterns and connectivity with patch size as a more comprehensive indicator for EM.

643, 1369

RESPONSE: The Final Revised Plan contains direction to manage ecosystems in properly functioning condition. This entails an evaluation of four criteria: structure, composition, disturbance regimes, and patterns. Within properly functioning (sustainable) ecosystems, these criteria function within a range of natural variability. Patch size, patch shape, patch distribution and connectivity are measures of "patterns". The process the Forest will use to assess ecosystem sustainability is described in a draft document entitled Properly Functioning Condition Process - Draft 1996. DD

ECOSYSTEM MANAGEMENT - SITE-SPECIFIC

Centennials

COMMENTS: Rewrite the Centennial Subsection because severe fires, insects and disease are a natural component of this area; there is too much logging and roading already, with major impacts to wildlife; you are using RNV to reduce the risk of catastrophic events as an excuse to log the Centennials; and you don't know the real RNV.

695

RESPONSE: Refer to the Goals/Objectives and Standards/Guidelines for Properly Functioning Condition (PFC) and Fire in the Revised Plan. PFC is emphasized over RNV in the Revised Plan. The "setting" section provides a general overview for the subsection. Site-specific landscape analysis assessments or projects determine the feasibility and scale (spatial and temporal) of opportunities that exist within this subsection, and consider ecological, social and economic implications. These assessments identify associated risks and mitigation/management requirements (such as aggressive fire suppression) if no action is the most desirable option. DM

Lemhi/Medicine Lodge

COMMENTS: Rewrite Lemhi - Medicine Lodge Subsection, because there is a large amount of biodiversity with a large number of plants, animals and fungi species in spite of the fact that there is a lack of the species diversity; it is not undesirable that these forests are more susceptible to insects, disease and larger fires since that is within its normal process and function; plant associations should be managed for a longer Range of Natural Variability; natural processes should be allowed to function to create diversity; and the recreation objective to increase motorized use will cause more problems, especially on trails.

695

RESPONSE: Refer to the Goals/Objectives and Standards/Guidelines for Properly Functioning Condition (PFC) and Fire in the Revised Plan. PFC is emphasized over RNV in the Revised Plan. The "setting" section provides a general overview for the subsection. Site-specific landscape analysis assessments or projects determine the feasibility and scale (spatial and temporal) for opportunities that might exist within this subsection, and consider ecological, social and economic implications. These assessments identify the associated risks and mitigation/management requirements (such as aggressive fire suppression) if no action is the most desirable option. The Lemhi-Medicine Lodge Subsection contains no suitable timber lands within the 3M Alternative. Management activities rely on achieving other resource values or are responsive to natural events. Refer to the Objective for Recreation in this subsection which states, "Provide increased designated motorized road and trail access in a managed low impact method." DM

Teton Range

COMMENTS: Rewrite the Harvest Plans for the Teton Range Subsection because

ECOSYSTEM MANAGEMENT - SITE-SPECIFIC

this area has already had too much silvicultural treatment and does not need any more.

695

RESPONSE: The Teton Range Subsection contains no timber management emphasis prescriptions. Areas of suitable lands exist within this subsection but any timber management that might occur will be done in a manner that is sensitive to the resource objective(s) for the prescription area (such as visuals). Approximately 95% of the public lands in the subsection is not part of the suitable timber base and the remaining 5% has other management emphasis. DM

COMMENTS: Explain the term "over-mature vegetation" in an ecosystem context.

695

RESPONSE: Refer to the glossary section of the Revised Plan for the definition of this term. From an ecosystem context, the concern about vast acreages of overmature trees is that they might be more susceptible to insect and disease or fire, may lose diversity, or may be simplifying. DM

COMMENTS: Add a goal of fire management to restore bighorn sheep habitat, particularly winter habitat, that has been degraded by the natural fire regime.

699

RESPONSE: Refer to the first Fire Objectives in the Revised Plan which addresses development of fire management plans. DM

Caribou Subsection

COMMENTS: Rewrite the Caribou Subsection to explain why there is a risk of large fires and insect and disease outbreaks, but the area is outside the timber base in 3M.

695

RESPONSE: Portions of the Caribou Subsection are within the suitable timber base. These areas contribute toward ASQ. Risk to fire and insect and disease outbreaks is based on the fire groups that make up the Caribou Subsection and the amount of mature/over mature age classes. DM

Improve the Subsection Descriptions

COMMENTS: Discuss ecological analysis that is specific to the Targhee National Forest that form the basis for the descriptions of the subsections. Forest numbers are grossly inaccurate and misrepresent vegetation conditions.

643

RESPONSE: The setting sections provide a general overview of conditions within the various subsections. Numbers were derived from the Geographical Information System data base and reviewed several times by the Ranger Districts for accuracy. These figures and general observations are further evaluated and refined at the landscape or project level of analysis. DM

ECOSYSTEM MANAGEMENT - SITE-SPECIFIC

Jackpine Loop and Leigh Creek

COMMENTS: DEIS, III-2: While it may be true at higher elevations that the Teton Range and Centennials exhibit greater connectivity, it is unlikely to be true at lower elevations. Intensive timber harvests occurred in the Jackpine Loop and Leigh Creek Areas, creating unnatural openings that span hundreds of acres. Shrub slopes at lower elevations (critical ungulate range) are no longer bordered by good hiding and thermal cover due to timber harvest. Shrub slopes are in proximity to new houses, roads and activities on adjacent private lands. Roads and trails are present in almost all of the drainages in the Tetons. Teton Pass Road and the Ashton-Flagg Ranch Road may have a major effect on landscape connectivity for large and small animals.

643

RESPONSE: The subsection description (DEIS III-1 III, and IV) are general and are intended to provide basic information. Past activities are analyzed when future activities are proposed in these areas (such as cumulative effects analysis) in site-specific projects. DM

Big Holes

COMMENTS: Do not log the west slope of the Big Holes as a means of fire prevention.

Missing Letter #

RESPONSE: Virtually all of what might be described as the west slope of the Big Holes falls into Prescription 5.1.4 (b), 3.2 (i), and 2.7 (a). Timber harvests are scheduled in the 5.1.4 (b) Prescription for insect and disease treatment, but not in the others. No specific need is identified at this time to log this area as a means of fire prevention. DM

ECOSYSTEM MANAGEMENT - SUCCESSION

General

(Note: Discussions about Succession and Old Growth in lodgepole, Douglas-fir and aspen are cross-referenced in Timber; Discussions about Succession and Late Seral in sagebrush are cross-referenced in Range, Sagebrush.)

COMMENTS: Expand and include current thinking and knowledge of community ecology and dynamics. Current theories on the state and transition model of community change have not been incorporated. Show that vegetation composition does not follow a predictable unidirectional advancement from early post disturbance communities until it reaches a preconceived vegetation climax.

643, 1446

Attributing all of the changes in forest and shrub communities to fire suppression oversimplifies the complex processes that interact to cause changes in forest communities such as the effects of grazing that have shifted species composition of the riparian areas and have contributed to Doug-fir encroachment in aspen stands.

643

ECOSYSTEM MANAGEMENT - SUCCESSION

Consider that vegetation composition does not follow a predictable unidirectional advancement from early post disturbance communities until it reaches a preconceived vegetation climax. Most studies have shown this is not the case, but more dependent on species present prior to disturbance and a mix of slope, soils, aspect, elevation and other topo-edaphic factors that characterize the site.

643

RESPONSE: Grazing effects are included in the discussion on succession. Within a forestwide document, introducing some of the major influences such as fire suppression that have an effect on plant succession is appropriate. At the landscape or project level, the Forest looks at things in more detail. The Targhee is working with Montana State University to develop modeling procedures. Much of this work is still conceptual or in the testing stage and is unavailable for incorporation into the revision process. As the Forest's landscape efforts proceed, these concepts may lead to amendments to the Revised Plan as more knowledge/insight is gained about the various ecosystems that make up the Targhee. DM

COMMENTS: Define why a variety of successional stages is a management objective. Describe why this is needed to maintain wildlife and how patch size and connectivity will be managed with other habitat factors.

1369

RESPONSE: The objective of managing for an array of successional stages is to improve the overall biodiversity in sections of the Targhee. Mixes of successional stages and the maintenance of key species (e.g., aspen) makes the ecosystem more resistant to perturbations and more resilient when perturbations occur (keeps the systems from becoming simplified). Refer to the Properly Functioning Condition section of the Revised Plan under "Ecological Processes and Patterns", Chapter III. An array of ecological indices (e.g., patch size, patch shape, connectivity, diversity) are being considered at the Forest's landscape level analysis and are being evaluated when considering management options. The intent of the Revised Plan is to introduce some of these key concepts and to lay the foundation for finer levels of analysis that are or will be occurring on the Forest. DM

COMMENTS: Include stand structure characteristics in your criteria for late successional. Include minimal basal area, snag density and average dbh requirement so public can understand the value of late successional to wildlife.

1369

RESPONSE: Please refer to the Old Growth and Late Successional Forest section within the Final Environmental Impact Statement. In particular, refer to the Table AA. DM

COMMENTS: Correct contradictions that upland non-forested areas are trending toward a predominant mid to late seral stage and then contradicting statements that mid-seral stage is a satisfactory ecological condition. This illustrates how classic succession theory can get you into trouble.

489

ECOSYSTEM MANAGEMENT - SUCCESSION

RESPONSE: Chapter III of the Revised Plan states: "Satisfactory ecological condition is defined as being in mid-seral stage or higher ecological status and having a stable or upward trend in soil and vegetation condition". Several factors are evaluated in arriving at ecological condition. Refer to the glossary section of the Revised Plan for the definition of "Desired Vegetation Condition". DM

Ecological Processes - Climate Factors

COMMENTS: Include a discussion of climatic factors that have stimulated forest changes. Regional climatic trends have trended toward warmer and wetter growing seasons since the end of the Little Ice Age.

643

Consider large-scale meteorological mechanisms, like El Nino-Southern Oscillation, and relationship to local processes such as vegetation development of fuels accumulation that affect fire frequencies or intensity. These local events may be swamped by larger spatial and temporal events.

1273b

RESPONSE: These comments are outside the scope of this document. DM

ELK - ANALYSIS PROCESS

General

COMMENTS: The key issues that drive the Plan should address the health of the resource not elk security because elk security allows Fish and Game to force the Forest into unhealthy management of both timber and range.

432

RESPONSE: Elk security was only one of the key issues considered in the Revised Plan. Other key issues were sustainability, fire and natural disturbances, riparian, grizzly bear management, access, roadless area management, and timber harvest. These and numerous other issues were all considered in the analysis for the Revised Plan. The Forest works cooperatively with the State Fish and Game agencies to help them meet their objectives while also meeting the other multiple uses mandate of the Forest Service. A healthy ecosystem includes healthy elk, range and timber. MO

COMMENTS: Explain why Alternative 2 (in DEIS chapter 2) "slightly improves" elk security when alternative 3M (in DEIS chapter 2) "greatly improves" elk security with only a 1/2 increase. Define terms, explain standards.

629a

RESPONSE: We agree that the terms "slightly improves" and "greatly improves" are relative and subjective. That is why the actual percent change in acres of the Forest meeting elk vulnerability thresholds was displayed in the DEIS and is displayed in the FEIS. MO

COMMENTS: The Forest fails to accurately state the agreed upon State of Idaho elk hunting objectives.

766

RESPONSE: In the DEIS, the Forest accurately stated a portion of the State of Idaho elk hunting objectives. For the FEIS, the Forest accurately states the entire State of Idaho elk hunting objectives. Elk hunting objectives are set by the State Fish and Game agencies. The Forest works with the State Fish and Game agencies to analyze how the Final Revised Plan contributes towards achieving their objectives. The Forest incorporated the State Fish and Game agency's most recent research on elk vulnerability into the Final Revised Plan and used an elk vulnerability model developed by the Idaho Department of Fish and Game. This model predicts overall bull elk vulnerability during the general elk rifle hunting season, based on motorized access and hunter densities. The model does not predict the number of branch antlered bulls which will remain in the population, nor the percentage of yearling bulls to be harvested, nor the percentage of mature bulls which will remain in the population. The Forest emphasized the portion of the State elk hunting objectives that fit the results of the analysis. Many factors affect elk vulnerability which are outside the control of the Forest Service, such as numbers of hunters, distribution of hunters, length of seasons, different types of seasons, and weather conditions. The Forest will continue to emphasize management of its contribution to elk vulnerability, but cannot plan for or control other factors and conditions. MO

ELK - ANALYSIS PROCESS

COMMENTS: Restate the first ecological component in the DFPR Chapter II: "manage to improve elk security."

766

RESPONSE: In the Draft, the Forest used the statement: "Manage to reduce elk vulnerability." Reduced elk vulnerability is the modeling tool that shows improvements in elk security. The wording is better clarified in the Final Revised Plan. MO

COMMENTS: Address elk vulnerability/effectiveness. Revise the following: decrease elk vulnerability, increase elk habitat effectiveness and cross-country motorized closures, and increase elk security through effective roads & trails.

766

RESPONSE: The Revised Plan decreases elk vulnerability by closing more roads and trails to motorized travel and by reducing the amount of the Forest open to summer cross-country motorized travel from 62% to 7%; increases elk habitat effectiveness by closing more roads and trails to motorized travel and increases cover as previously harvested areas grow back into tree cover; emphasizes making road and trail closures effective, and makes road closure effectiveness monitoring a number one priority monitoring item. MO

COMMENTS: Road closures to protect big game require: more analysis, better methods and science, stricter standards and guidelines, and better adherence to environmental laws.

1361

RESPONSE: The analysis of roads and trails for the Final Revised Plan includes a complete Forestwide inventory. Other agencies, such as the Idaho Department of Fish and Game, assisted with the inventory. Every existing road and trail closure is evaluated for its effectiveness. Cross-country OHV travel incorporated GIS technology showing slope and vegetation characteristics that identify areas of the Forest where OHV travel can occur.

The Revised Plan establishes open road and open motorized trail route densities using standards for every area of the Forest.

The Forest used the most recent research on elk vulnerability and the most recent guidelines for motorized access in grizzly bear habitat. The Forest is adhering to all environmental laws. MO

Criticism of Elk Vulnerability Figures Used by the Forest

COMMENTS: The Plan indicates 91% of the Forest meets Idaho Fish and Game's elk vulnerability thresholds, which is not true.

58

RESPONSE: Using the most recent research on elk vulnerability, which includes an elk vulnerability model developed by the Idaho Department of Fish and Game, the Forest predicts that in the preferred alternative, 89% of the Forest would meet the elk vulnerability thresholds established by the Idaho Fish and Game Department and the Wyoming Game and Fish Department. It will take several years to implement all of the changes in motorized access to achieve these

ELK - ANALYSIS PROCESS

predictions. Many factors are outside the control of the Forest Service which influence elk vulnerability, such as changes in the number of elk hunters, changes in elk seasons, weather patterns, and so forth. It will take monitoring and cooperative work with the State Fish and Game agencies to achieve the predicted results. MO

COMMENTS: To be realistic the Elk Vulnerability chart should be based on a percentage of the maximum attainable.

375

RESPONSE: The elk vulnerability chart accurately displays the percentage of the Forest which meets the elk vulnerability thresholds established by the State Fish and Game Departments. MO

Elk Vulnerability - Examine Other Studies

COMMENTS: Include a radio-telemetry study on elk.

766

RESPONSE: Information from the elk studies which were cooperatively funded by the State Fish and Game agencies and the Forest Service during the 1980s and early 1990s were used as the Forest worked with the State Fish and Game agencies to identify issues, and the actions needed to resolve the issues. Techniques for monitoring included radio-telemetry, depending on the researcher's preference and study objectives. MO

Elk Vulnerability - Winter and Summer Populations

COMMENTS: Elk sub-populations summering on the Targhee National Forest are not the same population that is visible on winter range; collect data on both populations because it is misleading to only collect data on winter populations.

766

RESPONSE: Data on elk populations is collected by the State Fish and Game agencies and shared with the Targhee. They have both summer and winter data about distributions of elk. MO

COMMENTS: A credible evaluation of big game population requires habitat quality and population size, spatial and temporal distribution of animals, herd composition, vulnerability to harvest, productivity, calf/fawn survival, quality of hunting experience, and the amount of hunting opportunity.

766

RESPONSE: The Forest Service is primarily responsible for managing the habitat for big game on National Forest lands. State Fish and Game agencies are primarily responsible for managing the big game populations. Big game population data is collected by the State Fish and Game agencies. Therefore, in the Final Revised Plan and Environmental Impact Statement, the Forest emphasizes the Forest Service responsibility for managing habitat conditions, and does not display detailed population data. MO

ELK - ANALYSIS PROCESS

COMMENTS: Correct errors and use the Idaho Fish & Game elk population numbers and methods.

690

RESPONSE: The Forest used the Idaho Fish and Game elk population numbers and methods. Information from the elk studies (which were cooperatively funded by the State Fish and Game agencies and the Forest Service during the 1980s and early 1990s) were used as the Forest worked with the State Fish and Game agencies to identify issues and the actions needed to resolve the issues. The Forest used the most recent research on elk vulnerability, which included an elk vulnerability model developed by the Idaho Department of Fish and Game and an elk habitat effectiveness model developed cooperatively with the State Fish and Game agencies. MO

Elk Hunting Objectives - Bull:Cow Ratio

COMMENTS: Incorporate more than just one indicator of elk vulnerability (bull:cow ratio on winter range) in order to adequately monitor elk security.

766, 1365

RESPONSE: The bull:cow ratio on winter ranges will not be the only indicator of elk vulnerability for monitoring. The State Fish and Game agencies collect a variety of information about big game populations, and the Forest will continue to work cooperatively with them to monitor both habitat conditions and big game populations on the Forest using other indicators. MO

COMMENTS: In the analysis of hunting qualities, include the number of elk available in the hunting season and the portion of total bulls comprised of branch antlered bulls.

766

RESPONSE: The Forest Service is primarily responsible for managing the habitat for big game populations on National Forests. State Fish and Game agencies are primarily responsible for managing the big game populations. Big game population data is collected by the State Fish and Game agencies. In the Final Revised Plan and Environmental Impact Statement, the Forest emphasizes its responsibility for managing habitat conditions. The Forest does not display detailed population data. MO

COMMENTS: Complete the elk hunting objectives in the DEIS (Chapter III) by adding the following after the respective bull:cow ratio: for Ready Access units: "with 40% of bulls branch-antlered; and maintain the percentage of yearling bulls in the antlered segment of the harvest at or below 50% and the percentage of mature bulls (having at least 6 points on one antler) at or above 10%." For Front Range units: "with 50% of bulls branch-antlered; and maintain the percentage of yearling bulls in the antlered segment of the harvest at or below 35% and the percentage of mature bulls (having at least 6 points on one antler) at or above 20%."

643, 766

Include in the DEIS one of the four State of Idaho objectives for elk vulnerability.

766

ELK - ANALYSIS PROCESS

RESPONSE: Elk hunting objectives are set by the State Fish and Game agencies. The Forest works with the State Fish and Game agencies to analyze how the Final Revised Plan contributes towards achieving their objectives. The Forest incorporated the State Fish and Game agencies' most recent research on elk vulnerability into the Final Revised Plan and used an elk vulnerability model developed by the Idaho Department of Fish and Game. This model predicts overall bull elk vulnerability during the general elk rifle hunting season, based on motorized access and hunter densities. The model does not predict the number of branch antlered bulls which will remain in the population, nor the percentage of yearling bulls to be harvested, nor the percentage of mature bulls which will remain in the population. The Forest emphasized the portion of the State elk hunting objectives that fit the results of the analysis. Many factors affect elk vulnerability which are outside the control of the Forest Service, such as numbers of hunters, distribution of hunters, length of seasons, different types of seasons, and weather conditions. The Forest will continue to emphasize management of its contribution to elk vulnerability, but cannot plan for or control other factors and conditions. MO

COMMENTS: The Forest expresses Elk Vulnerability goals using an indicator (winter range herd composition) which does not relate directly to elk management. The Forest should revise Elk Vulnerability goals in the DEIS (Chapter III) to reflect Idaho Fish & Game's position (use numbers and bull ratios on the Forest during hunting season); use this information in the analysis.

643

RESPONSE: We agree that the bull:cow ratio on winter ranges may not be the best indicator of elk vulnerability. The State Fish and Game agencies collect a variety of information about big game populations, and the Forest will continue to work cooperatively with them to monitor both habitat conditions and big game populations on the Forest. MO

Elk Habitat Effectiveness

COMMENTS: Do not rely on Elk Habitat Effectiveness in order to determine how many trails to close because it is based on two studies conducted by one individual (Lyon) which does not provide enough statistically defensible scientific data to justify its use.

270

RESPONSE: Elk habitat effectiveness is only one of many considerations used in determining how many trails to close or keep open to motorized use. The Forest used a variety of studies by several researchers. Scientific research, such as that by Lyons, is peer-reviewed and is part of the overall deliberations. MO

ELK - HABITAT

General

COMMENTS: Protect and restore elk habitat to ensure the security and success of elk.

34, 62, 136, 180, 252, 325, 697

RESPONSE: Elk habitat is an important consideration in the Revised Plan. The Final Revised Plan improves elk habitat conditions by reducing the density of open motorized roads and trails, reducing the amount of the Forest open to cross-country motorized travel, and reducing the amount of proposed timber harvesting which allows hiding cover to increase in the future as trees in previously harvested areas grow back into hiding cover. MO

COMMENTS: Oppose issues of elk habitat because it is misleading to the public.

311

RESPONSE: The elk habitat analysis in the Revised Plan incorporates the most recent research and best information available for elk vulnerability and elk habitat effectiveness. The Forest encourages anyone with questions about elk habitat to visit the Targhee offices or the Fish and Game Departments. MO

Range Health

COMMENTS: Address the health of the grazing, range resource when analyzing factors that affect elk security.

432

RESPONSE: The Forest analyzed factors which are identified as the most important for elk security (such as open road and trail densities, cross-country OHV access, hunter densities, and hiding cover). At this time, the grazing-range resource is not identified as a factor affecting elk security. MO

Amount of Range

COMMENTS: Address 250 forested acres needed to complete security for big game; define whether the entire 250 acres must qualify as security.

1273b, 1369

RESPONSE: The wording in the Draft Forest Plan Revision was difficult to understand. The Forest clarified this direction for the Final Revised Plan. For management prescriptions 5.1.4 and 5.4, the Forest will manage for blocks of the Forest that are greater than 250 acres in size. These blocks can be a combination of sapling, pole, mature and old growth trees.

Also, in management prescriptions 5.1.4 and 5.4, "security areas" will be maintained adjacent to areas where timber sales are in progress. Security areas do not need to be all cover. They will normally be large areas incorporating both cover and openings, with low road densities, and no disturbance activity is allowed until the timber sale activity is completed. MO

ELK - HABITAT

Enforce Range Protection

COMMENTS: Enforce protection of big game range because even with three agencies managing big game (Bureau of Land Management, U.S. Forest Service, and Idaho Fish & Game) there is still a need for enforcement & protection.
314

RESPONSE: The Forest cooperates with other agencies for law enforcement and notifies the appropriate agency and law enforcement personnel when aware of a violation. Cooperative law enforcement efforts will continue into the future. MO

Cover

COMMENTS: Define thermal cover as 45% canopy closures by using scientific references.
1369

RESPONSE: During the first five years of drafting the Revised Plan, the Forest held a series of elk workshops with State Fish and Game agencies and reviewed a lot of literature. Although some literature discusses and defines thermal cover, absolute thermal cover requirements are not justified on the Targhee. Elk can be found year around in desert habitats without thermal cover, and they occur in a wide variety of mountain habitats with a wide range of cover and noncover attributes. Also, elk continue to use lodgepole pine forests in areas where the mountain pine beetle killed high percentages of the trees, and where reduced canopy closure is far below 45%. For the Final Revised Plan, elk security was determined the most important concern. The most important habitat features dealing with elk security are motorized access density, hunter density, and hiding cover. MO

COMMENTS: Leave enough cover when harvesting timber for elk security.
625

RESPONSE: Management prescriptions 5.1.4 and 5.4 require that only 20% of the forested acres can be in a created opening at any point in time. Therefore, 80% of the forested acres in these management prescriptions will provide cover for elk at any point in time. Also, these management prescriptions require management for large blocks of cover (greater than 250 acres in size). MO

COMMENTS: The Elk Habitat Effectiveness model is dependent upon elk hiding cover. Professional biologists suggest increasing optimum elk hiding cover levels from 40% to 50-60% of a watershed.
No letter #, 413

RESPONSE: The Elk Habitat Effectiveness model recognizes that optimum habitat conditions exist with 50 to 60 percent hiding cover in a watershed. However, research indicates that hiding cover is not the most important factor in predicting potential elk use in a watershed. Other factors, such as motorized access density, are more important than cover in predicting potential elk use in a watershed. Detailed hiding cover analysis for the watersheds on the Forest show that no watershed currently has optimum hiding cover conditions,

ELK - HABITAT

including those watersheds in wilderness which have never had timber harvesting activity. Some watersheds have as little as 6 to 12 percent hiding cover (such as the watersheds in the Birch Creek and Medicine Lodge), yet have an increasing elk population during the last decade. MO

Corridors

COMMENTS: Manage for elk migration corridors.
189, 356, 625

RESPONSE: Elk migration between summer and winter ranges occurs almost everywhere on the Forest. A general overview of elk migration is as follows:

In the Lemhi Mountains and Medicine Lodge Subsections, elk generally migrate to lower elevations to reach winter ranges. Some of these winter ranges occur on BLM lands, the Salmon/Challis National Forest, private lands, and in Montana.

Elk which summer in the Centennial Mountains migrate either north into Montana or south to the desert west of St. Anthony to reach winter ranges.

Elk which summer in the Island Park area and in Yellowstone National Park migrate south and west to winter on the desert west of St. Anthony.

Elk which summer on the west slope of the Tetons migrate east to Jackson Hole, or west to lower elevation winter ranges along the Forest boundary.

Elk which summer in the Big Hole/Palisades Subsection migrate to lower elevation winter ranges along the Forest boundary, and to Wyoming State feed grounds near Alpine.

Elk which summer in the Caribou portion of the Forest migrate west to the Fall Creek and Tex Creek winter areas.

Elk will migrate through a variety of vegetation types, including forests, deserts, and grasslands. Elk will migrate to seasonal ranges across open roads. A notable example are the elk which summer in the Island Park area and in Yellowstone National Park, and winter on the desert west of St. Anthony. These elk migrate across many open roads, including State Highway 47 and U.S. Highway 20. The Targhee is unaware of any migration being stopped because of forest management activities, including the lodgepole pine salvage program which occurred during the last decade.

However, the following concerns have been expressed about elk migration to winter ranges: 1) if winter range areas are closed to hunting, then elk are not available to be hunted if they migrate too quickly through the huntable areas; and 2) elk which arrive on winter ranges too early use forage which may be needed later in the winter. The Forest Plan Revision addresses these concerns. It closes 94% of the Forest to summer cross-country motorized vehicle travel; reduces the number of miles of open road by about 1,000 miles; and allows 20 percent of the forested acres to be in a created opening at any one time, thereby providing more cover in areas where timber harvesting can occur.

Hunting pressure during the fall big game hunt may influence how quickly elk migrate between summer and winter ranges in some areas of the Forest. Hunting pressure is primarily influenced by the hunting regulations of the State Fish and Game agencies, but can be influenced partially by the

ELK - HABITAT

amount of motorized access and the amount of cover. By closing 94% of the Forest to summer cross-country travel, reducing the number of open roads, and limiting the amount of created openings where timber harvesting occurs, hunting pressure may be changed which may allow elk to move more slowly to winter range areas. MO

ELK - HUNTING

Elk Security Negatively Impacts Hunting

COMMENTS: Object to closed roads because closures reduce hunting areas and crowding hunters onto small areas will cause more fatalities.

3, 48, 511

Road closures will cause more "winter kill" in winter range, more "slob hunts" and more "Indian kill".

277, 388

Object to the Forest's desire to eliminate motorized trail bikes in order to reduce elk vulnerability to hunting pressure because: Idaho Fish and Game shows only 1% of hunters use trail bikes to hunt; Hunting Unit #39 has some of heaviest OHV recreation and motorized trail densities and had increase from 100 elk harvest in 1980 to 600 in 1989; and increased harvest in Unit #39 was result of increased herd size, which occurred while OHV use was also increasing.

629a

Open gates in elk habitat areas to two weeks to allow for more consistent hunter success.

250

Elk Security Positively Impacts Hunting

Support hunting and ensure quality hunting.

20, 278

Protect and improve the hunting experience by prohibiting OHV travel because motorized access is the reason for the loss of the amount of elk hunting on the Targhee National Forest.

190, 215

Restrict access to critical winter range to improve hunting.

212

Establish a uniform opening date to eliminate preference to special interest/farmers groups.

250

Recognize and add two key elements to elk/hunting management: 1) The fact that Forest management affects hunter density and distribution, and the quality of the hunting experience; 2) The importance of managing forests efficiently, with high levels of elk habitat effectiveness, so that big game remain on forest lands and are therefore available to the hunting public of Idaho rather than being driven into refuge areas or across state borders to secure habitat.

766

Close roads and trails because elk are the foundation of a multi-million dollar hunting business in Idaho.

185

ELK - HUNTING

Limit motorized use in conjunction with over-harvested areas because it would result in longer hunting season and increase habitat for other species.

270

Protect Elk from Hunters

Recommend to Idaho Fish and Game to cut back on permits.

50

Prohibit any vehicle from closed areas.

170

Close big game areas to ORVs during hunting season.

157, 165, 168, 174, 180, 181, 187, 190, 203, 226, 278, 280, 360, 650, 690, 1247, 1313, 1388

Close roads only during hunting season, not year-round.

51, 375, 393, 413, 687, 693, 1202, 1267, 1317, 1389

Address elk security year-round, not just during the hunting season.

305

Close selected roads and trails to reduce elk vulnerability.

2, 24, 32, 331, 731

Idaho Fish and Game

Leave management of the elk security issue entirely to Idaho Fish and Game. Support Idaho Fish and Game's proposals and 5-year elk plan.

182, 357, 625, 766

Use Idaho Fish and Game elk population counts.

690

Allow Idaho Fish and Game to implement wildlife management to manage elk population.

393

Look at Idaho Fish and Game thresholds for elk vulnerability and how they fit each planned unit.

1341

Because 90% of bull elk mortality is caused by hunters, the Forest Service should recommend that Idaho Fish and Game shorten or eliminate the general season, implement a permit system, and implement road closures; use these guidelines, don't just close roads.

629a

Oppose the use of the issue 3 indicator of elk security (the extent to which elk are protected from hunting pressure) because the U.S. Forest Service is allowing Idaho Fish and Game to direct management practices.

432

Do not use Fish and Game regulations when determining elk vulnerability thresholds because the agency is not trustworthy.

270

The Forest has met Idaho Fish and Game goals at the expense of other users evidenced by a dramatic reduction of ASQ and access even though there has been an increase in elk numbers over the last 10 years.

692

Idaho Fish and Game regulations for elk security do not consider elk populations, hunter success, numbers of licenses sold, numbers of hunters and economic return to Idaho.

228

ELK - HUNTING

Closing 2/3 of the roads is Idaho Fish and Game's way of keeping an open bull season (not restricting the number of hunting permits) at the expense of other users such as ORV users.

393, 413

Opposed to closures, seasonal restrictions, and elimination of cross-country and OHV travel to reduce elk vulnerability because Idaho Fish & Game has another agenda and elk vulnerability is "over-kill."

646

RESPONSE: (TO ALL) Before responding to the above comments, note that State Fish and Game agencies manage hunting regulations and animals populations. Therefore the Fish and Game agencies determine hunting dates, number of permits, sex and age, licensing and fees, length of season, and economic returns to the state. The Forest Service is charged with managing habitat, including motorized recreational use.

Elk were selected as a management indicator species for the Final Revised Plan because: 1) they are a species commonly hunted; and 2) population changes (number of animals and/or distribution of animals) indicate the effects of Forest management activities on habitat conditions that are important to elk and other wildlife. Since elk are hunted, population changes also indicate the effects of hunting regulations. Most often, it is combinations of habitat conditions, access and hunting regulations that affect elk populations.

One of the goals for the Revised Plan is: "Provide habitat to support the wildlife and hunting goals of the States of Idaho and Wyoming."

The elk population goals for the Idaho Department of Fish and Game (IDFG) are:

Game Management Units 60, 61, 62, 62A, 64, 65, 66, 69: Known as "Ready Access Units", the IDFG goal for the post hunting season population is ≥ 15 bulls per 100 cows (this equates to a maximum of 60 percent bull elk mortality), with 40% of bulls branch-antlered; and maintain the percentage of yearling bulls in the antlered segment of the harvest at or below 50% and the percentage of mature bulls (having 6 points on one antler) at or above 10%. (IDFG letters: May 12, 1995 and Nov. 15, 1995)

Game Management Units 58, 59, 59A, 67: Known as "Front Range Units", the IDFG goal for the post hunting season population is ≥ 20 bulls per 100 cows (this equates to maximum of 50 percent bull elk mortality), with 50% of bulls branch-antlered; and maintain the percentage of yearling bulls in the antlered segment of the harvest at or below 35% and the percentage of mature bulls (having 6 points on one antler) at or above 20%. (IDFG letters: May 12, 1995 and Nov. 15, 1995)

IDFG stated that these goals were not being met in Game Management Units 59, 59A, 60, and 62A (Elk Workshop, September 1992).

The elk population goals for the Wyoming Game and Fish Department (WGF) are:

For all of the Wyoming units on the Forest, the WGF goal for the post hunting season population is ≥ 20 bulls per 100 cows. This equates to a maximum of 50 percent bull elk mortality.

For all of the Wyoming units on the Forest, these goals are being met.

For elk habitat effectiveness, IDFG requested maintaining elk habitat effectiveness values of at least 0.6 in each subwatershed (IDFG letter

ELK - HUNTING

dated June 25, 1996). Currently, elk habitat effectiveness values are below 0.6 in many watersheds of the Forest.

For elk winter ranges, the goal is to provide quality winter range conditions, including managing motorized access to provide security for wintering animals.

For the Final Revised Plan, the Targhee identified the habitat components most important to support the above stated goals for populations, elk habitat effectiveness, and winter range. These components include motorized access density, and hiding cover. The Revised Plan provides for the following changes in motorized access density and hiding cover to support the above stated goals:

1) Cross-country snowmachine travel is prohibited on all elk winter ranges to provide security for wintering animals. Only a few designated routes are allowed for motorized access through elk winter ranges during the winter time.

2) Cross-country motorized travel is prohibited on 94% of the Forest during the spring, summer and fall periods to provide for improved elk habitat effectiveness and lower elk vulnerability.

3) An open road and open motorized trail route density is established for every area of the Forest. The result of these specified densities is that about 600 miles of currently open motorized roads and about 130 miles of currently open motorized trails are closed to motorized use, improving elk habitat effectiveness and lowering elk vulnerability. These road and trail closures include system and nonsystem roads and trails.

4) The number of forested acres proposed for timber harvesting during the next decade is greatly reduced from what occurred during the previous decades. About 30,500 forested acres are proposed for some kind of timber harvest or other type of vegetative treatment (such as prescribed fire) during the first decade. This amounts to only 2.5% of the total forested acres on the Forest. This will allow for a net increase in cover as the previously harvested areas continue to grow and provide cover for elk and other wildlife. MO

ELK - OPEN ROADS

COMMENTS: Road density standards must be adopted as a key indicator for elk.

1367b

Big game winter and summer ranges should be included in any implementation of motorized access targets.

766

Reduce motorized road densities by closing roads, enforcing closures, reducing motorized activity and reclaiming and replanting roaded areas.

F-K(4), 204, 370, 656, 1330, 1331

Expand the discussion of how habitat effectiveness is reduced through increased road densities.

1446

Question the Forest's emphasis on reducing road and trail densities because we disagree that the Targhee is over-roaded from past logging activities. Elk security is only threatened if elk are adjacent to the road - not 200 yards away.

12, 26, 1202

ELK - OPEN ROADS

RESPONSE: The Forest held several elk workshops with scientists from within and outside the Forest Service to identify the habitat factors which are most important for elk. The scientists and their research clearly indicated that motorized access is one of the most important factors affecting elk habitat and populations. The Forest subsequently conducted a detailed inventory and analysis of motorized access in watersheds on the Forest. The results showed that open road and open motorized trail densities in watersheds varied greatly across the Forest, ranging from .01 miles/square mile to 2.25 miles/square mile. Therefore, the need to reduce motorized access on roads and trails varied across the Forest. In the Revised Plan, motorized access density on roads and trails increases by varying amounts in 6 watersheds, remains unchanged in 2 watersheds, and declines by varying amounts in 37 watersheds. Overall, the Revised Plan provides improved elk habitat effectiveness and lower elk vulnerability. More information about motorized access on roads and trails and the effects on elk habitat and populations is presented in the FEIS and Process Paper D. MO

OROMTD Formula

COMMENTS: Dislike the number of open roads and motorized trails per square mile the Forest recommends.

Allow summer motorized route densities of ≤ 1 mile per square mile in areas providing elk and deer summer habitat and crucial winter range;
766

Lower to ≤ 2 miles per square mile for snowmobiles in elk & deer winter ranges;
1273b, 1361

Establish ≤ 2 miles per square mile except in wildlife security areas adjacent to timber sale areas when it should be increased 3-4 times.
389

The road density calculation should not be limited by the size of the prescription area (Prescription 5.4).
1247

RESPONSE: The Revised Plan establishes an open road and open motorized trail route density (OROMTRD) for almost every prescription area of the Forest. The elk analysis for the Revised Plan was done on a watershed basis. All watersheds provide summer habitat for elk. Eight watersheds have an OROMTRD of 1.0 to 1.5 miles/square mile, and 37 watersheds have an OROMTRD of less than 1.0 miles/square mile. On elk and deer winter ranges, no cross-country snowmachine use is allowed at any time, and OROMTRD must be less than or equal to 2 miles per square mile. MO

Open Road Definition

COMMENTS: Define an open road as any road that can be traveled on by a motorized vehicle (even if it is designated as closed or gated); count only those roads that are obliterated as fully closed.
389, 643

Redefine "open road/trail" because the measurement of more than 1-2 motorized vehicle trips per week is so low as to be of no concern; it underestimates elk habitat effectiveness and vulnerability which is unfair to

motorized users; there is no scientific proof for this figure; and without cameras on every road, there is no way this monitoring item will work. (CROSS REFERENCE: Access - Road Density)

629a

RESPONSE: The Revised Plan contains a Glossary with three pages of definitions about roads and road density. The definition of an open road for elk habitat is based on research by Dr. L. Jack Lyon, Forestry Sciences Lab, Missoula, Montana. Elk research shows that effective road closures provide good habitat for elk. Therefore, road obliteration is not a necessity to improve elk habitat. Monitoring road and trail motorized access is a number 1 priority item for the Forest. MO

Motorized Trail Densities Versus Road Densities

COMMENTS: Object to the Forest lumping open motorized trails together with open roads. Explain how trail densities harm elk and what scientific data was used to determine effects. There is no scientific proof that as motorized trail densities increase, elk security declines. (Lyon's studies do not extend to trails.)

26, 288, 291, 344, 367, 528, 629a, 1191, 1202, 1332, 1376

There is no data to support that motorized trail densities have the same/similar effect on elk as open road densities, the DEIS and DFPR should not treat them the same and they should not be a part of the Elk Habitat Effectiveness formula. Proof that elk security is not affected by increased trail densities: Draft Interagency Guidelines for Managing Elk Habitats and Populations on USFS Lands in Central Idaho does not equate motorized trails as having the same effects as motorized roads; study shows in Hunting Unit #39 that elk vulnerability due to OHV hunting pressure does not significantly decrease with the elimination of trail bikes from the area; the Idaho Fish & Game 1988 Deer/Elk Rifle Hunting Study shows only 1% of hunters use trail bikes to hunt. That leaves 99% of hunters in the area; "Elk Calf Response to Simulated Noise Disturbance in Southeast Idaho," Journal of Wildlife Management 49(4): 926-930 showed there is no significant impact to elk numbers/calf survival.

Close roads and trails for wildlife protection only when scientific facts support the reasoning for closures. (CROSS REFERENCE: Access - Single Track)

629a

RESPONSE: Because of much discussion and debate about the effects of motorized use on trails, the following provides a brief overview documenting the work done to obtain information about the effects of motorized use on trails.

The Forest held a series of elk workshops with the State Fish and Game agencies to work on analysis steps for elk habitat effectiveness and elk vulnerability for the Final Revised Plan. According to Dr. L. Jack Lyon, Intermountain Forest and Range Experiment Station, there is no research on the effects of motorized use on trails, but intuitively elk should respond to motorized use on trails the same as motorized use on roads. Based on that statement, motorized use on trails has been equal to motorized use on roads for the elk habitat effectiveness and elk vulnerability analysis.

ELK - OPEN ROADS

At the public access meeting of January 5, 1994, Dr. L. Jack Lyon provide a written response to questions from the public about motorized access. He stated again that there has been no reported research on the effects of trails. At the public access meeting, alternative views were presented from the public about the effects of trails. Mr. Marty Morache presented the most extensive alternative view that motorized trails do not have as much effect as roads.

Idaho Department of Parks and Recreation cited the 1987-1988 Idaho Rifle Elk Hunting Study which documented that only 1% of hunters use trail bikes to hunt (in 1987-88). The implied question is, should the Targhee equate motorized trails, which provide access for 1% of the hunters, equal to motorized roads, which provide access for 99% of the hunters, in elk vulnerability analysis? The Forest did not find any study conducted since 1987-1988 which documents if a higher percentage of hunters are using trail bikes to hunt in 1996.

At the request of the Interagency Grizzly Bear Committee, a taskforce established standardized definitions for roads and trails and standardized methods to measure densities for roads and trails. In the final report (titled the "Interagency Grizzly Bear Committee Taskforce Report - July 1994") trails and roads are treated equally in determining motorized access density.

Recent work is in progress on the development of "Draft Interagency Guidelines for Managing Elk Habitats and Populations on USFS Lands in Central Idaho." In these guidelines, trails are given 1/10th the effect of roads. Personnel on the Nez Perce National Forest said that the guidelines are still draft, there is no research supporting that trails be given 1/10th of the effect of roads, and that the biologists working on the draft guidelines agreed on the 1/10th criteria based on 1) fewer number of vehicles on trails and 2) lower sound levels. (Steve Blair, personal communication, July 9, 1996.)

At this time, there is no scientifically controlled research study on the effects of motorized use on trails. In Process Paper D for the Final Revised Plan, the Forest provides new elk habitat effectiveness and elk vulnerability analysis wherein motorized use on trails is given 1/10th the effect of motorized use on roads. This new analysis is then compared with the previous analysis wherein motorized use on trails is equal to the effect of motorized use on roads. In the Final EIS, we discuss the uncertainty associated with the analysis of motorized use on trails.

Other Studies

COMMENTS: Do not overlook studies that show that nonmotorized users affect elk security.

Look into studies that prove that single-track trails, hiking and, mountain biking are disruptive to elk habitat.

346

Information in the Draft Interagency Guidelines for Managing Elk Habitats and Populations on USFS Lands in Central Idaho shows that roads and trails restricted from motorized users actually increased elk vulnerability by making elk habitat more accessible to non-motorized users.

629a

ELK - OPEN ROADS

Refer to the Elk Telemetered Heart Rates Study by the Rocky Mountain Forest and Range Experiment Station which found that close-range gunshots and humans on foot (from as far away as 400-800 meters) consistently produced more elk reaction (either altered behavior or running) than did automobiles, motor bikes & aircraft. This study suggests protection would be provided by placing roads in areas hidden by trees & away from elk feeding sites.

313, 270, 1449

RESPONSE: The Forest acknowledges that any time humans approach elk (especially elk which are hunted), there is a response by elk. However, motorized access is identified as one of the most important factors affecting elk habitat effectiveness and elk vulnerability on the Forest. Most people use motorized vehicles to gain access into the Forest. That is why it received special emphasis in the Final Revised Plan. No major issues or concerns were identified for nonmotorized summer use on trails or roads. There is concern about nonmotorized uses on elk and deer winter ranges. Winter Range Prescription 2.7a prohibits nonmotorized cross-country use during the winter period in winter range. MO

COMMENTS: Address habitat fragmentation, not just road density limits;
1368

Limit the number and size of patches (and the accompanying roads) because according to Lyon 1980 and Van Dyke 1995, the single most important function in elk utilizing an area is the proximity of an active road.

1367

RESPONSE: Management Prescriptions 5.1.4 and 5.4 require management for large blocks of forest cover greater than 250 acres in size. Large blocks reduce fragmentation and provide more security for elk. The Forest agrees that motorized access is the most important variable predicting potential elk use in an area. In the analysis of potential elk use, motorized access accounted for 70 to 80 percent of the effects. MO

ELK - ROAD CLOSURE

This subcategory addresses access issues from an elk security perspective. Cross reference to the Access category for additional information.

Supports

COMMENTS: Favor closures due to concerns about elk security and elk habitat. Motorized use has a negative impact on wildlife.

136, 143, 173, 174, 201, 226, 265, 270, 280, 337, 356, 357, 370, 459,
631, 643, 656, 668, 697

Support current level of elk security but want some closures when snow depth is an issue.

1240

Limit some access for elk security, but leave some open.

35

Cut out backcountry access.

26

ELK - ROAD CLOSURE

Close non-system roads to help elk.
227

Close access to elk sensitive areas.
F-K(4), 650

Close all roads where elk migrate.
1331

Close motorized access to important elk habitat seasonally or year-round.

F-B(4), 157, 167, 174, 179, 181, 212, 252, 278, 305, 339, 360, 490, 659, 669, 690

Do not build new roads because they create needless access to areas that jeopardize elk security.

325, 1331

Restrict OHV, ORV, and ATV travel from elk security areas.
37, 176, 226, 370, 619, 652, 667, 1331

Restrict OHV use during the summer.
305

Monitor effectiveness of road closures for elk security.
175, 643

Enforce road closures in elk habitat.
174, 204, 1331

Non Support

COMMENTS: Oppose road and trail closures for elk security.

34, 39, 43, 47, 49, 53, 319, 445, 687, 1240, 1264

It is inconsistent management to close trails to OHV users but then allow hikers and then release wolves which feed on elk.

397

Roads never bothered elk security. No evidence to support that elk will not cross roads or be otherwise adversely affected by roads not used by armed humans.

36, 53, 393, 1240

Oppose closures because elk thrived during the last 10 years when timber harvesting brought high road useage; if elk were bothered by roads they would have stayed in more remote areas.

12, 272, 275, 1202

There are enough areas for elk, including feeding areas, already.
687, 1264

Opposed to closing roads in both elk summer and winter range because elk populations are not a problem. The population is usually so high that many elk have to be harvested each year to keep the population in balance; there are more elk than ever before. There are so many that Idaho Fish & Game is selling 4,000 controlled hunt permits this year.

270, 272, 646, 693

OHVs/ATVs do not harm elk populations; (some cite Idaho Fish & Game).

319, 397

Motorized users just go around gates anyway.

1

ELK - ROAD CLOSURE

There is no scientific evidence that equates single track trails or roads with wildlife impacts.

F-O(4), 393, 1202

Road closures are a political move to protect the elk which resulted in reduced ASQ.

228

Road management will have little effect on elk mortality when 86% of mortality is caused by hunting and 14% by natural causes.

1202

Road closures will not have the desired effect because roadless hunting units are not abundant in elk.

687

RESPONSE: (TO BOTH SUPPORT AND NON-SUPPORT) At the beginning of work on the Revised Plan, the Forest held several elk workshops, inviting scientists from within and without the Forest Service, to identify the habitat factors which are most important for elk. The scientists and their research clearly indicated that motorized access was one of the most important factors affecting elk habitat and populations. Elk will migrate across roads and many do so to get to winter and summer ranges. Human activity on roads can effect migration, causing elk to either migrate more quickly or even delay migration. Subsequently the Forest conducted a detailed inventory and analysis of motorized access by watersheds on the Forest (watersheds are one way to define a geographical area for scientific study). The results of this inventory and analysis showed that open road and open motorized trail densities in watersheds varied greatly across the Forest (ranging from .01 miles/square mile to 2.25 miles/square mile). Therefore, the need to reduce motorized access on roads and trails varies across the Forest. In the Revised Plan, motorized access density on roads and trails increases by varying amounts in 6 watersheds, remains unchanged in 2 watersheds, and declines by other amounts in 37 watersheds. As a result, 8 watersheds have an open road and open motorized trail route density (OROMTRD) of 1.0 to 1.5 miles/square mile, and 37 watersheds have an OROMTRD of less than 1.0 miles/square mile. Overall, the Revised Plan provides for improved elk habitat effectiveness and lower elk vulnerability. More information about motorized access on roads and trails and the effects on elk habitat and populations is presented in the FEIS and Process Paper D. MO

ELK - STANDARDS AND GUIDELINES

Elk Habitat Effectiveness

COMMENTS: Add a wildlife standard to maintain an elk habitat effectiveness value of at least 0.6 in each sub-watershed (approximately 2000-6000 acres).

766

RESPONSE: The Forest evaluated this suggestion in detail, but could not adopt it for the following reasons: 1) In some areas of the Forest, Districts could not close enough roads to achieve an elk habitat effectiveness (EHE) value of at least 0.6 because established developments in the areas require access; there are private, state, and other Federal lands which require access; and most public does not want some historic access roads closed. 2) Cover values

ELK - STANDARDS AND GUIDELINES

are naturally low in some watersheds, especially those with a low percentage of forested acres. The low amount of cover reduces elk habitat effectiveness, and makes it impossible to achieve an elk habitat effectiveness value of 0.6 in each sub-watershed.

On a Forestwide basis, the Revised Plan improves EHE from a Forestwide average of 0.58 for the existing condition to a Forestwide average of 0.64. In the Revised Plan, 68 percent of the Forest has an EHE of greater than or equal to 0.6. MO

COMMENTS: Create standards for deer and elk hiding and thermal cover.

1365

Develop guidelines for elk cover/forage relationships (i.e. sight distance, logging impacts, and elk vulnerability) and incorporate as standards in prescription areas contributing to timber ASQ's.

389

RESPONSE: While working on the Final Revised Plan, the Forest held a series of elk workshops with State Fish and Game agencies and reviewed a lot of literature. Although some literature discusses and defines thermal cover, absolute thermal cover requirements are not justified. Elk can be found year around in desert habitats without any thermal cover, and they occur in a wide variety of mountain habitats with a wide range of cover and noncover attributes. Elk continue to use lodgepole pine forests in areas where the mountain pine beetle killed high percentages of the trees, and where reduced canopy closure is far below 45%. For the Final Revised Plan, the Forest determined that elk security is the most important issue. The most important habitat features dealing with elk security are motorized access density, hunter density, and hiding cover.

Management prescriptions 5.1.4 and 5.4 require that only 20% of the forested acres can be in a created opening at any point in time. Therefore, 80% of the forested acres in these management prescriptions will provide cover for elk at any point in time. Also, these management prescriptions require management for large blocks of cover (greater than 250 acres in size). MO

COMMENTS: Drop the statement on Page III-2: "human access routes may have reduced the ability of species to move between habitat blocks" because there is no evidence; oppose year-round closures because there is no scientific data to prove elk will not cross roads.

393, 413

RESPONSE: The statement on Page III-2 is a general comment agreeing with a considerable amount of literature which document the effects of roads on wildlife. The statement is accurate in that it uses the words "may" and "reduced". More detailed analysis on the effects of roads is presented further in Chapters III and IV of the EIS. MO

COMMENTS: Increase a forest-wide direction to limit cross-country motorized travel in order to protect big game habitat.

389

ELK - STANDARDS AND GUIDELINES

RESPONSE: The Revised Plan proposes to prohibit summer cross-country motorized travel on 93% of the Forest. Prior to the Revised Plan, cross-country motorized travel was prohibited on 38% of the Forest. MO

Elk Vulnerability

COMMENTS: Clarify what the State Vulnerability Standards are for elk; how the habitat measure is derived; and what and where estimated vulnerability levels are. Define in guidelines the scientific basis for defining unsuitable areas as security by simply increasing the acreage of lower quality areas.

1369

RESPONSE: The State goals for elk vulnerability; a map showing where these goals are applied; a brief discussion explaining elk vulnerability; and scientific literature cited are shown in the FEIS.

The Revised Plan does not define unsuitable areas as security by increasing the acreage of lower quality areas. MO

COMMENTS: Make a Standard that the elk vulnerability model only be applied as a temporary measure during the hunting season.

1389

RESPONSE: The FEIS clearly defines elk vulnerability as applying to the hunting season. The elk vulnerability model is an analysis tool not a standard. MO

COMMENTS: Correct error on elk security and graphing on the CBA chart in Alternative 2.

413

RESPONSE: The Counting By Advantages (CBA) process helped select the preferred alternative in the DEIS. It was not used in formulating the final preferred alternative. The CBA chart is not contained in the FEIS. MO

Elk and Deer Winter Range (Management Prescription 2.7(a-b))

COMMENTS: Incorporate crucial elk winter range prescriptions into the Plan.

389

Create standards and guidelines for big game winter range areas not already under Management Prescription 2.7 Elk and Deer Winter Range.

FS-9

Big game winter range is sometimes in conflict with another prescription. If another prescription is chosen, the winter range prescription cannot be used. Prepare a new winter range map and write a standard and guide to go along with the map.

FS-3

RESPONSE: The Revised Plan updates the mapping of elk and deer winter range in cooperation with the Idaho and Wyoming Fish and Game agencies. Some of the elk and deer winter ranges are not mapped with the winter range prescription.

ELK - STANDARDS AND GUIDELINES

For example, some of the winter ranges are mapped with a grizzly bear prescription or a proposed wilderness prescription. The other prescriptions will still maintain the habitat conditions important for wintering deer and elk. The Forest added a forestwide standard to the Revised Plan to close all elk and deer winter range areas to cross-country snowmachine use, regardless of the management prescription they receive. MO

COMMENTS: Write a standard to separate out livestock forage from game forage on critical ranges.

FS-3

RESPONSE: The Forest clarified the wording in the Forestwide standards and guidelines to show when forage utilization on elk and deer winter ranges will be measured. It is important to look at the combined forage utilization by both livestock and wildlife, so that these areas can be maintained in a productive state. MO

COMMENTS: Develop objectives, standards, and guidelines for elk and deer winter range that have substance. Develop a standard to calibrate the success of vegetation improvement; describe forage conditions in a quantifiable manner.

no letter #

RESPONSE: Management Prescription 2.7(a-b) was developed to fit a wide range of vegetative conditions for elk and deer winter ranges across the forest. These winter range areas vary from being mostly sagebrush/grass to mostly aspen or conifer. More specific direction on forage may be good for one area, but not applicable to another. Each winter range area will be managed according to the potential for that particular area. One item the Forest strengthened in the final Revised Plan pertains to cross-country snowmachine use. All elk and deer winter range areas are closed to cross-country snowmachine use. MO

Timber Management (Big Game Security Emphasis) (Management Prescription 5.1.4(b))

COMMENTS: Oppose efforts to manage for elk security in Management Prescription 5.1.4(b) and support elk hunting here because lack of access imposed by prohibiting ORV travel, establishing buffer zones and preventing logging in many timbered areas provides security enough.

432

RESPONSE: Management prescription 5.1.4(b) is designed to allow timber harvesting while maintaining suitable elk habitat conditions, so that elk use would be maintained in these areas. The Forest did not deem it desirable to reduce elk use in these areas. MO

Elk & Deer Summer Range (Management Prescription 5.4 (a-c))

COMMENTS: The management prescription for elk and deer summer range allows for timber harvest and roading in response to insect and disease epidemics

which fails to fully protect security areas.

643

RESPONSE: The objective, as stated in the management prescription, is to use silvicultural techniques which prevent or lessen insect and disease epidemics to maintain cover values for elk. This objective provides direction for keeping forest stands healthy, which will provide better cover for wildlife over time. All of the other standards and guidelines in the management prescription must also be followed. MO

COMMENTS: Make the following changes to Prescription 5.4 (a-c): Elk & Deer Summer Range:

Third Paragraph: "Timber management emphasizes security for big game species."

Objective: "Fire, insects and disease are allowed to play their natural role in ecological succession to create and maintain a variety of forested age classes which in turn provide the requisite cover and forage for big game species."

Roads: "No new roads will be allowed."

Timber: "No clearcutting, no shelterwood cuts in lodgepole, no seed tree cuts. Only individual and group selection harvest will be allowed.

"No timber harvesting activity or similar type of disturbance activity can occur within the security area during the time it is designated a security area. Security area designations will be at least 10 years in duration. New security areas will be designated and protected at least 18 months prior to entry into currently designated security areas."

643

RESPONSE: The Revised Plan does not makes these changes to timber harvest in Management Prescription 5.4 for the following reasons: From 1980 to 1992, the Forest conducted an elk monitoring project associated with some timber sales on the Dubois Ranger District. Results of this monitoring illustrated that elk use declined (but was not eliminated) in the timber sale areas during the years of road building and harvesting, but increased again after this activity was completed. Elk and deer use clearcuts, shelterwood cuts, and seed tree cuts. At the beginning of work on the Revised Plan, the Forest held a series of elk workshops with State Fish and Game agencies, and reviewed a lot of literature. From this work, elk security was determined to be the most important issue. The most important habitat features dealing with elk security were motorized access density, hunter density, and hiding cover. Hunter density is regulated by the State Fish and Game Departments. Motorized access and hiding cover are regulated by the Forest Service. Management prescription 5.4 establishes direction for low motorized access and for maintaining high levels of hiding cover over time. This prescription also provides for maintaining security areas adjacent to areas with timber harvesting activity, but it is not necessary to have these areas designated for at least 10 years.

The goal statement and the standards and guidelines in this prescription emphasize the need to provide security for big game while allowing some timber harvesting to occur. Most big game species are habitat generalists, and can accommodate a wide range of habitat conditions and changes. Historically, big game species accommodate a wide range of fire,

ELK - STANDARDS AND GUIDELINES

insects and disease events. The objective, as stated in the management prescription, is to use silvicultural techniques which prevent or lessen insect and disease epidemics to maintain cover values for elk. This objective provides direction for keeping forest stands healthy, which will provide better cover for wildlife over time. Maintaining high amounts of cover over time is considered important for supporting the goals of the Idaho and Wyoming Fish and Game agencies. The use of fire is allowed to maintain important habitat components. New roads are allowed, but open road and open motorized trail route density must be maintained less than or equal to 0.5 miles per square mile. MO

ELK - SECURITY

Support Measures for Elk Security

COMMENTS: Support elk security because elk are part of the ecosystem and because it is enjoyable to see elk.

20, 21, 23, 43, 46, 49, 51, 53, 156, 265, 285, 340, 445, 1176, 1204

Support Idaho Fish and Game's elk vulnerability standards and proposals to protect elk.

61, 331, 690

Establish secure areas for no less than 10 years and do not distribute these areas across the forest so they can function as a network rather than isolated islands.

1194

Use science acquired from the Targhee or similar forests when making decisions on elk.

1267

Non Support Measures for Elk Security

Oppose measures for elk security in general.

27, 29, 30, 33, 39, 50

Leave elk security the way it is.

55, 1319, 1321

Elk security closes off/limits access to the forest including hunting access; DEIS does not prove that elk populations need security.

46, 52, 393, 607

Idaho Fish and Game plan shows elk population has never been in better condition.

393, 431, 1239

There is sufficient cover.

1316, 1392

Nature should be allowed to take its course.

38

Motorbikes do not disturb elk.

1449

Security measures are bad for economics.

293

Elk security is not the Forest's problem.

251

ELK - SECURITY

Using elk security as a key indicator violates the multiple use mandate.

393

Elk security forces the US Forest Service into unhealthy management of both the timber and range resource.

432

Consider an alternative that clearly shows the social & economic cost of meeting the key issue of security for elk and measures that could mitigate this issue.

393

RESPONSE: (TO BOTH SUPPORT AND NON SUPPORT) As evident from the many public responses on elk security, there is no agreement about elk security. Some public want the Forest Service to be more supportive of State Fish and Game agency goals, while others want the Forest Service to be less supportive. The following explains the Forest's final decisions after reviewing these comments:

Elk were selected as a management indicator species for the Forest Plan Revision because: 1) they are a species commonly hunted; and 2) population changes (number of animals and/or distribution of animals) indicate the effects of Forest management activities which alter or change habitat conditions. Since elk are hunted, population changes also indicate the effects of hunting regulations. Most often, it is a combination of both habitat conditions and hunting regulations that affect elk populations.

One of the goals for the Revised Plan is: "Provide habitat to support the wildlife and hunting goals of the States of Idaho and Wyoming."

The elk population goals for the Idaho Department of Fish and Game are:

Game Management Units 60, 61, 62, 62A, 64, 65, 66, 69: These game management units are known as "Ready Access Units." For these units, the IDFG goal for the post hunting season population is ≥ 15 bulls per 100 cows (this equates to a maximum of 60 percent bull elk mortality), with 40% of bulls branch-antlered; and maintain the percentage of yearling bulls in the antlered segment of the harvest at or below 50% and the percentage of mature bulls (having 6 points on one antler) at or above 10%. (IDFG letters: May 12, 1995 and Nov. 15, 1995)

Game Management Units 58, 59, 59A, 67: These game management units are known as "Front Range Units." For these units, the IDFG goal for the post hunting season population is ≥ 20 bulls per 100 cows (this equates to maximum of 50 percent bull elk mortality), with 50% of bulls branch-antlered; and maintain the percentage of yearling bulls in the antlered segment of the harvest at or below 35% and the percentage of mature bulls (having 6 points on one antler) at or above 20%. (IDFG letters: May 12, 1995 and Nov. 15, 1995)

Idaho Department of Fish and Game stated that these goals were not being met in Game Management Units 59, 59A, 60, and 62A (Elk Workshop, September 1992).

The elk population goals for the Wyoming Game and Fish Department are as follows:

For all of the Wyoming units on the Forest, the WGF goal for the post hunting season population is ≥ 20 bulls per 100 cows. This equates to a maximum of 50 percent bull elk mortality.

ELK - SECURITY

For all of the Wyoming units on the Forest, these goals are being met.

For elk habitat effectiveness, the Idaho Department of Fish and Game requested maintaining elk habitat effectiveness values of at least 0.6 in each subwatershed (IDFG letter dated June 25, 1996). Currently, elk habitat effectiveness values are below 0.6 in many watersheds of the Forest.

For elk winter ranges, the goal is to provide quality winter range conditions, including managing motorized access to provide security for wintering animals. Currently, not all winter ranges have motorized access restrictions, and this situation is analyzed in the Forest Plan Revision.

The Revised Plan identifies the habitat components most important to support the above stated goals for elk populations, elk habitat effectiveness, and elk winter range. Habitat components include motorized access density and hiding cover. The Revised Plan provides the following changes in motorized access density and hiding cover to support the above stated goals:

Cross-country snowmachine travel is prohibited on all elk winter ranges to provide security for wintering animals. Only a few designated routes are allowed for motorized access through elk winter ranges during the winter time.

Cross-country motorized travel is prohibited on 93% of the Forest during the spring, summer and fall periods, to provide for improved elk habitat effectiveness and lower elk vulnerability.

The Forest Plan Revision establishes an open road and open motorized trail route density for every area of the Forest. The result of specified densities is that about 600 miles of currently open motorized roads and about 130 miles of currently open motorized trails are closed to motorized use in the Revised Plan, improving elk habitat effectiveness and lowering elk vulnerability. Closures include both system and nonsystem roads and trails.

The number of forested acres proposed for timber harvesting during the next decade is greatly reduced from what occurred during the previous decades. In the Revised Plan, about 30,500 forested acres are proposed for some kind of timber harvest or other type of vegetative treatment (such as prescribed fire) during the first decade. This amounts to 2.5% of the total forested acres on the Forest and allows a net increase in cover while the previously harvested areas continue to grow and provide cover for elk and other wildlife. MO

COMMENTS: Page III-126 to III-128, Use the best science (Lyon and Canfield 1991, Hillis et al 1991) to provide big game security. Provide blocks of hiding cover greater than 250 acres and greater than 1/2 mile from open roads.

1273b

RESPONSE: Management prescriptions 5.1.4 and 5.4 require blocks of cover greater than 250 acres in size. The distribution of these blocks, and whether they are always greater than 1/2 mile from an open road will depend on site-specific analysis. See Process Paper D and the list of citations for science used. MO/AM

School Section Creek and Modoc Creek

COMMENTS: Obliterate any roads associated with silvicultural techniques upon completion to protect elk and deer summer range at School Section Creek and Modoc Creek.

1185, 1348

RESPONSE: These areas of the Forest are within Management Prescription 5.4(c), which has an open road and open motorized trail density standard of less than or equal to 1.25 miles per square mile. This means there can be a maximum of 1.25 miles of road for every square mile. Timber harvest roads will either be opened or closed based on this figure and other site-specific conditions identified during project work. MO

Lemhi Ranger District

COMMENTS: The Elk Habitat/Vulnerability Analysis assumes that if a road or trail was open to motorized use, then it was used more than twice per week by motorized users. Explain why, then, some of these routes disappear because of lack of use (Example: lower trail of Pass Creek on Lemhi Ranger District and the North Fork of Pine Creek Trail in the Big Holes).

629a

RESPONSE: If the average motorized use on roads and trails is less than 1 to 2 vehicles per week, the Forest does not count those roads and trails in the analysis of elk habitat effectiveness. Each Ranger District reviewed all of the road and trail data for the Final Revised Plan, and their review is incorporated in the analysis. MO

Lionhead

COMMENTS: In Lionhead do not close roads to protect elk if closures will impede winter access in Lionhead.

7

RESPONSE: In the Revised Plan, the Lionhead area is open for snowmachine use. MO

Fall River Ridge

COMMENTS: I use Fall River Ridge for elk hunting in the fall. Do not close.
461, 463

RESPONSE: Fall River Ridge is within the Bechler/Teton Grizzly Bear Management Unit. This area has restrictions on motorized access to achieve habitat conditions necessary for recovery of the grizzly bear population. During the spring, summer and fall, motorized travel is permitted on a few open roads, but cross-country motorized travel will not be permitted. MO

ELK - SITE-SPECIFIC

Table Rock

COMMENTS: In Table Rock apply the OROMTRD in the 2.7(a) Prescription (Elk) for this area to be consistent.

1361

RESPONSE: The lower portion of Table Rock Creek has Management Prescription 2.7(a). MO

Big Holes

COMMENTS: Opposed to snowmobile and trail bike restrictions because there is scant evidence deer are bothered in the Big Holes area. (CROSS REFERENCE: Access - Snowmobiles)

67

RESPONSE: Snowmachine restrictions apply to the areas of elk and deer winter range; these restrictions are necessary to protect wintering deer and elk. Reductions in motorized access are being implemented to reduce elk vulnerability on the bull segment of the elk population, to help support the goals of the Idaho Department of Fish and Game. (See response to elk-road closure). MO

COMMENTS: Road closures defeat Fish and Game's purpose of allowing elk harvest in the Big Holes to keep elk from eating farmer's hay and to keep from having to pay for the damage.

F-G(2)

RESPONSE: Reductions in motorized access are being implemented to reduce elk vulnerability to the bull segment of the elk population and to help support the goals of the Idaho Department of Fish and Game. The Idaho Department of Fish and Game has not suggested a need to increase motorized access in order to resolve elk depredation problems on private lands. MO

Fox and Moose Creeks

COMMENTS: Protect elk in Fox and Moose Creeks.

1331

RESPONSE: The Revised Plan meets the goals for elk vulnerability established by the Wyoming Game and Fish Department. Elk habitat effectiveness ratings for Fox and Moose Creeks range from .67 to .76. These are among the highest ratings for elk habitat effectiveness on the Forest. MO

Horseshoe-Packsaddle

COMMENTS: Prohibit mountain bike use in Horseshoe Packsaddle critical winter range to protect the elk.

329

RESPONSE: Cross-country travel by mountain bikes is prohibited during the winter period, to protect wintering elk and deer. MO

Timber Harvest and Elk

COMMENTS: Timber harvest, specifically clearcuts, has negative impacts on elk security.

47, 293, 317, 640, 668

Forbid logging/new roads in elk habitat year-round.

211, 212, 280, 357

Oppose logging to improve elk habitat; logging is not needed for elk habitat "health";

51, 252, 396, 622, 1194

Prove with documentable evidence that timber harvest does not harm elk habitat.

625

Revise management prescription for elk & deer summer range to not allow timber harvest as a response to insect & disease.

643

Rather than using the elk habitat effectiveness model, an unbiased scientific study would show that mature stands of timber devoid of an understory make poor security for elk as compared to timber stands in the advanced seedling/sapling stage.

393

Supports logging because elk thrive in clearcut and abandoned forests.

275

Do not change the way elk are managed, except for reducing ASQ's in the lodgepole pine forests.

687

RESPONSE: (TO ALL OF THE ABOVE COMMENTS) Elk use areas of the Forest where timber harvesting has occurred. The Forest conducted a long term monitoring study on elk use in a timber sale area on the Dubois Ranger District. Monitoring showed that elk use declined, but was not eliminated, during the active years of the logging, and returned to pre-logging levels after the logging activity was done. Elk use occurs in all stages of forest succession, from the grass/forb and seedling stage to the old growth stages.

The Revised Plan allows for future timber harvesting, but takes into account the most important habitat considerations for elk, which are motorized access density and hiding cover. The Revised Plan reduces motorized access density from existing levels. The Revised Plan allows hiding cover to increase as trees in past logged areas grow to provide cover. Management prescriptions 5.1.4 and 5.4 allow timber harvesting, but require that 20% of the forested acres can be in a created opening at any point in time. Therefore, 80% of the forested acres in these management prescriptions will provide cover for elk at any point in time. These management prescriptions require management for large blocks of cover (greater than 250 acres in size). MO

COMMENTS: Address how the agreement with Idaho Fish and Game on elk security has greatly reduced the ASQ.

393

ELK - TIMBER

RESPONSE: The ASQ is the result of the cumulative effects of many goals, objectives, standards and guidelines, and management prescriptions which have been incorporated into the Revised Plan. An analysis of how each goal, objective, standard and guideline, and management prescription affects the ASQ has not been done, and is not necessary to effectively disclose environmental effects or provide a reasoned choice between alternatives. MO

ELK - WINTER/SUMMER

Protection - Winter Range

COMMENTS: Protect elk winter range and "critical or crucial" elk winter range.

136, 161, 174, 180, 189, 331, 340, 356, 357, 659, 662, 664, 697, 766

Discuss and incorporate the Teton Front Winter Recreation Plan regarding big game winter habitat objectives and ORV restrictions. (CROSS REFERENCE: Recreation)

1446

RESPONSE: The Forest worked with Idaho and Wyoming Fish and Game Departments to identify the critical elk and deer winter range areas on the Forest. In the Revised Plan, all elk and deer winter range areas are closed to cross-country snowmachine use. In some places, the elk and deer winter range areas fall within other management prescriptions, such as wilderness, proposed wilderness, wild and scenic and recreational rivers, and grizzly bear habitat. Even though they are within other management prescriptions, the habitat components that make them winter range areas are protected. MO

COMMENTS: Winter elk herd population is already as large as private property can withstand; as large as winter range can stand.

687, 1378, 1389

RESPONSE: Many elk winter on lands off the National Forest. Many factors affect where elk will winter, including migration, winter severity, quality of the winter range, and size of the elk population. The Forest Service will maintain good quality winter range on the National Forest. The responsibility for managing the size of elk populations and resolving problems on private property resides with the State Fish and Game Departments. MO

COMMENTS: Object to restrictions of cross-country travel in winter range because there are already enough laws in effect.

319

RESPONSE: In the Revised Plan, all elk and deer winter ranges are closed to cross-country travel to protect wintering big game animals during a time of the year when they need to conserve as much energy as possible. By protecting elk winter range, the Forest is responding to all the laws, including those requiring management for wildlife and cooperation with State Idaho Fish and Game agencies. MO

Quantity of Elk Winter Range

COMMENTS: Wants more elk winter range; clarify why the amount of elk winter range proposed is less than currently present.

389, 1267

RESPONSE: Working with the Idaho and Wyoming Fish and Game agencies, the Forest identified the crucial mid-to-late natural elk and deer winter ranges on the Forest. Crucial winter ranges are those areas which determine a population's ability to maintain itself at a certain level over the long term. Identifying crucial winter range is a challenging task, because the distribution and number of wintering deer and elk on the Forest depends on winter severity. The winter range areas on the Forest are the upper elevational limits of elk and deer winter ranges. Generally, a higher proportion of deer and elk winter at lower elevations on BLM, State, and private lands during most winters. Some elk and deer, which summer on the Targhee, winter on ranges in Montana and Wyoming. MO

Protection - Summer Range

COMMENTS: Protect elk breeding/calving areas from adverse effects by prohibiting logging, roading & motorized vehicles.

F-B(4), F-G-1(475), FS-5, 136, 150, 157, 162, 167, 174, 175, 180, 181, 185, 189, 190, 203, 206, 209, 212, 219, 226, 252, 266, 275, 278, 280, 340, 357, 360, 490, 622, 659, 662, 667, 690, 1270, 1348, 1388

RESPONSE: Elk use areas of the Forest for breeding and calving where timber harvesting occurred. The Forest conducted a long term monitoring study on elk use in a timber sale area on the Duboise Ranger District which showed that elk use declined, but was not eliminated, during the active years of the logging, and returned to pre-logging levels after the logging activity was done. Elk use, including breeding and calving, occurs in all stages of forest succession, from the grass/forb and seedling stage to the old growth stages.

The Revised Plan allows for future timber harvesting, but takes into account the most important habitat considerations for elk, which are motorized access density and hiding cover. The Revised Plan reduces motorized access density from existing levels. The Revised Plan allows hiding cover to increase as trees in past logged areas grow to provide cover. Management prescriptions 5.1.4 and 5.4 allow timber harvesting, but require that 20% of the forested acres will be in a created opening at any point in time. Therefore, 80% of the forested acres in these management prescriptions will provide cover for elk at any point in time. Also, these management prescriptions require management for large blocks of cover (greater than 250 acres in size).

Numerous other management prescriptions, such as wilderness, proposed wilderness, nonmotorized, semi-primitive motorized, grizzly bear, and so forth, maintain or improve elk habitat by reducing motorized access and maintaining or improving hiding cover.

The Revised Plan reduces elk vulnerability in support of State Fish and Game goals, and improves elk habitat effectiveness. MO

ELK - WINTER/SUMMER

COMMENTS: Monitor reduction of ORVs in summer elk habitat.
161

RESPONSE: Monitoring motorized access, including areas of summer habitat, is a number 1 priority monitoring item in the Revised Plan. MO

Quality of Summer Range

COMMENTS: Good summer habitat prevents starvation/winter kill.
275

RESPONSE: We agree that good summer and fall habitat brings animals into the winter period in good condition, which improves winter survival. MO

COMMENTS: Include goals and objectives in the Allotment Management Planning for the number of animal unit months needed to sustain elk on their summer and winter range.
1206

RESPONSE: The forage utilization standards in the Revised Plan include the needs of wildlife. If forage utilization standards are exceeded, domestic livestock grazing is adjusted to meet the needs of wildlife. MO

Amount of Summer Range

COMMENTS: Explain why such a small portion of the Forest defines summer habitat for management.
1369

RESPONSE: Nearly all of the Forest receives summer use by elk. Elk habitat needs are taken care of by numerous management prescriptions, including wilderness, proposed wilderness, aquatic influence zones, research natural areas, grizzly bear habitat, nonmotorized, semi-primitive motorized, range management, and so forth. The Revised Plan improves elk habitat effectiveness, and reduces elk vulnerability in support of State Fish and Game Department goals. MO

FIREWOOD

Access to Personal Firewood Areas - Support

COMMENTS: Keep the access to firewood.

39, 43, 51, 213, 251, 277, 406, 440, 524, 1265, 1335

RESPONSE: Access to firewood is generally retained or re-opened for commercial firewood in timber sale areas. Ranger Districts will schedule firewood/products sales to meet road density objectives. BR/LB

COMMENTS: Allow firewood only on public lands.

156

RESPONSE: Public land is the only place where the Forest Service has jurisdiction. LB

COMMENTS: Allowing firewood collecting is good for the forest and public relations.

62

RESPONSE: Your comment is acknowledged. Firewood gathering can be beneficial in reducing fuel loading while providing economic benefits. BR/LB

COMMENTS: Require that slash piles be stacked by commercial loggers so that individuals can access it for firewood.

697

RESPONSE: Site-specific analysis will determine if slash piles should be stacked or dispersed in the project area based on the site-specific needs of the resources affected by management activities. RB/LB

COMMENTS: Increase harvest of firewood because there is more dead lodgepole than you have acknowledged or identified.

11

RESPONSE: After additional analysis, the Targhee has retained 3.8 MMBF for firewood/forest products in the Final Revised Plan.

COMMENTS: Allow access to firewood because it is an historic use, and collection does little damage to forest.

214

Provide more access to firewood than is currently allowed.

293

RESPONSE: Access issues are resolved by each Ranger District as the firewood program is implemented. The Revised Plan proposes a firewood/product harvest program of 3.8 MMBF/year. As post harvest or firewood areas become available, access, though generally temporary in nature, will be made available. LB

COMMENTS: Allow firewood harvesting of snags within 100 feet along a road because birds can use other trees.

309

FIREWOOD

RESPONSE: Harvesting within 100 feet of a road could be allowed if direction in the Revised Plan is met and site-specific analysis determines firewood harvesting is appropriate, based on site-specific resource needs. LB

COMMENTS: Allow firewood harvesting but do not build new roads.

325

RESPONSE: Access for any project is determined on site-specific analysis. If firewood harvesting requires new access, access would be analyzed in a site-specific NEPA document and would comply with direction in the Revised Plan. LB

COMMENTS: Reconsider your position that firewood is not a key issue because 70% of the homes in the Upper Snake River Valley burn firewood to heat their homes.

55, 413

RESPONSE: As the quality and accessibility of firewood decreases, demand decreases. The Ranger Districts will keep track of demand during the firewood season. If demand exceeds supply or if the resource is available it is possible to review it and take the steps to balance the program. 3.8 MMBF/year is an average volume. Total annual volume could be more or less but should average this level. LB

Access to Personal Firewood Areas - Non Support

COMMENTS: Reduce the limit for personal firewood availability because of impacts of "random skidding and access roads" and impacts to natural habitats.

1365

RESPONSE: 3.8 MMBF is the proposed harvest level for the Forest during this decade. Skidding methods and access opportunities are determined during site-specific analysis. These concerns will be mitigated in order to harvest this material. LB

COMMENTS: Enforce the fuelwood limits.

1365

RESPONSE: This is done to the best of our ability. The Forest uses monitoring to determine if firewood harvests are correct. Usually this involves going out in the field and checking permits and amounts being removed. LB/BR

COMMENTS: Clarify the impacts of firewood harvest in security areas and decide whether it will be allowed.

1369

RESPONSE: Impacts of firewood harvest on security areas are better analyzed at a site-specific level. Management direction for maintaining security areas is included in the Revised Plan. The FEIS discusses the effects and consequences of firewood harvest in these areas. BR/LB

FIREWOOD

COMMENTS: Oppose the firewood harvests when they occur in Aquatic Influence Zones.

282

RESPONSE: The Aquatic Influence Zone Prescription (2.8.3) allows salvage and commercial firewood cutting when catastrophic events result in degraded riparian conditions. LB

COMMENTS: Opposed to firewood harvests in order to meet Objective 3: "to maintain or restore ecological health and function."

282

RESPONSE: This objective allows treatment of wood residue only, if needed to restore ecological health and functions. Situations may exist where natural occurrences have altered ecological health and function. These objectives are designed to allow treatments that restore these processes and functions. LB

Salvage Timber

COMMENTS: Allow blown down trees to be salvaged for firewood. Allow dead and dying trees to be harvested with up to five cords per family to help clean up downed timber.

214, 243, 285, 472, 1239

RESPONSE: The Targhee has allowed harvest of these materials in the past. Depending on the amount of material and location, blown down trees can be harvested as firewood or as commercial timber. The amount available per family each year varies, based on changing supply and demand. BR/LB

COMMENTS: Harvest dead lodgepole pine for firewood to reduce flammable material that ignites spontaneously.

285

RESPONSE: Past firewood harvest came from this type of material. The majority of the 3.8 MMBF will come from the lodgepole pine component. LB

ASQ

COMMENTS: Enforce ASQ limits. Reduce the ASQ limit substantially (to an ASQ of zero as recommended in Alternative 6 if possible).

1365

RESPONSE: The ASQ is a ceiling; it is not a projected future sale level or target and does not reflect all of the factors that influence future sale levels. ASQ is based on the amount of suitable acres in each Alternative. In Alternative 6 there are no suitable lands. ASQ volume in all alternatives is lower than past harvest levels. LB

COMMENTS: Supports ASQ amount in Alternative 2 for increased firewood harvest.

47, 1335

FIREWOOD

Support ASQ in Alternative 3M as long as it does not affect firewood cutting.

44, 49, 53

RESPONSE: All alternatives include a firewood harvest volume projection of 3.8 MMBF. LB

COMMENTS: Include the harvest of firewood in the ASQ because it can constitute a substantial portion of the harvest of forest trees; to show it separately is misleading.

282, 625

RESPONSE: The ASQ of 8.0 MMBF/year does not include firewood or products of less than sawtimber size. Dead material is not included in the yield calculations. BR/LB

COMMENTS: Opposed to reductions from 11 million board feet to 3.8 million board feet of firewood available because the reduction means that: 70% of people dependent on firewood for warming their homes will freeze, a total of \$6,152,000.00 per year will be spent by the state of Idaho to subsidize heating bills for poor Idahoans, and taxpayers will subsidize fossil fuels.

275

RESPONSE: According to "Atlas of Social Indicators for the Upper Columbia River Basin" (1995) about 17% of the housing units in Bonneville, Clark, Fremont, Jefferson, Madison and Teton Counties are heated by wood. Teton County has the highest incidence of wood use for home heating at 50%. As wood has become progressively more difficult and costly to access and retrieve, people have switched to other fuels. The Targhee recognizes that wood is an important fuel for home heating. A volume of 3.8 MMBF of fuelwood/product is an estimate of the volume expected to be sold, on average, over the next decade. Recent fuel sales are below the 11.0 MMBF level mentioned. DP

COMMENTS: Recalculate the projected harvest figure of 3.8 MMBF to a figure of 14 MMBF because: 14 MMBF figure is based on mathematical calculations determined after attending a public meeting with Forest Service officials in May 1996. More accurate estimated dead volumes can be determined from the vegetation attribute tables that exist for each mature stand. Estimates of the demise of availability of dead lodgepole are grossly exaggerated (based on authors detailed calculations). There remains about 400 MMBF of dead timber and 30% of this is usable as house logs or firewood.

413

Explain how the 3.8 million board feet of firewood figure was established as the amount available.

228

RESPONSE: The 3.8 MMBF figure was determined by professionals familiar with the resource, the ground, and forestwide goals, objectives, standards, and guides. 3.8 MMBF is the firewood/forest product volume the Targhee can reasonably provide on an annual basis, while complying with the constraints in management prescriptions. LB

FIREWOOD

COMMENTS: Determine sale of firewood by deadstand, beetle kill, and the economic sustainability of the area harvesting the wood.

265

RESPONSE: The Ranger Districts determine where firewood harvest will occur. Firewood opportunities must comply with the restrictions, constraints, and/or objectives detailed in the Revised Plan. LB.

Economics

COMMENTS: Provide quality firewood for local community.

62, 293, 1265, 1313

RESPONSE: All alternatives will provide 3.8 MMBF/year of firewood. LB

Wildlife

COMMENTS: Evaluate the effects of firewood gathering on wildlife habitat and describe past impacts of significance and future management plans. Explain impact of firewood gathering in wildlife security areas.

1369

Need second guideline for cavity nesters: "Consider cavity nest species and protection measures for retained wildlife trees in cutting units when designating fuelwood areas and sales, both commercial and personal use charge areas." (CROSS REFERENCE: Wildlife, Snag/Cavity Nesters)

FS-9, FS-10

RESPONSE: The past effects of firewood harvests is included in the analysis for management indicator species. For example, all nonstocked and seedling areas, whether created by timber harvesting or firewood gathering, are included in the analysis of cover for elk habitat effectiveness. The snag analysis for existing condition includes the effects of past firewood harvesting that removed dead standing trees.

Future firewood harvesting will meet the forestwide standards and guidelines and the direction outlined in each management prescription. Some examples are: 1) If a management prescription only allows 20% of the forested acres to be in a nonstocked or seedling stage at any point in time, firewood gathering must meet this direction; 2) Firewood harvesting must meet the direction for dead and down material in the forestwide standards and guides; 3) Firewood harvesting must meet the snag habitat biological potential of each management prescription.

The future effects of firewood harvests are included, where appropriate, in the analysis for management indicator species. The details of the analysis are documented in Process Paper D. The DEIS and FEIS provide the results of the analysis. MO

GRIZZLY BEAR - ACCESS

Support Closures

COMMENTS: Address road/trail access as it pertains to grizzly bears, grizzly bear habitat, and Bear Management Units (BMU). Give road closures as high a priority as habitat improvement. Limit or restrict access by: placing a moratorium on new roads in management Situation I and II grizzly habitat; close existing roads; and close trails including restricting and/or limiting ORV/ATV use in grizzly bear habitat; ensure effective road closures.

32, 62, 151, 156, 162, 165, 168, 170, 173, 175, 206, 265, 297, 317,
357, 359, 389, 610, 620, 625, 652, 667, 695, 697, 1273b, 1331, 1361,
1365, 1446, 1667

RESPONSE: The Revised Plan reduces OROMTRD in the BMU's, reduces TMARD in the BMU's, and nearly eliminates cross-country motorized OHV use. For the Targhee portion of each BMU, OROMTRD is less than or equal to 0.6 miles per square mile, and TMARD is less than or equal to 1.0 miles per square mile. MO

COMMENTS: To allow motorized bikes into BMUs does not support bear protection efforts.

1273b

RESPONSE: The Revised Plan allows motorized bikes on roads and trails designated open for motorized use in the BMU's where bear recovery will not be jeopardized and trail/road densities are met. Motorized bikes are not allowed on any road or trail closed to motorized use. MO

Non Support Closures

COMMENTS: Oppose road and trail closures; closing access will not help grizzly bear recovery efforts.

27, 35, 36, 45, 46, 47, 52, 240, 446, 501, 546, 633, 693, 709,

Warning signs would be preferred to road closures in Grizzly Bear Country.

25

RESPONSE: Historical records show that grizzly bear populations survive where frequencies of contact with humans are low. Populations of grizzly bears and other large carnivores persist in those areas where large expanses of relatively secure habitat are retained and where human induced mortality is low. In the lower 48 conterminous states, this is primarily associated with National Parks, Wilderness areas and large blocks of public lands.

By managing motorized access on the landscape, the following grizzly bear management objectives are met: minimize human interaction and potential grizzly bear mortality; minimize displacement from important habitats; minimize habituation to humans; and provide relatively secure habitat where energetic requirements can be met.

The management of human use levels through access route management is one of the most powerful tools available to balance the needs of grizzly bears with the needs of humans. It is documented in several research projects, both completed and ongoing, that unregulated human access and development within grizzly bear habitat can contribute to increased bear mortality and affect bear use of existing habitat. MO

GRIZZLY BEAR - ACCESS

COMMENTS: Do not close access because of grizzly bear or wolves because they are not Threatened or Endangered. (CROSS REFERENCE: Wildlife, Specific Species - Wolves)

715

RESPONSE: In the lower 48 States, the grizzly bear is classified as a threatened species, and the gray wolf is classified as a nonessential experimental population, under authority of the Endangered Species Act. The Revised Plan reduces access within the grizzly bear BMU's to improve habitat conditions to support grizzly bear recovery goals. Access restrictions for the gray wolf will occur within one mile around active den sites and rendezvous sites between April 1 and June 30, when there are five or fewer breeding pairs of wolves in the Yellowstone or Central Idaho Nonessential Experimental Population Areas. MO

General

COMMENTS: Need more research on trail access to grizzly bear habitat and the impacts they have.

1202

RESPONSE: Additional research on the effects of trail access helps the Forest understand how to better manage trail use. Research on grizzly bears is done by the Interagency Grizzly Bear Study Team, and such research would be helpful to our management efforts. MO/JR

Open Road Densities

COMMENTS: Reconsider open road/open motorized trail route density as an indicator for grizzly and develop a new indicator based on social/economic effects of constraint on road development and timber harvest.

393

RESPONSE: The management of human use levels through access route management is one of the most powerful tools available to balance the needs of grizzly bears with the needs of humans. It is documented in several research projects, both completed and ongoing, that unregulated human access and development within grizzly bear habitat can contribute to increased bear mortality and affect bear use of existing habitat. By managing motorized access on the landscape, the following grizzly bear management objectives can be met: Minimize human interaction and potential grizzly bear mortality; minimize displacement from important habitats; minimize habituation to humans; provide relatively secure habitat where energetic requirements can be met. The social/economic effects are discussed and displayed in the FEIS. MO

COMMENTS: The two vehicles per week maximum allowance is flawed, because the policy indicates that grizzly bears will still be displaced by very little traffic.

1273b, 1361

GRIZZLY BEAR - ACCESS

RESPONSE: The two vehicles per week criteria is used for elk habitat effectiveness analysis, not grizzly bear analysis. For grizzly bear analysis, the Forest uses the criteria established in the Interagency Grizzly Bear Committee's Task Force Report on Grizzly Bear/Motorized Access Management and the Grizzly Bear Cumulative Effects Model. MO

COMMENTS: Provide best available data on "ghost roads," roads, authorized use of closed roads, and ineffective road closures as components of the OROMTRD for grizzly bears.

1273b, 1361

RESPONSE: The Ranger Districts conducted a complete inventory of all roads and trails on the Forest, which included identifying and mapping all "ghost" roads and trails. They used knowledge and information from other agencies, such as the State Fish and Game agencies. The Ranger Districts also evaluated motorized use on all roads and trails. In analyzing effects on grizzly bears, the Forest used the criteria established in the Interagency Grizzly Bear Committee's Task Force Report on Grizzly Bear/Motorized Access Management and the Grizzly Bear Cumulative Effects Model. MO

COMMENTS: Unclear that road/trail densities of .29 - .56 miles/square mile will correlate with grizzly management practices.

690

RESPONSE: The road and trail densities in the Revised Plan meet, and in most cases are lower than, the recommendations in the 1993 Grizzly Bear Recovery Plan. At this time, additional research and analysis is being done on road and trail densities in the Yellowstone Grizzly Bear Recovery Zone. When this research and analysis is done, the Forest will know more about how the road and trail densities in the Revised Plan will affect grizzly bear management. MO

COMMENTS: Use information provided by Roads Scholar Project to accurately depict road densities within BMUs.

643, 1361

RESPONSE: Our road inventory information is more current than that in the Roads Scholar Report. The roads which will remain open after the Plan is implemented are used to determine road density. All other roads will be closed or obliterated and cross-country motorized is not allowed. Therefore, the road density depicted is accurate.

We will use the Roads Scholar information as appropriate as we work through the task of closing and obliterating roads.

The analysis of road density as it relates to grizzly bear was done from the Interagency Grizzly Bear Committee. JR

COMMENTS: Include specifics on exactly when road density standards will be achieved. Needs to be achieved sooner than three years.

643, 1361

GRIZZLY BEAR - ACCESS

RESPONSE: The subject roads will be closed by a Forest Supervisor's order when the Record of Decision is signed. However, adding physical restriction devices or obliteration of the roads will require three years to complete.

Therefore, the objective in the Revised Plan is to implement the access standards in the BMU's within 3 years of the implementation of the Record of Decision. This is an ambitious, yet achievable, objective which takes into account the realities of accomplishing this huge task. MO/JBR

COMMENTS: Support Forest's intent to reduce road densities in BMUs. Support using OROMTRD.

393, 625, 1273b, 1276, 1367b

RESPONSE: Thank you for your support. The Forest used the criteria established in the Interagency Grizzly Bear Committee's Task Force Report on Grizzly Bear/Motorized Access Management and the Grizzly Bear Cumulative Effects Model. MO

COMMENTS: Add to the OROMTRD that roads must be closed elsewhere to keep the area within standards.

1273b

RESPONSE: The OROMTRD standard includes all open roads and open motorized trails within the Targhee portion of each BMU subunit. This is consistent with the criteria established in the Interagency Grizzly Bear Committee's Task Force Report on Grizzly Bear/Motorized Access Management. MO

COMMENTS: Do not allow comparison numbers for road density calculations to include two tracks, motorized trail and motorized cross-country use.

658

RESPONSE: For road and trail density calculations, the Forest used the criteria established in the Interagency Grizzly Bear Committee's Task Force Report on Grizzly Bear/Motorized Access Management and the Grizzly Bear Cumulative Effects Model which includes two-tracks, motorized trails, and motorized cross-country use. MO

COMMENTS: Expand the FEIS to consider more than the grizzly bear when increasing road densities and reduction of cover.

1446

RESPONSE: The DEIS and the FEIS incorporated road and cover analysis for other management indicator species, where it was appropriate to do so. MO

GRIZZLY BEAR - ADMINISTRATION

Goals/Objectives

COMMENTS: DFPR III-11, Goals - Grizzly Bear Habitat: Rewrite Goal #1 as follows: "Habitat conditions will conserve and sustain a recovered population of Grizzly Bear in Greater Yellowstone Ecosystem and Targhee Forest."

1446

GRIZZLY BEAR - ADMINISTRATION

RESPONSE: This change was not incorporated into the Final Revised Plan. The existing goal provides the same direction which is to provide habitat for a recovered population of grizzly bears. JR

COMMENTS: DFP, Designated Wilderness Page III-57 to 65: Include a goal to maintain grizzly bear habitat for a viable population of bears.

389

RESPONSE: Designated Wilderness contributes towards grizzly bear habitat, and the analysis for the Revised Plan takes this into account. However, a recovered bear population will use more areas than just designated wilderness. Therefore, it is not appropriate to include this recommendation. MO

COMMENTS: Rewrite objective I to read: "Meet or exceed recovery criteria in the Grizzly Bear Recovery Plan"; rewrite Objective III to read: "Provide Safe, secure release sites for relocation of nuisance bears;" rewrite Objective IV to read: "Implement road density standards in the BMU's within one year of the signing of the ROD in coordination with Federal and State Wildlife Agencies."

1446

RESPONSE: These changes were not incorporated in the Final Revised Plan. Objectives 1 and 3, as written, meet the same purpose as the suggested wording. Objective 4 provides 3 years to completely implement the road density standards in grizzly bear areas, because of the magnitude of this job. The closure will be implemented immediately upon signing the ROD by signing. However, road obliteration and/or gates or other effective closure devices will not be completed within one year because of cost. JR

COMMENTS: Objective VII: Include wording which provides for CEM Thresholds model used to access cumulative impacts.

643

RESPONSE: The CEM is an analysis tool, which is still being validated and tested. It is not appropriate to include it in an objective but the Forest used the CEM in the analysis of the alternatives for the EIS. MO

COMMENTS: Include a more thorough discussion of grizzly bear recovery challenges in Goals and Objectives.

727

RESPONSE: After consideration, the Forest decided the appropriate place to discuss recovery challenges is in the Grizzly Bear Recovery Plan. MO

Core Areas

COMMENTS: Support "Grizzly Bear Core Areas"; protect and identify them by using Management Prescription 5.3.5 or the Plateau Prescription; do not allow motorized disturbance.

643, 658, 690, 719, 1381

GRIZZLY BEAR - ADMINISTRATION

Identify core areas using BMUs stating the areas it will connect with or lie adjacent to.

1273b

Change Management Prescription 5.3.5 to designate core areas as true refuges for Grizzly Bears.

644, 690

RESPONSE: In the Revised Plan, the following management prescriptions meet core area criteria: 1.1.6, 1.1.7, 1.3, 2.3, 2.6.2, 2.6.5, and 3.1.2. Management prescription 5.3.5 is not a core area for grizzly bears. The FEIS and the Biological Assessment for grizzly bears document the amount of core area within each BMU for each alternative. MO

COMMENTS: Change the third paragraph in Forest Acres within Core Areas. This section should reflect the goal to meet all of the core area standards due to the lack of past management.

1446

Expand core areas for protection of Grizzly Bears.

631, 643, 1387

RESPONSE: In the Revised Plan, the following management prescriptions meet core area criteria: 1.1.6, 1.1.7, 1.3, 2.3, 2.6.2, 2.6.5, and 3.1.2. The FEIS and the Biological Assessment for grizzly bears document the amount of core area within each BMU for each alternative. At this time, there is no completed research or analysis which answers the question of how much core area is needed. When they are completed, the Targhee will evaluate conditions to see if more or fewer core areas are needed. MO

COMMENTS: Core areas should have "actual" road densities, not just Forest Service roads.

731, 1194, 1387, 1401

If research indicates core areas are to leave OROMTRD of 0.0 mi/sq.mi, then they must be restricted or prohibited.

1273b, 1361

RESPONSE: Core areas prohibit motorized access on any roads and trails during the non-denning period. MO

COMMENTS: Support management plans in core areas that remain inviolate for eleven years, with additional core areas secure in no less than two years.

643

RESPONSE: In the Revised Plan, the following management prescriptions meet core area criteria: 1.1.6, 1.1.7, 1.3, 2.3, 2.6.2, 2.6.5, and 3.1.2. These management prescriptions are in place for the 10 to 15 year duration of the Revised Plan. Where needed, additional security areas will be identified adjacent to areas where management activities are taking place. These security areas must be in place as long as the management activities are occurring. MO

GRIZZLY BEAR - ALTERNATIVES

(CROSS REFERENCE: Alternatives)

Alternative 2

COMMENTS: Support Alternative 2, because it places access as a higher priority than grizzly bears.

F-F(6), 98, 267, 717

RESPONSE: The Revised Plan provides a network of roads and trails open for public and use that provides good access to the Forest. However, reductions in road density were included to meet habitat requirements for a recovered population of grizzly bears. We have a legal responsibility to provide sufficient habitat to remove grizzly bears from threatened status.

Historical records show that grizzly bear populations survive where frequencies of contact with humans are low. Populations of grizzly bears and other large carnivores persist in those areas where large expanses of relatively secure habitat are retained and where human induced mortality is low. In the lower 48 conterminous states, this is primarily associated with National Parks, Wilderness areas and large blocks of public lands.

By managing motorized access on the landscape, the following grizzly bear management objectives can be met: minimize human interaction and potential grizzly bear mortality; minimize displacement from important habitats; minimize habituation to humans; provide relatively secure habitat where energetic requirements can be met.

The management of human use levels through access route management is one of the most powerful tools available to balance the needs of grizzly bears with the needs of humans. It is documented in several research projects, both completed and ongoing, that unregulated human access and development within grizzly bear habitat can contribute to increased bear mortality and affect bear use of existing habitat. MO/JR

Alternative 3M

COMMENTS: Support Alternative 3M because of its grizzly bear recovery measures including phasing out grazing and sheep allotments over a period of time and reflecting the needs of the 4 Endangered Species Act species on the Targhee.

11, 37, 40, 143, 181, 182, 193, 211, 314, 325, 340, 359, 370, 442, 625, 643, 658, 664, 695, 1273b, 1276, 1351, 1392

RESPONSE: Thank you. This is indeed one of the reasons why the Forest selected Alternative 3M. MO

COMMENTS: Oppose Alternative 3M because it either provides too much protection for grizzly bear or not enough.

6, 30, 47, 52, 53, 98, 170, 290, 311, 337, 343, 445, 481, 640, 690, 1176, 1389

RESPONSE: At this time, research is unable to define absolute levels of protection necessary for the grizzly bear. The range of alternatives in the Revised Plan provides a range of protection measures and is based on the best information and the best professional judgements available at this time.

GRIZZLY BEAR - ALTERNATIVES

The Revised Plan will meet grizzly recovery objectives and maintain habitat for a recovered population of bears. MO/JR

GRIZZLY BEAR - ANALYSIS PROCESS

DEIS

COMMENTS: DEIS indicates measuring viability of grizzly bear is inadequate and needs to reflect the court's refutation of this methodology; DEIS claims the Yellowstone grizzly population is increasing. Needs a reference for this.
1361, 1369

RESPONSE: The Revised Plan uses the criteria for grizzly bear recovery established in the 1993 Grizzly Bear Recovery Plan. Recovery plans are developed by the U.S. Fish and Wildlife Service. This recovery plan has been challenged in court, and if a court ruling results in changes to the recovery plan, the Forest will evaluate how the changes may affect the Targhee National Forest. The reference for the population data in the DEIS and FEIS is Dr. Chris Servheen, Grizzly Bear Recovery Coordinator, USDI Fish and Wildlife Service, 1995 and 1996. MO

COMMENTS: In Table IV-7 of the DEIS, total forested acres are broken down into categories. When was this data gathered? Why didn't this table follow the model of Table III-14 for comparison?
1273b

RESPONSE: The data in Table III-14 showed the existing condition for each of the BMUs. The data in Tables IV-7 through IV-10 compared how each BMU would change by alternative, compared to existing conditions. The existing conditions in Tables IV-7 through IV-10 are the same as the existing conditions for each BMU displayed in Table III-14. MO

EIS

COMMENTS: Expand the FEIS to consider more than the grizzly bear when increasing road densities and reduction of cover.
1446

RESPONSE: The Revised Plan includes analysis for 26 management indicator species. Where appropriate, road densities and cover analysis are done for more species than just the grizzly bear. MO

COMMENTS: Clarify the bar graph comparisons on grizzly bear management.
375

RESPONSE: The bar graph displays how open road and open motorized trail route densities change in each BMU for each alternative. Generally, open road and open motorized trail route densities are higher in Alternatives 1 and 2, and decline in each subsequent alternative, with Alternatives 5 and 6 having the lowest densities. MO

GRIZZLY BEAR - ANALYSIS PROCESS

COMMENTS: The DEIS needs more analysis, stricter Standards and Guidelines, better methods of science. It should abide by environmental laws. The EIS's measuring viability of grizzly bears is inadequate. Change this to reflect the courts' refutation of this methodology.

1361

RESPONSE: For the Revised Plan, the Forest used the newest version of the grizzly bear cumulative effects model. The Forest follows the Interagency Grizzly Bear Committee direction on motorized access management. All of the data for the cumulative effects model and motorized access includes all of the past timber harvesting, a complete inventory of all roads and trails (including system and nonsystem roads and trails), and an accounting of all human activities which could be identified.

The Revised Plan uses the criteria for grizzly bear recovery established in the 1993 Grizzly Bear Recovery Plan (recovery plans are developed by the U.S. Fish and Wildlife Service). This recovery plan has been challenged in court, and if a court ruling results in changes to the recovery plan, the Forest will evaluate how the changes may affect the Targhee. MO

COMMENTS: The DEIS needs to be concerned about ESA and domestic grazing and how phasing out sheep will polarize people against protecting grizzly bears.

1446

RESPONSE: The Forest is phasing out domestic sheep grazing within the grizzly bear BMUs on an opportunity basis. This action is specifically designed to help prevent polarizing the issue. A phase out can occur while achieving a recovered grizzly bear population. MO

COMMENTS: The DEIS/FEIS should include core and security areas to prevent timber harvesting in designated BMUs.

1446

RESPONSE: The following management prescriptions meet the criteria for core areas: 1.1.6, 1.1.7, 1.3, 2.3, 2.6.2, 2.6.5, and 3.1.2. No timber harvesting is allowed in these management prescriptions. Some timber harvesting may occur in management prescription 5.3.5, but must follow all of the standards and guidelines required in this management prescription. MO

Data

COMMENTS: Use the latest data on grizzly bear recovery in GYE; lack of baseline data would reduce effectiveness of grizzly bear management because relocating security areas would cause more damage; need scientific data to validate on an ecosystem scale whether or not insects and disease will have any significant negative impacts on the maintenance of grizzly habitat; redesign Management Situation Areas I, II, III to reflect the past ten (10) years of data on grizzly bear use.

176, 643, 1273b, 1381

GRIZZLY BEAR - ANALYSIS PROCESS

RESPONSE: For the Revised Plan, the Forest uses the newest version of the grizzly bear cumulative effects model. The Forest follows the Interagency Grizzly Bear Committee direction on motorized access management. All the data for the cumulative effects model and motorized access includes all the past timber harvesting, a complete inventory of all roads and trails (including system and nonsystem roads and trails), and an accounting of all human activities which could be identified.

The Revised Plan uses the criteria for grizzly bear recovery established in the 1993 Grizzly Bear Recovery Plan (recovery plans are developed by the U.S. Fish and Wildlife Service). This recovery plan has been challenged in court, and if a court ruling results in changes to the recovery plan, the Forest will evaluate how the changes may affect the Targhee National Forest.

The Forest is unaware of scientific data which validates, on an ecosystem scale, whether or not insects and disease will have any significant negative impacts on the maintenance of grizzly habitat.

In the Revised Plan, MS 1 areas remain as they are because these areas have the highest grizzly bear use; MS 2 areas become more like MS 1 areas to encourage increased grizzly bear use; and MS 3 areas remain as they are because of high human use and numerous developments. MO

COMMENTS: There is not enough data on whether or not there are any grizzly bear dens in the Plateau BMU.

1202

RESPONSE: Documented grizzly bear use in the Plateau BMU shows that such use is low, compared to other BMUs. Within the past few years, a few radio-collared grizzly bears were documented using the Plateau BMU. At this time, the Forest does not know how many bears may be denning in the Plateau BMU. MO

COMMENTS: Use best science available; use more research on trail access in grizzly habitat for impacts; need more baseline data to reduce the need for relocating security areas; use science gathered from Targhee or other similar forest when making grizzly bear decisions.

393, 667, 692, 1202, 1267

RESPONSE: For the Revised Plan, the Forest uses the newest version of the grizzly bear cumulative effects model. The Forest follows the Interagency Grizzly Bear Committee direction on motorized access management. All of the data for the cumulative effects model and motorized access include all the past timber harvesting, a complete inventory of all roads and trails (including system and nonsystem roads and trails), and an accounting of all human activities which could be identified.

The Revised Plan uses the criteria for grizzly bear recovery established in the 1993 Grizzly Bear Recovery Plan (recovery plans are developed by the U.S. Fish and Wildlife Service). This recovery plan has been challenged in court, and if a court ruling results in changes to the recovery plan, the Forest will evaluate how the changes may affect the Targhee National Forest. MO

GRIZZLY BEAR - ANALYSIS PROCESS

DFPR

COMMENTS: The Grizzly Bear Management issue is ill-conceived, misrepresented, and public input process is inadequate.

182

RESPONSE: The grizzly bear is listed as threatened under the authority of the Endangered Species Act. The Endangered Species Act was passed by Congress after much public input and debate. The Grizzly Bear Recovery Plan was developed by the U.S. Fish and Wildlife Service, after review and comment by the public. The Revised Plan for the Targhee National Forest is developed with full public input as required by the National Environmental Policy Act and the National Forest Management Act. MO

COMMENTS: Clarify the meaning of 7,000 acres of undisturbed habitat next to timber sales; clearcut size of 40 acres or less does not benefit grizzly bear telemetry work.

625, 1364, 1369

RESPONSE: The conditions of the 7,000 acre security areas are defined in Management Prescription 5.3.5. There is no requirement for clearcut sizes of 40 acres or less. MO

COMMENTS: The DFPR needs to clarify the following statement: "Activities will not occur when grizzly bears are active."

643, 1273b

RESPONSE: This wording appears in Management Prescriptions 2.6.2 and 2.6.5. The standards and guidelines in these management prescriptions identify what activities are permitted and under what conditions. MO

COMMENTS: The DFPR needs to include sufficient standards to ensure protection of grizzly bears.

1365

RESPONSE: The Revised Plan contains all of the goals, objectives, standards, and guidelines which are necessary to meet recovery goals which have been established for the grizzly bear population in the Yellowstone Grizzly Bear Recovery Zone. MO

COMMENTS: Include 1995 data on high grizzly mortality rates in the DFPR.

690, 1381

Amend the statement under Grizzly Bear Management, "All demographic recovery targets are currently being met" to reflect new data on recovery in Greater Yellowstone Ecosystem.

643, 690, 1381

RESPONSE: The Revised Plan and FEIS contain the 1996 data, the most current data available (published or officially approved and released for use). MO

GRIZZLY BEAR - ANALYSIS PROCESS

COMMENTS: The DFPR did not include requirements for food storage methods, monitoring bear activity and domestic grazing.

1277

The DFPR needs to include garbage storage requirements, including a definition of: "A minimum of 10' off the ground and 4 feet from any vertical supporting structure."

389, 643

RESPONSE: Food and garbage storage requirements are covered in a special order which has been in existence for several years. There is no need to repeat this special order in the Revised Plan.

The Revised Plan contains several monitoring items relating to grizzly bear habitat, including monitoring road closure effectiveness, achievement of road density standards, and grizzly bear habitat improvement. The Forest will continue to cooperate in the reporting of grizzly bear observations, especially for female grizzly bears with cubs.

The Revised Plan contains direction to phase out domestic sheep grazing in all BMUs. Existing cattle grazing allotments are allowed to remain, but specific standards and guidelines must be followed. MO

COMMENTS: Prescription 2.6 Map 10 lists 2.6.3 as Grizzly Bear - Plateau BMU - Security Area. The Plan should include 2.6.2 or 2.6.3 in this map. Include the reason for designating 2.6.5 as Grizzly Bear Security Area.

1277

RESPONSE: The Revised Plan includes Management Prescription 2.6.2 in the Plateau BMU. Management Prescription 2.6.5 was developed to meet the unique management conditions which exist in the Bechler/Teton BMU. Management Prescription 2.6.3 is not used in the Revised Plan. Analysis indicates that the combination of management prescriptions used in the grizzly bear BMU's improves habitat conditions sufficient to meet recovery plan goals for the grizzly bear in the Yellowstone Grizzly Bear Recovery Zone. MO

DFPR - Security

COMMENTS: Access management and security concerns for grizzly bear are directly related. The Targhee National Forest needs to provide greater security for Grizzly Bears.

667, 697

RESPONSE: The Forest agrees that access management and security concerns are directly related. In the Revised Plan, TMARD and OROMTRD are reduced in all of the BMUs to provide better security for the grizzly bear. Cross-country motorized travel is nearly eliminated in all BMUs. Every BMU has core areas which do not allow any motorized access at all. Adequate security will be provided for the grizzly bear when the Revised Plan is fully implemented. MO

COMMENTS: The DFPR fails to consider the large amount of management activities in security areas.

1273b

GRIZZLY BEAR - ANALYSIS PROCESS

RESPONSE: All linear features (roads and trails), all point activities (developed sites, concentrated use areas, and so forth), all dispersed activities (grazing, general recreation use, and so forth) are mapped for all BMUs. All this data is part of the cumulative effects model, which is used to analyze the effects of the existing condition and all alternatives. MO

COMMENTS: Define security areas and whether these areas receive high levels of logging/road building under the current Forest Plan.

1273b

RESPONSE: The Revised Plan identifies the following management prescriptions as meeting core area criteria: 1.1.6, 1.1.7, 1.3, 2.6.2, 2.6.5, 2.3, and 3.1.2. These management prescriptions constitute security areas for the grizzly bear. No logging or road building are allowed in these management prescriptions. Security areas are defined in prescription 5.3.5. MO

COMMENTS: The DFPR III-136 (5.3.5. Grizzly Bear Habitat) needs to consider changing the maximum opening size to accurately reflect security needs of the grizzly bear.

643

RESPONSE: The Final Revised Plan adequately addresses grizzly security. No research shows a particular opening size is needed. The relative importance of cover to grizzly bears is documented by Blanchard (1978) in a 4-year study in the Yellowstone ecosystem. Ninety percent of 2,261 aerial radio relocations of 46 instrumented grizzly bears were in forest cover too dense for observation. Whether grizzly bears use forest cover because of an innate preference or to avoid humans is unknown (Blanchard 1978). The importance of an interspersed open parks as feeding sites associated with cover is also recorded in Blanchard's study: "Only 1 percent of the relocations were in dense forest more than a kilometer from an opening."

Forest cover is important to grizzly bears for use as beds. Most beds are found less than a yard or two from a tree (Servheen and Lee 1979, Blanchard 1978). Blanchard further records only 16 of 233 beds observed (6.7 percent) were without immediate cover. Schallenberger and Jonkel (1980) found grizzly bears preferred forest in over 80 percent of their radio relocations.

There is no research documenting requirements for the distribution, quantity or quality of cover on a "landscape" scale or within grizzly bear home range. Changes in the distribution and quantity and quality of cover are not necessarily detrimental to grizzly bears. At the September 19-21, 1993, symposium on "The Ecological Implications of Fire in Greater Yellowstone - Second Biennial Conference on the Greater Yellowstone Ecosystem," the Interagency Grizzly Bear Study Team presented a paper titled "Effects of Wildfire on Grizzly Bear Movements and Habitat Use" where they state:

"On the average, grizzly bears used burned habitats in proportion to their availability within individual annual ranges during 1989-1992. Seasonal indices of movement and annual range sizes of cohorts are not statistically different from the 1975-1987 averages."

The grizzly bear cumulative effects model was recently used to assess and compare the habitat quality in some female home ranges prior to and following the 1988 wildfires in Yellowstone National Park. This information was presented at a meeting held on the Forest on September 14, 1995, and is:

GRIZZLY BEAR - ANALYSIS PROCESS

	<u>Female 125</u>		<u>Female 126</u>	
	<u>Pre- fire</u>	<u>Post- fire</u>	<u>Pre- fire</u>	<u>Post- fire</u>
Vegetation Value	.28	.39	.24	.27
Habitat Value	.31	.40	.26	.30
Habitat Effectiveness	.23	.33	.21	.25

CC/JR

COMMENTS: DFPR needs to define what habitat improvements will be allowed and what specific activities are considered improvements.

1369

RESPONSE: The Revised Plan establishes the goals, objectives, standards and guidelines which provide direction for future site specific projects. It is not the place of forest plans to define or describe specific improvements or activities. This would be done in a site-specific NEPA analysis. MO

COMMENTS: DFPR III-89: Security area should encompass a minimum 7,000 acres and must be effective.

643

RESPONSE: This Management Prescription 2.6.5 is 19,975 acres in size and the only motorized access allowed is on two roads. This security area is very effective. MO

COMMENTS: Protection of grizzly bears leaving dens could be accomplished with site specific and time specific measures rather than disallowing any activities.

1389

RESPONSE: The Forest is in agreement. In the Revised Plan, the Forest removes the cross-country snowmachine closure date of April 1 in the BMU's, and adds the following standard: "Within grizzly bear BMUs, site specific restrictions on winter recreation activity (such as area closures, timing restrictions, and so forth) will be imposed to resolve human-grizzly bear conflicts."

COMMENTS: Recommend vegetative manipulation not be permitted regardless of pine-nut crop yield. It is a weak assumption that if there is a bad pine-nut crop, bears will not be there and contact with people will be minimized.

643, 1273b

RESPONSE: The Revised Plan has a guideline stating there will be no vegetation manipulation in whitebark pine areas in the fall, except in years of poor cone crops, in order to help avoid conflicts with bears in whitebark pine areas. MO

COMMENTS: Lack of baseline data reduces the effectiveness of grizzly bear management because relocating security areas causes more damage.

176

GRIZZLY BEAR - ANALYSIS PROCESS

RESPONSE: There are two kinds of security areas in the Revised Plan: permanent security areas and short term security areas associated with timber sale activities.

The permanent security areas are established by management prescription, and meet "core area" criteria as identified in the Interagency Grizzly Bear Committee Task Force Report on Grizzly Bear/Motorized Access Management. These management prescriptions are in place for the 10 to 15 year planning period of the Revised Plan. These management prescriptions include the following: 1.1.6, 1.1.7, 1.3, 2.3, 2.6.2, 2.6.5, and 3.1.2.

Short term security areas are established adjacent to active timber sale areas, and are in place for the duration of the timber sale activity. MO

GRIZZLY BEAR - BEAR MANAGEMENT UNITS

Support

COMMENTS: Protect grizzly BMUs by locating them in wilderness areas; prohibiting firearms, and prohibiting off-highway travel.

F-K(6), 393, 659, 692, 1239, 1273b, 1316, 1322, 1330, 1365, 1390

RESPONSE: The grizzly bear recovery zone includes more areas than just wilderness areas. Wilderness areas, by themselves, will not support a recovered grizzly bear population.

Prohibiting firearms is a drastic measure that would end all hunting within the BMUs. Data on the bear population indicates that it is increasing, so it is not necessary to prohibit firearms.

The Revised Plan closes nearly all of the BMUs to cross-country motorized travel. MO

COMMENTS: Do not convert from a cattle allotment to sheep allotments in BMU.
1446

RESPONSE: The Revised Plan contains such a standard to prohibit this from occurring. MO

COMMENTS: Incorporate into the grizzly bear management prescriptions: Recommend habitat effectiveness goals and provide a solid time line which will achieve grizzly bear habitat effectiveness.

643

RESPONSE: At this time, the cumulative effects model is not validated, and therefore there is no specific habitat effectiveness goal which can be established. MO

Non Support

COMMENTS: Do not support BMUs for grizzly bears because bears do not winter in them and they are just a backdoor to expand Yellowstone National Park. If you want to expand the park, you should put it to a vote.

285, 607, 728

GRIZZLY BEAR - BEAR MANAGEMENT UNITS

RESPONSE: Grizzly bears den within the BMUs. Grizzly bear BMUs are not a backdoor to expand Yellowstone National Park. They are based on year round habitat needed to sustain a subpopulation of bears. MO/JR

GRIZZLY BEAR - COMMITTEE GUIDELINES

Support Committee Guidelines

COMMENTS: Supports the use of the Interagency Grizzly Bear Committee Guidelines including the use of Situation I, II, and III. Implement Situation I under the Biological Elements Sections. Put the IGBC Guidelines under Grizzly Habitat Standards and Guidelines.

F-D(51), F-F(6), 135, 267, 293, 323, 346, 367, 374, 381, 385, 386, 389, 393, 404, 413, 473, 474, 476, 481, 495, 524, 628, 643, 1187, 1202, 1273b

RESPONSE: The Revised Plan incorporates the Interagency Grizzly Bear Guidelines in the management prescriptions which are within the grizzly bear recovery zone. This direction is not repeated in the Revised Plan. MO

Address Changing Habitat Needs

COMMENTS: On Pages II-3, 4, and 5 Needs for Change of the IGBC Guidelines: Delete the last paragraph and replace with the following: "The provisions of the ESA have not yet changed since the Plan was put into effect in 1985. However, the understanding of the habitat needs of the listed species, in particular the grizzly bear, changed management on a large portion of the Forest. New information, accumulated over the last ten (10) years, provides new insight and direction regarding effective management access, vegetation manipulation, and human activities in grizzly bear habitat."

This change will alleviate the need for discussion of why Alternative 1 does not fully comply with the 1985 FP or Guidelines direction for timber management in Situation 1-2 grizzly bear habitat.

1446

RESPONSE: The wording in Section VII was changed as you suggested. JR

COMMENTS: Specify an adaptive approach to the response to habitat change in the IGBC Team Guide; add monitoring.

297, 697

RESPONSE: The Forest concurs that adaptive management and monitoring are important parts of the Revised Plan. Refer to the Monitoring and Evaluation section for grizzly bears for more information. MO

COMMENTS: Explain when/why the IGBC discarded the habitat system on page II-17 and why this approach is not accepted by today's scientific community.

228

RESPONSE: The Interagency Grizzly Bear Guidelines have not been officially discarded. Areas within the recovery zone are managed in accordance with Management Situation 1 Guidelines, thereby doing away with designations of

GRIZZLY BEAR - COMMITTEE GUIDELINES

Management Situation 2. Within the grizzly bear recovery zone, grizzly/human conflict minimization and grizzly bear habitat management receives the highest management priorities. Management decisions favor the needs of the grizzly bear population when grizzly habitat and other land uses cannot be made compatible. Occasionally individual grizzly bears might be removed or relocated when conflicts occur. This is only done according to the nuisance bear guidelines and when the action will not threaten the population.

Developed areas are managed in accordance with Management Situation 3 Guidelines. In developed areas where human presence results in conditions which make grizzly presence untenable for humans and/or grizzlies, grizzly bear presence and factors contributing to their presence are actively discouraged. Grizzlies frequenting such developments are managed according to nuisance bear guidelines. MO

Oppose Committee Guidelines

COMMENTS: Oppose the use of the Interagency Grizzly Bear Committee Guidelines because of the restrictions and closed door approach and because people should be considered, not just threatened and endangered species.

608, 648, 702, 1202

The decision to move bears to zoos should be transferred to a committee of citizens at risk by the bears rather than IGBC.

275

RESPONSE: The Forest must follow laws and regulations contained in the Endangered Species Act, The National Forest Management Act, and other acts, manuals and handbooks pertaining to the management of National Forests. The only human related activity that will be completely eliminated within the grizzly bear recovery zone is domestic sheep grazing (the domestic sheep grazing will be phased out over time). Other human activities are allowed to occur within the grizzly bear recovery zone, but they must follow specific standards and guidelines as outlined in the Revised Plan. Removal of the bears to zoos or any other location is under the direction of the Fish and Wildlife Service. MO

GRIZZLY BEAR - GENERAL

Non Support

COMMENTS: Oppose grizzly bear management efforts because it should not have priority over any other issue including human needs, grazing, rights, and economic needs of small communities; oppose expansion of grizzly population; too many bears, too many conflicts.

12, 24, 34, 42, 219, 285, 298, 311, 341, 344, 346, 388, 393, 431, 432, 450, 525, 607, 608, 665, 720, 1202, 1242, 1259, 1354, 1358, 1390, 1395

Public lands should be managed for public needs, not primarily for grizzly bears, therefore management guidelines should be followed without "politics."

F-F(6), 242, 292

Handicapped people do not want to encounter a grizzly in the forest.

446

GRIZZLY BEAR - GENERAL

RESPONSE: The Forest must obey laws and regulations contained in the Endangered Species Act and National Forest Management Act pertaining to threatened and endangered species, which includes the grizzly bear. The only human activity that will be completely eliminated within the grizzly bear recovery zone is domestic sheep grazing which will be phased out over time. Other human activities are allowed to occur within the grizzly bear recovery zone, but they must follow specific standards and guidelines as outlined in the Revised Plan. Information is available at Forest Service offices about how to safely coexist with the grizzly bear, with a minimum of conflict.
MO/AM

Support

COMMENTS: Expand management plans and management situation lines to accommodate growing bear populations and their use of the Forest; ensure grizzly bears remain a part of our ecosystem and heritage; management of grizzly should have priority over other human activities including logging, recreation and grazing; management of grizzly bears is necessary for viable populations; protect grizzlies even in conflict with humans because they deserve a chance to live.

49, 179, 226, 293, 464, 468, 519, 615, 662, 694, 1194, 1273b

RESPONSE: The Revised Plan does not expand the grizzly bear recovery zone. The Revised Plan gives grizzly bears and grizzly bear habitat management emphasis within the recovery zone. All human activities within the recovery zone must follow standards and guidelines developed to protect the grizzly bear population and maintain or improve grizzly bear habitat. MO

COMMENTS: The Forest Service should consult with the U.S. Fish and Wildlife Service on all of the allotments within Grizzly Bear Recovery Zone.

1269, 1446

RESPONSE: The Forest formally and informally consults with the U.S. Fish and Wildlife Service on all of the provisions of the Revised Plan, including the livestock grazing standards and guidelines within and without Grizzly Bear Recovery Zones. MO

Miscellaneous

COMMENTS: The Forest Service should maintain existing carnivore movement between existing ecosystem until completion of the five year evaluation process.

1273b

RESPONSE: The 1993 Grizzly Bear Recovery Plan identified the need to assess the potential of linkage zones between the different grizzly bear recovery areas. At this time, little is known about the potential for linkage zones. The linkage zone assessment for the Centennial Mountains is not done. While the assessments are being done, the Recovery Plan suggests the following management considerations:

"Future land management activities within these areas may be critical to maintaining their utility as linkage zones. It is essential that

GRIZZLY BEAR - GENERAL

existing options for carnivore movement between existing ecosystems be maintained while the evaluation of linkage zones is underway. Management strategies that limit human-induced mortality and address access management will facilitate the maintenance of the potential of these zones during the 5-year evaluation period. On public lands, management prescriptions similar to big game summer range prescriptions that address access management would likely conserve any existing potential of these areas for linkage until completion of the 5-year evaluation process."

"Connectivity between the Yellowstone Grizzly Bear Ecosystem and other grizzly ecosystems is not likely to be realized in the near future because of the distance to other ecosystems and the intervening human development and alteration of landscape. Therefore, the recovery plan recommends that one grizzly be placed into the ecosystem from an outside population every ten years as an effort to maintain the genetic health of the population."

The Revised Plan incorporates these management considerations by reducing motorized access throughout the Centennial Mountains and in other possible linkage zones, and by using management prescriptions which improve or maintain big game habitat. MO

COMMENTS: Need to carry firearms in grizzly bear country, especially when leading young people, to scare grizzlies away. Need alternatives to cover head and protect vital organs.

FS-6

RESPONSE: Firearms are allowed on National Forest lands. It is lawful to protect yourself from a grizzly bear attack. Within the grizzly bear recovery zone, there are regulations which require people to store their food so as not to attract grizzly bears. MO

COMMENTS: Base grizzly bear management on the best science available.
393, 692, 1267

RESPONSE: For the Revised Plan, the Forest used the research conducted on grizzly bears in the Yellowstone ecosystem and the grizzly bear cumulative effects model to analyze habitat conditions. This is considered as some of the best science available. MO

COMMENTS: Removal of carcass or complete incineration is only alternative to prevent a bear from using the carcass.
389

RESPONSE: The Forest allows the use of explosives to "remove" the carcass of a dead animal so it does not attract a grizzly bear. MO

COMMENTS: Recommend restricting toxicants because they may violate the "Endangered Species Act" for such as the grizzly bear.
389

RESPONSE: All chemicals used on the Forest must be approved prior to their use through site-specific project analysis. This analysis ensures that the Endangered Species Act is not violated. MO

GRIZZLY BEAR - GENERAL

COMMENTS: Grizzly bear populations have increased and are now found in range that has not been occupied for many decades.

1188, 1363

RESPONSE: Research on the Yellowstone grizzly bear population indicates that the population is increasing between two to five percent per year. MO

COMMENTS: Concerned about recreational and environmental impacts that "buffer areas" have.

694

RESPONSE: We are not clear what "buffer" areas are being referred to. The grizzly habitat management strategy implemented in the Final Revised Plan addresses grizzly habitat needs within the Recovery Area that has been in place for many years. JR

COMMENTS: The Fish and Wildlife Service must administer the Endangered Species Act as well as work with numerous other Federal environmental laws. The lawsuit regarding grizzly bears will be resolved pending the outcome of the Targhee Plan. The Forest Service is writing the biological assessment and then the USFWS will respond.

314

RESPONSE: The Forest agrees. MO

GRIZZLY BEAR - MONITORING

COMMENTS: The Forest should monitor people driving through fences/gates on closed roads; install and monitor proper closure devices for effective security for grizzly bears.

175, 667

RESPONSE: The Revised Plan establishes motorized access as a number one monitoring priority. The Plan provides direction to make road closures and restrictions effective, so that people do not drive around them. MO

Maps/Signs/Education

COMMENTS: Provide brochures, posters and educational efforts at trailheads, campsites and areas open for travel in grizzly bear country; establish a timeline for grizzly bear education program. (CROSS REFERENCE: Recreation)

643

RESPONSE: The Revised Plan contains a guideline on grizzly bear education, focusing efforts on residents in residential and summer home areas, developed recreation site users, wilderness users, hunters, outfitters and guides, and permittees. The grizzly bear education program is continuous, therefore, no timeline is established. MO

GRIZZLY BEAR - MONITORING

Time Lines

COMMENTS: Recommend a time specific plan that describes the prioritization scheme for implementing the road closure program for grizzly bears; plan a schedule for closing sheep allotments; identify the sheep allotments that have the most potential for livestock/grizzly interactions within one year and address in Objective 9 to discontinue livestock grazing in grizzly bear habitat.

643, 1273b, 1277

RESPONSE: The Revised Plan has an objective to implement the TMARD and OROMTRD within three years in the grizzly bear BMU's. The Revised Plan directs the phasing out of domestic sheep allotments in the grizzly bear BMU's, but no time line to accomplish this is established because the phase out is on an opportunity basis. MO

Implementation

COMMENTS: Support management activities in core areas to remain inviolate for 11 years; secure additional core areas for no less than two years.

643

RESPONSE: The following management prescriptions meet core area criteria, and are designed to be in place for the entire 10 to 15 year period of the Revised Plan: 1.1.6, 1.1.7, 1.3, 2.3, 2.6.2, 2.6.5, and 3.1.2. MO

GRIZZLY BEAR - POLITICS

COMMENTS: The government should not manage for the grizzly bear; oppose reintroduction efforts to Central Idaho and Island Park areas; Congressional legislation was not intended to favor grizzly bear over people.

5, 12, 467, 469, 688

RESPONSE: The Forest is obeying laws and regulations pertaining to the Endangered Species Act and the National Forest Management Act. MO

GRIZZLY BEAR - PRESCRIPTIONS

COMMENTS: Include a contingency standard management prescription that addresses grizzly bears using areas outside of BMU's and to allow Forest Service personnel to verify bear sightings.

643

RESPONSE: Grizzly bears outside the BMU's are protected under authority of the Endangered Species Act. Management currently follows the Interagency Grizzly Bear Guidelines. The Interagency Grizzly Bear Committee is working on a conservation strategy which will further address the management of grizzly bears outside of the recovery zone.

Current policy provides for Forest Service personnel to provide information on grizzly sightings. MO/JR

GRIZZLY BEAR - PRESCRIPTIONS

Management Prescription 5.3.5

COMMENTS: Change Prescription 5.3.5 to designate core areas as a true refuge for grizzly bears.

644, 690

RESPONSE: Management prescription 5.3.5 is not a core area. Other management prescriptions (1.1.6, 1.1.7, 1.3, 2.3, 2.6.2, 2.6.5, 3.1.2) meet core area criteria for the grizzly bear. MO

COMMENTS: Prescription 5.3.5 is not listed on Map; 1.1.1 prescription with 10,000 acres - where are they? There is also inconsistency which needs fixing where the same item is identified as a standard in one place and a guideline in another.

314

RESPONSE: Management prescription 5.3.5 only occurred on Map 10 (Alternative 3M) in the Draft Plan. Your reference to prescription 1.1.1 is listed in the prescription table for the Madison subsection. This is an error. Prescription 1.1.1 is not used in alternative 3M. Thank you for pointing this out. We have searched out inconsistencies to correct them in the Final Revised Plan. MO

COMMENTS: Explain in Management Prescription 5.3.5 Grizzly Bear Habitat if map 29 indicates where cattle grazing is allowed.

695

RESPONSE: It is not necessary to explain in Management Prescription 5.3.5 that map 29 indicates where cattle grazing is allowed. MO

Management Prescription 2.6.X Series

COMMENTS: DFPR III-86: The area covered by Management Prescription 2.6.1(a) serves as a critical corridor for grizzly bears. While lands are not in the suitable timber base and will not contribute toward the ASQ, there is potential for timber harvest under ecosystem management. This must be clearly addressed in the management prescription. Timber Sale Contract for DFPR III-122 management prescriptions include mitigations such as those described in Forest Service Regulations CT6.25.

643

RESPONSE: In the Final Revised Plan, a limit of twenty million board feet per decade has been placed on harvest opportunities that occur on unsuited lands. All unscheduled timber harvest must follow forestwide standards and guidelines, and management prescription direction and standards and guidelines. There will also be site-specific NEPA analysis, and informal or formal consultation with the U.S. Fish and Wildlife Service. MO

COMMENTS: Regarding Prescription 2.6.5: Mountain biking and other mechanized travel should be discouraged in core areas; create a standard that there will be no construction of temporary roads; begin the reclamation of all roads within one year of signing of the ROD and make this a standard; allow

GRIZZLY BEAR - PRESCRIPTIONS

outfitter and guide permits only if the activities are compatible with core areas.

1446

RESPONSE: There is no data to suggest that mountain biking or other nonmotorized mechanized travel causes any more impact than walking, hunting, or horse travel.

The standard for the roads prescription says: "Construct no new roads." This means any type of road, including permanent or temporary. The Revised Plan objective for closing and obliterating roads in the BMU's is to accomplish this work within three years of implementation of the ROD. The three-year time period recognizes the large amount of work and cost that will be involved and budget limitations.

Existing outfitter and guide permits are allowed, but no new outfitter and guide permits are allowed. There have been no grizzly bear conflicts with the existing permittees. MO

COMMENTS: Favor Prescription 2.6.X series for grizzly habitat rather than 5.3.5.

695

RESPONSE: The Forest analysis indicates that the combination of management prescriptions in the grizzly bear BMU's will provide the necessary habitat conditions for bear occupancy and use. MO

COMMENTS: Revise the Management Prescription for BMU's south of Robinson Creek 5.3.6. In order to emphasize "a high degree of security and resource conditions which contribute toward the conservation and recovery of the grizzly bear, and benefits to other wildlife." Emphasize a high degree of security and resource conditions which contribute toward the conservation and recovery of the grizzly bear, and benefits to other wildlife, while providing some timber harvest opportunities for local businesses and individuals. (The second paragraph is the same as the second paragraph in MP 5.3.5). The third paragraph should be modified to read as follows:

The abundance and distribution of natural food sources (such as huckleberry habitats, whitebark pine, etc.) are maintained or improved by natural events such as fire and insect disturbances. A variety of forest successional stages are present due to restraint from human interference with natural events and disturbances. Habitat conditions which contribute to the movement of bears to adjacent bear management units are maintained. Human activities are managed so that human conflicts with grizzlies are unlikely; this includes increased public education on grizzly bear, elk and other wildlife species dependent on similar habitat needs. Motorized access is reduced to protect other resource needs. Objectives: Same as 5.3.5. Standards and Guidelines: Same as in 5.3.5, but with the changes noted below.

Under the subsection that discusses "Insects & Disease," there is no scientific validity to the assumption that, on an ecosystem scale, insects and disease will have any significant negative impacts on the maintenance of grizzly habitat. The negative tone and word selection only contributes to the unsubstantiated claims that a forest that has insects and disease is "unhealthy". This unfounded bias will ultimately lead to inappropriate timber harvest such as we have seen on the Targhee in the past. Timber harvest and

GRIZZLY BEAR - PRESCRIPTIONS

its accompanying roading are the causes of grizzly bear impacts on the Forest, not insects and disease. The last phrase of this Guideline which reads "...unless this conflicts with the maintenance of grizzly bear habitat" needs to be deleted.

Wildlife: Maintain snag habitat at >60 percent of the biological potential for woodpeckers. (Convert this stipulation from a Guideline to a Standard).

Number, Size and Location - Change to the following: Security areas will encompass a minimum of 7,000 acres, contain no roads, be devoid of major human activities, and contain seasonal habitat components important to grizzly bears. They will be distributed across a landscape so as to function as a network, rather than merely isolated "islands". (S)

The Standard for "Number, size and location" of activity areas with its requirement that areas shall not exceed 7,000 acres in size seems to be in conflict with the Guideline that addresses EA analysis areas. That guideline requires that analysis areas are suppose to be "at least 7,000 acres in size."

Paragraph 1 on Page III-134, change "should" to "will" and make this a Standard. Paragraph 2, Page III-134, add the following sentence and make this a Standard. "No more than one entry into an area per decade, not to exceed three years in duration."

Forest Use and Occupation: Access(S). Same as MP 5.3.5 except System roads 804, 383, 254 from its junction with road 656 to where it ends, and 267 would be closed. Roads

No new roads for any management activity will be constructed unless an equal or greater number of miles of existing roads are identified for obliteration, and obliterated at least two years prior to new road construction. New road construction will comply with the following requirements: (S)

The four road requirements will remain the same as noted on Page III-134 and III-135.

Recreation. Trails - New or relocated trails will meet the following: 1. Avoid high quality grizzly bear habitat. (S)

Sanitation - Human activity sites will be kept clean of all potential grizzly bear attractants. This includes human food, garbage, horse pellets, dog food and waste. Reasonable standards for front country and backcountry sanitation will be applied throughout the BMU's (S).

Production of Natural Resources. Timber.

The minimum cover standard is 50%, including a minimum 20% hiding cover, 20% thermal cover, and an additional 10% hiding or thermal cover. Hiding cover is defined as the ability to hide 90% of a grizzly bear at 200 feet. Thermal cover is defined as trees at least 40 feet tall, with a closed canopy of at least 70%. The documents include more detailed definitions. Furthermore, cover will not be considered effective unless they are at least 4 to 8 sight distances across (4 to 8 times the maximum distance one can spot a bear or other animal). In areas in or adjacent to riparian areas, the minimum standard is 6 to 8 sight distances. (S)

Maximum distances to security cover will be at least 150 feet, based on the FWS Biological Opinion. (S). New, created openings shall not exceed 1.6 acres in size, and no existing openings greater than 1.6 acres in size shall be enlarged. No new created openings are allowed adjacent to existing openings (including meadows and created openings). Size restriction

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of new openings ensures there will be no further loss of habitat available to grizzlies for foraging. (S)

Group selection or individual tree selection harvest methods will be the preferred silvicultural technique. No sale shall exceed 50 MBF. Sales will only be offered to qualified small businesses with fewer than 20 employees. (S)

Security cover is defined as forested acres (all tree species) which have not been managed or burned in the last 40 years. (S)

No activity is permitted for the purposes of maintaining natural openings. (S)

There will be no vegetation management in riparian areas or in whitebark pine areas. (S)

Dead and Down Component - all tops and limbs resulting from timber harvest will be scattered in the immediate vicinity of harvested trees. (S)

Security areas must provide the following conditions:(S) 1. No change. 2. No change. 3. No timber harvesting activity or similar type of disturbance activity can occur within the security area during the time it is designated as a security area. The minimum length of time that an area will be designated as a security area will be ten years.

643

RESPONSE: The Forest considered all of the above recommendations, but decided that the combination of management prescriptions applied in the Revised Plan for the lands south of Robinson Creek provide for grizzly bear occupancy and use to achieve the objectives of the grizzly bear recovery plan.

The Fish and Wildlife Service covered this in their Biological Opinion on the Revised Forest Plan. MO/JR

GRIZZLY BEAR - RANGE/HABITAT

COMMENTS: Support phasing out sheep allotments to improve grizzly habitat; prohibit grazing in high quality food production areas.

1185, 1273b, 1331

Oppose phasing out sheep allotments and grazing to improve grizzly habitat.

404, 1188, 1354, 1363,

RESPONSE: The Targhee has a well documented history of grizzly bear and domestic sheep incidents. All of the domestic sheep allotments in Management Situation 1 habitat are already closed. The remaining domestic sheep allotments, which are in Management Situation 2 habitat, are to be phased out on an opportunity basis in the Revised Plan. The Forest chose the phase out because these allotments have not had grizzly bear/sheep incidents, or the number of incidents have been few, and no grizzly bears have been harmed or killed. MO

COMMENTS: Grazing permits should include specific language that assures guidelines for minimizing grizzly bear/livestock conflicts.

389

GRIZZLY BEAR - RANGE/HABITAT

RESPONSE: All grazing permits within the grizzly bear recovery zone have specific direction for minimizing and responding to grizzly bear/livestock conflicts. MO

COMMENTS: Reduce the maximum distance to security cover for grizzly bear from 300 feet to 150 feet. Stated amount is twice the recommended amount.
643

RESPONSE: There is no data available which establishes the amount of distribution, or the size of cover for grizzly bears on a landscape basis. The guideline in the Revised Plan follows what limited research is available, but allows for site-specific considerations, such as for natural patch sizes and other ecosystem management needs. MO

COMMENTS: Riparian, wetland, and stream areas (on Targhee National Forest) should be preserved and dedicated as grizzly bear sanctuary.
276, 1383

RESPONSE: These areas are managed according to direction contained in management prescription 2.8.3. This management direction will maintain or improve these areas for the grizzly bear as well as many other species which use these areas. MO

COMMENTS: Address habitat fragmentation not just road density limits in grizzly bear areas.
1368

RESPONSE: Based on this information the Revised Plan will not result in habitat fragmentation detrimental to grizzly recovery. In fact, the reduction in road density, combined with the standards and guidelines for vegetation management, will reduce any fragmentations which may exist presently.

There is no research which defines habitat fragmentation for grizzly bears. The following summary on food habits and cover illustrate that bears use a wide variety of habitats and have been able to respond to large changes in habitat conditions, such as the 1988 Yellowstone fires:

FOOD HABITS - GENERAL OVERVIEW (U.S. Fish & Wildlife Service 1993)-
The broad historic distribution of grizzly bears suggests adaptive flexibility in food habits of different populations. Although the digestive system of bears is essentially that of a carnivore, bears are successful omnivores, and in some areas may be almost entirely herbivorous. Although grizzly bears in many areas are almost entirely herbivorous, they are lacking in multiple stomachs and a caecum and are therefore unable to digest cellulose. Bears feed on animal or vegetable matter that is highly digestible and high in starch, sugars, protein, and stored fat.

Grizzly bears must avail themselves of foods rich in protein or carbohydrates in excess of maintenance requirements in order to survive denning and post-denning periods. Herbaceous plants are eaten as they emerge, when crude protein levels are highest. These levels decline rapidly in many plant species as the plants mature.

Grizzly bears are opportunistic feeders and will prey or scavenge on almost any available food including ground squirrels, ungulates, carrion, and garbage. In areas where animal matter is less available, roots, bulbs,

GRIZZLY BEAR - RANGE/HABITAT

tubers, fungi, and tree cambium may be important in meeting protein requirements. High quality foods such as berries, nuts, and fish are important in some areas.

The search for food has a prime influence on grizzly bear movements. Upon emergence from the den they seek the lower elevations, drainage bottoms, avalanche chutes, and ungulate winter ranges where their food requirements can be met. Throughout late spring and early summer they follow plant phenology back to higher elevations. In late summer and fall, there is a transition to fruit and nut sources, as well as herbaceous materials. This is a generalized pattern, however: bears are individuals trying to survive and will go where they can best meet their food requirements.

COVER - GENERAL OVERVIEW (U.S. Fish and Wildlife Service 1993) "The relative importance of cover to grizzly bears is documented by Blanchard (1978) in a 4-year study in the Yellowstone ecosystem. Ninety percent of 2,261 aerial radio relocations of 46 instrumented grizzly bears were in forest cover too dense to observe the bear. Whether grizzly bears use forest cover because of an innate preference or to avoid humans is unknown (Blanchard 1978). The importance of an interspersed open parks as feeding sites associated with cover is also recorded in Blanchard's study: 'Only 1 percent of the relocations were in dense forest more than a kilometer from an opening.'"

"Forest cover was found to be very important to grizzly bears for use as beds. Most beds were found less than a yard or two from a tree (Servheen and Lee 1979, Blanchard 1978). Blanchard further records only 16 of 233 beds observed (6.7 percent) were without immediate cover. Schallenberger and Jonkel (1980) found grizzly bears preferring forest in over 80 percent of their radio relocations."

There is no research documenting requirements for the distribution, quantity or quality of cover on a "landscape" scale or within grizzly bear home range. Changes in the distribution and quantity and quality of cover are not necessarily detrimental to grizzly bears. At the September 19-21, 1993, symposium on "The Ecological Implications of Fire in Greater Yellowstone - Second Biennial Conference on the Greater Yellowstone Ecosystem," the Interagency Grizzly Bear Study Team presented a paper titled "Effects of Wildfire on Grizzly Bear Movements and Habitat Use." The following is quoted from the abstract of the paper:

"On the average, grizzly bears used burned habitats in proportion to their availability within individual annual ranges during 1989-1992. Seasonal indices of movement and annual range sizes of cohorts are not statistically different from the 1975-1987 averages."

The grizzly bear cumulative effects model was recently used to assess and compare the habitat quality in some female home ranges prior to and following the 1988 wildfires in Yellowstone National Park. This information was presented at a meeting held on the Forest on September 14, 1995, and is presented below:

	<u>Female 125</u>		<u>Female 126</u>	
	<u>Pre-</u>	<u>Post-</u>	<u>Pre-</u>	<u>Post-</u>
	<u>fire</u>	<u>fire</u>	<u>fire</u>	<u>fire</u>
Vegetation Value	.28	.39	.24	.27
Habitat Value	.31	.40	.26	.30
Habitat Effectiveness	.23	.33	.21	.25

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Positive aspects of timber management include an increase in bear foods (such as forbs, berries, and grasses) in certain regions through vegetative manipulation (such as tree removal, riparian management, or prescribed burning). Timber management programs may negatively affect grizzly bears by removal of cover, displacement from habitat during the logging period, and increases in human/grizzly bear confrontation potential or disturbance factors as a result of road building and management. (U.S. Fish and Wildlife Service 1993) MO

GRIZZLY BEAR - SITE-SPECIFIC

Dubois District

COMMENTS: Support the proposal for Italian Peaks area to wilderness status to enhance grizzly habitat. (CROSS REFERENCE: Wilderness)
643, 1314

RESPONSE: Thank you for the support, however, Italian Peaks is outside the grizzly bear recovery zone, and is proposed as wilderness because of other factors, not the grizzly bear. MO

COMMENTS: Place a strong grizzly conservation emphasis at McGarrey Canyon, West Three Mile Creek, West Camas Creek, and Telephone Creek.
1348

RESPONSE: These areas are outside the grizzly bear recovery zone, and do not receive special emphasis for grizzly bear management in the Revised Plan. MO

Island Park District

Support

COMMENTS: Support proposal 2.6.1(a) in Two Top Roadless Area; support Grizzly Bear Management at Sawtell Peak, Carrot Canyon, Taylor Creek, Sheridan Creek and Table Mountain; upgrade Henry's Lake Mountains to non-motorized grizzly bear habitat; keep Lionhead free from encroachment by motorized vehicles.
362, 643, 695, 1185, 1348

RESPONSE: The Revised Plan incorporates these management recommendations. MO

COMMENTS: Address the need for bear-proof dumpsters in Island Park.
1276

RESPONSE: Bear-proof dumpsters in Island Park require the continued cooperation and involvement of state, county, and municipal governments, and the numerous private businesses and land owners. The Targhee National Forest will help and cooperate as much as possible. MO

Non Support

COMMENTS: Oppose closing any sheep allotments, both active and vacant to manage for grizzly bears; oppose grizzly bear management in Island Park

GRIZZLY BEAR - SITE-SPECIFIC

because grizzly bears will not go in designated areas of Cave Falls up to Old Faithful; strongly oppose expansion of grizzly bear populations in Area 61.

F-F(6), 267, 298, 413, 433, 466, 694

RESPONSE: The Revised Plan phases out all domestic sheep allotments within the grizzly bear recovery zone because of the well documented history of conflicts between grizzly bears and domestic sheep.

The area referred to from Cave Falls to Old Faithful applies to the Plateau BMU. This BMU has lower habitat values and documented use for grizzly bears than most other BMU's and lower documented grizzly bear use than most other BMU's. However, management will emphasize the grizzly bear for the next 10 years to evaluate grizzly bear occupancy and use of this area.

Area 61 refers to Idaho Department of Fish and Game, Game Management Unit 61. A portion of this game management unit is within the grizzly bear recovery zone, and grizzly bear management is emphasized in this portion. MO

COMMENTS: Oppose closing nine vacant sheep allotments on this district because these allotments are located on Situation 2 grizzly habitat which is poor grizzly habitat.

413

RESPONSE: The nine sheep allotments referred to are within the grizzly bear recovery zone of the Island Park Ranger District. There are also two sheep allotments on the Teton Basin Ranger District within the grizzly bear recovery zone. These 11 allotments are to be phased out on an opportunity basis in the Revised Plan. The reason they are being phased out is because of the well documented history of conflicts between grizzly bears and domestic sheep in Situation 1 habitat. As the grizzly bear population continues to expand, the Forest expects the same kinds of conflicts in Situation 2 habitat in the future. MO

Garns Mountain

COMMENTS: Make Garns Mountain a wilderness to ensure adequate grizzly habitat.

181

RESPONSE: Garns Mountain is outside the grizzly bear recovery zone, and management emphasis is not placed on the grizzly bear in this area of the Forest. MO

Jackpine Creek

COMMENTS: Supports retaining roadless character of the Jackpine Creek area for grizzly bear security.

1312

RESPONSE: The Jackpine Creek area is maintained as a roadless area in the Revised Plan. This area meets core area criteria as defined in the Interagency Grizzly Bear Committee Taskforce Report on Grizzly Bear/Motorized Access Management. MO

GRIZZLY BEAR-- SITE-SPECIFIC

Centennials

(CROSS REFERENCE: Centennials)

Support

COMMENTS: Support the Centennial Mountains as grizzly bear habitat.
136, 174, 175, 176, 180, 212, 278, 436, 1185, 1381

RESPONSE: The eastern portion of the Centennial Mountains is within the grizzly bear recovery zone for the Yellowstone Recovery Area, and in this portion, the grizzly bear receives management emphasis.

The western portion of the Centennial Mountains is identified for a study by the Interagency Grizzly Bear Team to assess the potential for a linkage zone or corridor to connect the Yellowstone area with central Idaho and northwestern Montana. As of this date, the study has not been done. MO

COMMENTS: Proposed timber sales should be reduced or eliminated in favor of less sensitive areas because timber activities including roads will not improve grizzly bear habitat and will cause fragmentation.
438, 690, 1360

RESPONSE: All timber harvesting in the portion of the Centennial Mountains within the Recovery Zone must follow the standards and guidelines in management prescription 5.3.5. These standards and guidelines are developed to maintain or improve grizzly bear habitat while allowing for some timber harvesting. The Revised Plan also reduces and establishes standards which cannot be exceeded for TMARD and OROMTRD in the Centennial Mountains. MO

COMMENTS: Eliminate grazing on the east end of the Centennials; grazing, in general, is a problem in the Centennials.
695, 1387

RESPONSE: The Revised Plan calls for phasing out all domestic sheep allotments within the grizzly bear recovery zone in the Centennial Mountains. Grazing, in general, is not a problem in the Centennials. MO

COMMENTS: The entire Centennial Mountain Range should be designated a "core" Grizzly Bear Management Area.
1387

RESPONSE: The Revised Plan establishes core areas within the grizzly bear recovery zone. However, it is not possible or necessary to make the entire Centennial Mountain Range a core area for grizzly bear management. MO

COMMENTS: The Centennials will need careful management to avoid conflicts between grizzly bears and people.
1348

RESPONSE: Within the grizzly bear recovery zone, grizzly bear management is emphasized to avoid conflicts between grizzly bears and people. MO

GRIZZLY BEAR - SITE-SPECIFIC

Non Support

COMMENTS: Do not consider the Centennials as grizzly bear habitat.
1314

RESPONSE: The eastern portion of the Centennials is within the Yellowstone grizzly bear recovery zone as established in the Grizzly Bear Recovery Plan.
MO

Corridors

COMMENTS: Preserve the Centennial Mountains as an important linkage and do not fragment by logging activities.

652, 690, 1387

Protect the Centennial Mountain Range and manage it in cooperation with adjoining public land managers with a long-term conservation strategy because it will encourage genetic diversity within grizzly bear populations.

690

The Centennial Range is a link to the Yellowstone Ecosystem as well as other large ecosystems in Idaho and Montana.

3, 51, 136, 157, 174, 175, 180, 181, 203, 209, 252, 270, 276, 280, 293, 356, 411, 496, 516, 643, 659, 690, 1185, 1273b, 1348, 1381, 1385, 1387, 1393

Use OROMTRD in the Centennial Corridor.

1273b

Treat the Centennial Range as a single landscape unit.

1185

RESPONSE: The 1993 Grizzly Bear Recovery Plan identified the need to assess the potential of linkage zones between the different grizzly bear recovery areas. At this time, little is known about the potential for linkage zones. The linkage zone assessment for the Centennial Mountains has not been done. While the assessments are being done, the Recovery Plan suggests the following management considerations:

"Future land management activities within these areas may be critical to maintaining their utility as linkage zones. It is essential that existing options for carnivore movement between existing ecosystems be maintained while the evaluation of linkage zones is underway. Management strategies that limit human-induced mortality and address access management will facilitate the maintenance of the potential of these zones during the 5-year evaluation period. On public lands, management prescriptions similar to big game summer range prescriptions that address access management would likely conserve any existing potential of these areas for linkage until completion of the 5-year evaluation process."

Connectivity between the Yellowstone Grizzly Bear Ecosystem and other grizzly ecosystems is not likely to be realized in the near future because of the distance to other ecosystems and the intervening human development and alteration of landscape. Therefore, the recovery plan recommends that one grizzly be placed into the ecosystem from an outside population every ten years as an effort to maintain the genetic health of the population."

GRIZZLY BEAR - SITE-SPECIFIC

The Revised Plan incorporates these management considerations by reducing motorized access throughout the Centennial Mountains, and using management prescriptions which improve or maintain big game habitat. MO

Ashton Ranger District

Support Grizzly Bear

COMMENTS: Support grizzly bear management efforts; close "Reclamation Road"; create new management prescriptions designed to protect land within the grizzly bear BMUs south of Robinson Creek; support Winegar Hole as wilderness for grizzly bear habitat.

171, 643, 690

RESPONSE: The Revised Plan does not close the "Reclamation Road" because it does not need to be closed to meet grizzly bear recovery goals.

All of the management prescriptions south of Robinson Creek in the Bechler/Teton BMU are designed to provide the habitat conditions necessary to meet grizzly bear recovery goals.

The Revised Plan recommends the Idaho portion of Winegar Hole as wilderness. MO

Non Support Grizzly Bear

COMMENTS: Oppose grizzly bear management efforts because it would close four sheep allotments on the Ashton Ranger District. Strongly opposes expansion of grizzly bears in areas 60 and 61.

F-F(6), 267, 298,

RESPONSE: The Revised Plan officially closes all domestic sheep allotments within the grizzly bear BMUs on the Ashton Ranger District. They are currently vacant. This was done because of the well documented history of conflicts between grizzly bears and the grazing of domestic sheep within the BMU's.

Areas 60 and 61 refer to Game Management Units of the Idaho Department of Fish and Game. Part of 61 is within the grizzly bear recovery line and receives emphasis in management for grizzly bears. All of area 60 is outside the grizzly bear recovery line, and does not receive emphasis in management for grizzly bears. As the grizzly bear population grows, there is a possibility that grizzly bears will be present outside the recovery line. MO

Bechler/Teton BMU

COMMENTS: Follow the rule set standards set forth in the draft Grizzly Bear Management direction.

1446

RESPONSE: We assume you are referring to the rule set in the Biological Opinion for the Plateau Bear Management Unit. That rule set is replaced with the standards and guidelines in the Revised Plan, and a new Biological Opinion has been issued. The grizzly bear habitat management guidelines in the Final

GRIZZLY BEAR - SITE-SPECIFIC

Revised Plan were developed to implement the direction in the Greater Yellowstone Grizzly Conservation Strategy as best we can interpret it at this time (it is a draft). JR

COMMENTS: Include a "security" area in the Bechler/Teton BMU; develop a management prescription and designated core areas in this BMU because protection is needed for the grizzly bear.

1273b, 1446

RESPONSE: The following management prescriptions meet core area criteria and provide security for the grizzly bear in the Bechler/Teton BMU: 1.1.6, 1.1.7, 1.3, 2.3, and 2.6.5. MO

COMMENTS: The Final Plan should close the 0.2% that is currently open to OHV use. Otherwise, show a clear rationale for how it is benign or beneficial to grizzly bear recovery.

1273b

RESPONSE: The 2% of the OHV use in this area is to the existing recreation sites. This recreation use will not have a negative impact on the bear. LB

COMMENTS: Phase out grazing in the southern end of this BMU.

695

RESPONSE: The Revised Plan phases out domestic sheep grazing in the southern end of this BMU. MO

Henry's Lake BMU

COMMENTS: Include a management prescription and core and security areas for Henry's Lake BMU. Appropriate conservation measures in this area will result in greater number of bears seeking habitat farther west (Centennials).

1273b, 1348, 1446

RESPONSE: The Revised Plan includes Management Prescriptions 3.1.2, 1.3, and 2.3 in the Henry's Lake BMU, all which meet core area criteria. It is unknown if a greater number of bears will use this area or areas further west. It will take several years of monitoring to assess changes in grizzly bear use in this area. MO

COMMENTS: Phase out grazing in grizzly bear habitat in most of the Henry's Lake BMU and in Madison BMU near the Two Top area.

695

RESPONSE: There has been no sheep grazing in the Two Top area for nearly ten (10) years. The Revised Plan has direction to phase out the remaining sheep allotments in the Henry's Lake BMU. MO

COMMENTS: Allow timber harvest in Henry's Lake BMU using Situation 1.

413

GRIZZLY BEAR - SITE-SPECIFIC

RESPONSE: The Revised Plan allows timber harvesting in Henry's Lake BMU, Subunit 1. There are specific standards and guidelines which must be followed when timber harvesting is done. MO

Plateau BMU

General

COMMENTS: Designate security areas for no less than ten years across the BMU rather than "island-like" areas; phase out grazing not including areas already closed; manage BMU for recreation, access and commodity because it is not Situation I; allow timber harvest using Situation 1.

413, 643, 695, 1202

RESPONSE: The Revised Plan establishes 30,000 acres of core area on the Targhee, to provide security for the grizzly bear. Core areas will exist for the 10 to 15 year life of the Plan. In addition to core areas, the Revised Plan establishes additional security areas to be established when there are major disturbance activities occurring, such as timber sales. These security areas will exist as long as the major disturbance activity occurs.

In addition, there are 275,000 acres in Yellowstone National Park which provide security.

There is no livestock grazing in the Plateau BMU.

In the previous Plan, a portion of this BMU on the Targhee was designated Management Situation 2 habitat. For the Revised Plan, increased emphasis is placed on all habitat within the grizzly bear recovery zone. Therefore, the Plateau BMU will be managed like Management Situation 1 habitat. Recreation, motorized access, and timber harvesting will be allowed in the BMU, but these activities must follow standards and guidelines in the Revised Plan. MO

COMMENTS: Change the Prescription language for this BMU to read, "In newly harvested units, soil disturbance shall not exceed 20% of the unit;" change canopy cover to 70% not 45% to represent standards previously set in DFPR III-136 and address this in Prescription; follow rule set standards for Plateau BMU.

643, 1446

RESPONSE: In the Revised Plan, scarification is limited to \leq 15 percent of an area where soil disturbance impedes the reestablishment of grizzly bear foods. Greater than 70 percent of the forested acres must provide security cover for the grizzly bear. Thermal cover is defined as 45% canopy closure, because natural stands of trees on the Targhee rarely provide more canopy closure, especially as high as 70 percent. MO

COMMENTS: Continue to use the weighted method to measure road densities in the Plateau; close 300 miles of roads in core areas for security purposes and leave 125 miles of open roads.

643, 695

RESPONSE: The Revised Plan uses the definitions and methods for measuring road densities that are established in the Interagency Grizzly Bear Committee

GRIZZLY BEAR - SITE-SPECIFIC

Taskforce Report on Grizzly Bear/Motorized Access Management. This Report does not use the weighted method to measure road densities. In the Revised Plan, there is no motorized access allowed within core areas. The Revised Plan establishes an OROMTRD of ≤ 0.6 miles per square mile in the Plateau BMU, which means that about 280 miles of motorized roads and trails are restricted to motorized access or obliterated. About 94 miles of roads and trails are open for motorized use in the Plateau BMU. MO

Non Support

COMMENTS: Oppose Plateau BMU: No evidence of survival rates; Plateau BMU does not fit grizzly bear habitat requirements, i.e. hot, dry, south/west slopes dominated by lodgepole pine; insufficient huckleberry patches; several studies indicate grizzly bears have not entered this BMU; local people who lived in Island Park have never verified grizzlies on Plateau. Close Plateau Bear Management Unit.

413

Use of the Plateau by grizzly bear is questionable even under the settlement terms and the Plateau BMU strategy; provide proof. None of the proposals in this BMU should be enacted in the Final Plan.

314, 393, 413, 688, 692, 1202, 1389

RESPONSE: The Plateau BMU is within the grizzly bear recovery zone. In 1993 and 1994, a study was conducted to evaluate habitat and grizzly bear presence in the Plateau BMU. The conclusion and recommendation of that study is (Puchlerz 1994):

"Caldera Subunit has existing habitat values that would be considered moderate. However, the yearlong occupancy of this BMU by an adult female grizzly bear with young should not be expected. The primary reason for this conclusion is that existing habitat effectiveness is low with a 51% reduction of the habitat value that currently exists. Mortality risk to grizzly bears would be considered high due to high road densities and the human use related to the existing road network."

"It is the committee's recommendation that the Targhee National Forest improve habitat effectiveness levels by implementing access management measures approved by the IGBC in July of 1994. With improved habitat effectiveness, occupancy should be expected. Continued monitoring for evidence of reproducing females is recommended."

"The Moose Creek/Pitchstone Subunit has existing habitat values that are considered low. They are currently the lowest we have recorded in the Yellowstone Recovery Zone. There are areas of moderate value habitat on the periphery of the subunit where bear use would be expected. Little reduction in habitat value has occurred as the majority of the subunit is without significant levels of human activity. The exception to this is the Targhee National Forest portion of the unit where high road density reduces habitat value significantly. The yearlong occupancy of this subunit by an adult female grizzly bear with young should not be expected."

"It is the committee's recommendation that the Targhee National Forest improve habitat effectiveness levels by implementing access management measures approved by the IGBC in July of 1994. Continued monitoring for evidence of reproducing females is recommended."

GRIZZLY BEAR - SITE-SPECIFIC

"In both the Caldera and the Moose Creek/Pitchstone subunits there exists an access management strategy, jointly developed by the Targhee National Forest and the U.S. Fish and Wildlife Service for the Targhee portion of the Plateau BMU. If this strategy were implemented it would greatly improve habitat effectiveness and security within the subunits." MO

COMMENTS: Clarify the status of whitebark pine in the Plateau because of its food source for grizzly bears.

413

RESPONSE: Most of the forested acres in the Plateau BMU are classified as lodgepole pine cover type. Only 20 percent of forest inventory plots contain whitebark or limber pine, and for these plots, 99.1 percent of the whitebark or limber pine trees are less than 2 inches in diameter, therefore not cone producing trees. MO

COMMENTS: Allow timber harvest in Plateau. Use of the Plateau by grizzly bears is questionable.

393, 692

RESPONSE: Management Prescription 5.3.5 applies to 107,500 acres of the Plateau BMU. This management prescription allows timber harvesting activity as long as specific standards and guidelines are followed. The following documents grizzly bear use in the Plateau BMU:

Plateau BMU, Subunit 1: Compared to the other BMU's and Subunits on the Forest, this area had one of the lowest number of grizzly bear sightings from 1959 to 1986 (Orme and Williams 1986). From 1986 through 1995, five grizzly bear sightings were recorded within subunit 1 in addition to many recorded observations of radio collared bear #227 (a male) for portions of each summer from 1994 through 1996. Two sows with cubs were observed for the period 1965 to 1984 (one of the sows was shot and killed by hunters in the fall of 1984). From 1985 to the present, no sows with cubs have been reported in this subunit.

Plateau BMU, Subunit 2: Compared to the other BMU's and subunits on the Forest, this area had one of the lowest number of grizzly bear sightings from 1959 to 1986 (Orme and Williams 1986). From 1986 through 1995, records show six grizzly bear sightings within Subunit 2. From 1965 to 1984, there were four sightings of bear groups (two or more bears together) but records do not confirm that these were sows with cubs. From 1985 to 1993, no sows with cubs were observed. In 1994, one sow with cubs was observed one time near the southern boundary of the subunit. No sows with cubs have been reported during 1995 and 1996. MO

Palisades Ranger District

COMMENTS: Add all of Palisades and Diamond Peak to wilderness to ensure grizzly bear habitat. (CROSS REFERENCE: Wilderness)

181, 643, 1314, 1360

RESPONSE: Palisades (located on the Palisades Ranger District) and Diamond Peak (located on the Dubois Ranger District) are both outside the grizzly bear recovery zone. They are not needed to achieve grizzly bear recovery.

GRIZZLY BEAR - SITE-SPECIFIC

However, large portions of both areas are recommended as wilderness for other reasons. MO/AM

Teton Basin Ranger District

Big Holes

COMMENTS: Oppose managing for grizzlies in the Big Holes because the population is doing well and there may be a few too many. It would be alright if there were no population.

F-G-2(2), 50, 311

RESPONSE: The Big Holes are outside of the grizzly bear recovery zone, and are not managed for grizzly bears in the Revised Plan. MO

Jedediah Smith Wilderness

COMMENTS: Oppose allowing human activity areas of 30 day periods during the active bear season because it contradicts bear security efforts.

1277

RESPONSE: Grizzly bear security was an important consideration in the development of the Revised Plan. The Revised Plan directs that Forest Service management activities within the grizzly bear BMU's are to be concentrated in time and space, and must follow specific standards and guidelines.

Human activities are restricted in the grizzly habitat prescriptions that meet "core" criteria in the Revised Plan. These "core" areas are undisturbed refugia for security of bears. In other areas, human activities are restricted in time and space to minimize disruption to grizzly activities and adjacent security zones are established to provide areas for escape while the activity occurs. This will meet grizzly security needs during periods of human activity. MO/JR

GRIZZLY BEAR - STANDARDS AND GUIDELINES

COMMENTS: Change the following guidelines to standards: Page III-11, Grizzly Bear Habitat, the four Objectives and one Guideline should be standards; Page III-133, Wildlife (5.3.5) - The Snag Guideline should be a Standard; The Guideline describing the shape and size of the activity area should be a Standard; Page III-134, both Guidelines should be Standards. The second one (characterizing management activities) should be amended to read "...on habitat quality and quantity and the potential for disturbing hibernation sites." On the same Page in Paragraph 1 change "should" to "will" and make this a Standard. On the same Page in Paragraph 2 add the following sentence and make this a standard, "No more than one entry into an area per decade, not to exceed three years in duration; Page III-136, Timber - The Dead and Down Component should be a Standard; Page III-137, Range - The first Guideline should be a Standard.

643, 1365

RESPONSE: The Forest considered these recommendations in detail, most of which would change objectives and guidelines to standards. The analysis of

GRIZZLY BEAR - STANDARDS AND GUIDELINES

grizzly bear habitat shows that there are broad ranges in habitat conditions, resulting from natural conditions and past management activities. Making everything standards does not recognize this broad range of conditions. To be responsive to the variety of conditions that currently exist, and will exist into the future, the Forest did not make these recommended changes. MO

COMMENTS: Include Standards for education of employees working in grizzly habitats, including information about food storage and direction to suspend activity if and when a bear is sighted. Develop standards for human food storage, garbage, horse pellets, dog food and waste for BMU's in front and backcountry areas.

643

RESPONSE: A special order on sanitation and food storage in grizzly bear habitat has been in place for many years. It is not necessary to repeat this special order in the Revised Plan. All people, including Forest Service employees, must follow the rules of this special order when using grizzly bear habitat. Information is available at all Targhee offices. MO

COMMENTS: Grazing permits should include specific language to assure guidelines for minimizing grizzly bears/livestock conflicts.

389

RESPONSE: All grazing permits within the grizzly bear recovery zone contain specific language requiring the permittee's full compliance in meeting grizzly bear management goals and objectives. MO

COMMENTS: Page III-134, Roads (5.3.5) Item 1 under Guideline should be a Standard. An additional standard should be included prohibiting the construction of new roads and requiring the obliteration of any roads with potential to adversely affect the habitat or ecosystem qualities of the area.

1365

RESPONSE: Item #1 is a guideline that allows for site specific considerations and analysis. Each BMU has an OROMTRD and TMARD established for it. New roads can only be built if the OROMTRD and TMARD remain below the standards for the BMU, or if an existing road or trail is restricted or obliterated so that the standards are not exceeded. MO

COMMENTS: Page III-135, Roads (5.3.5) Item 3 should be a Standard and should be rewritten as follows: "Fully revegetate temporary roads with native species immediately following use."

1365

RESPONSE: Item #3 is a guideline that allows for site-specific considerations and analysis. MO

COMMENTS: Develop standards to correct the impact done to grizzly habitat by clearcutting and road building and prevent future impacts.

1365

GRIZZLY BEAR - STANDARDS AND GUIDELINES

RESPONSE: The Revised Plan takes into account the effects of past management activities and reduces TMARD and OROMTRD for future timber harvesting. MO

COMMENTS: Include specific language to ensure Guidelines for minimizing grizzly bear - livestock conflicts.
389

RESPONSE: The Revised Plan phases out all domestic sheep grazing on an opportunity basis within the grizzly bear recovery zone. All grazing permits within the grizzly bear recovery zone contain specific language requiring the permittee's full compliance in meeting grizzly bear management goals and objectives. MO

COMMENTS: The following should be included as standards for grizzly bear habitat: 1) Sanitation standards will be set for human habitation and use on portions of the forest within the recovery zones; 2) Core area maps for each BMU are enclosed in the appendix; 3) Pursuant to the Grizzly Bear Recovery Plan, no timber cutting activities will be allowed within Situation I and II Habitat.
1446

RESPONSE: A special order on sanitation and food storage in grizzly bear habitat has been in place for many years. It is not necessary to repeat this special order in the Revised Plan.

The following management prescriptions meet core area criteria as defined in the Interagency Grizzly Bear Committee Task Force Report on Grizzly Bear/Motorized Access Management: 1.1.6, 1.1.7, 1.3, 2.3, 2.6.2, 2.6.5, and 3.1.2.

The Grizzly Bear Recovery Plan allows timber harvesting within Situation I and II habitat as long as necessary considerations for the grizzly bear are implemented. MO

Core areas are displayed on the prescription map. MO

COMMENTS: Change Standard and Guidelines on Page III-87 to 89 to reflect the new scientific data on grizzly bears which contradicts the use of Management Situation 1 as a Biological Standard for grizzly bear.
1446

RESPONSE: The Revised Plan references the Interagency Grizzly Bear Guidelines for Management Situation 1 habitat because these guidelines are still valid. Additional standards and guidelines are also listed in the management prescriptions which incorporate new scientific data. MO

COMMENTS: Page III-18, Dispersed Camping Management: Show information, education and sanitation standards for grizzly bear recovery zones in this section under Description or a section titled "Wildlife" under Standards and Guidelines. (CROSS REFERENCE: Recreation - Camping)
1446

RESPONSE: A special order on sanitation and food storage in grizzly bear habitat has been in place for many years. It is not necessary to repeat this special order in the Revised Plan. A guideline on grizzly bear education

GRIZZLY BEAR - STANDARDS AND GUIDELINES

exists in the Wildlife Section of the Revised Plan. This education guideline focuses on a broad range of people who use grizzly bear habitat, including dispersed camping users. MO

COMMENTS: Page III-91, Recreation (5.3.5): The trails standard should also mandate the obliteration of any trails causing or likely to cause significant negative impacts to primitive or semi-primitive non-motorized uses. (CROSS REFERENCE: Recreation)

1365

RESPONSE: The OROMTRD and TMARD for the BMU's focus on the needs of the grizzly bear, and not primitive to semi-primitive non-motorized recreation. MO

COMMENTS: Page III-87, Physical and Biological Elements, Land: The Rule Set developed for grizzly bear management, in the Grizzly Bear Management Strategy for the Plateau BMU, should be incorporated as a table in this section.

1446

RESPONSE: The Grizzly Bear Management Strategy for the Plateau BMU is not fully incorporated in the Revised Plan because there are some items that can not be implemented, new boundaries for Plateau BMU subunits require changes, and some items are inconsistent with new direction from the Interagency Grizzly Bear Committee (such as the Task Force Report on Grizzly Bear/Motorized Access Management). MO

COMMENTS: Page III-88, Forest Use and Occupation: For the most part, mountain biking and other mechanized travel should be discouraged from core areas. Beginning the reclamation of all roads within one year of the signing of the ROD should be considered a Standard to be consistent with Objective 4, Page III-11, Forestwide Standards and Guidelines. A Standard should state no construction of temporary roads in core areas.

1446

RESPONSE: There are no data to suggest that mountain biking is any more detrimental to grizzly bears than walking, and at this time the Forest does not propose closing core areas to all human entry.

The Forest selected three years as the objective to achieve the TMARD and OROMTRD in the BMU's, taking into account the large amount of work and cost involved to accomplish this. It is not feasible to do it in one year.

The standard for Management Prescriptions 2.6.2 and 2.6.5 states, "construct no new roads." This standard applies to all roads, permanent and temporary. MO

GRIZZLY BEAR - TIMBER

Support Harvest in Grizzly Habitat

COMMENTS: Timber harvesting activities, with proper management, do not impact grizzly bear habitat. To prohibit timber harvest would not help the grizzly

GRIZZLY BEAR - TIMBER

bear recovery effort. Allow commercial harvesting in the Greater Yellowstone Ecosystem.

275, 393, 692, 693

RESPONSE: Management Prescription 5.3.5 allows timber harvesting within the grizzly bear BMU's under standards and guidelines which maintain grizzly bear habitat. MO/JR

COMMENTS: Allow timber harvest in all grizzly habitat, and include good access and vulnerability constraints, i.e., no firearms, open and closed gates, etc.

693

RESPONSE: Management Prescription 5.3.5 allows timber harvesting within the grizzly bear BMU's. All of the BMU's have standards for OROMTRD and TMARD to regulate motorized access. The Revised Plan does not prohibit firearms in the BMU's. Hunting is a major activity which is allowed in all of the BMU's on National Forest lands. Fish and Game determines if firearms are prohibited. MO

COMMENTS: Correct DEIS, Alternative 2. This alternative allows timber harvest in both the Henry's Lake and Plateau BMUs. To the extent that Situation I habitat is involved, it is a NIC component, but only if it is a Situation I. Allow harvest in all BMUs, subject to an NIC component in Situation I habitat.

413, 767

RESPONSE: Alternative 2 allows timber harvest in all BMU's, including the Henry's Lake and Plateau BMU's. Alternative 2 allows timber harvest in Situation 1 habitat as a NIC component to the ASQ. MO

COMMENTS: Allow timber harvest in Situation I habitat and in roadless areas. Use lower quality of roads with immediate closure after use.

693

RESPONSE: Management Prescription 5.3.5 allows timber harvesting in grizzly bear habitat, which includes both Management Situation 1 and 2. Standards for OROMTRD and TMARD results in many road restrictions and obliteration. MO

COMMENTS: Commercial timber harvest will not by itself reduce food and cover habitat to the extent full recovery goals could not be met. Commercial timber harvest can enhance tree growth and speed development of cover for grizzly habitat. Consider an alternative based on the best science for grizzly management.

393, 692, 1267

RESPONSE: The Forest generally agrees. The Revised Plan allows for timber harvest within the grizzly bear BMU's and incorporates the latest science. MO

COMMENTS: Oppose Targhee National Forest severely restricting timber harvest and using the BMU's OROMTRD as constraint. Use of the constraint developed

under Settlement Agreement with Greater Yellowstone Coalition, et al, was crafted without going through NEPA. This severely restricts harvest within areas defined as habitat for grizzly bear. Evaluate the social and economic impact of constraining road development and timber harvest.

393

RESPONSE: OROMTRD was not used as a constraint in modeling the timber harvest and selecting an ASQ for the Revised Plan. The settlement agreement is temporary, and the provisions of the settlement agreement will be replaced with the provisions and management direction in the Revised Plan. There are numerous standards and guidelines which affect the amount of timber harvesting proposed in the Revised Plan. The social and economic impacts of the Revised Plan are displayed in the DEIS and the FEIS. MO

COMMENTS: Clearly state the limits on clearcut size to "40 acres or less on approximately 14% of the Forest" are not arbitrary to benefit grizzly bear telemetry work.

625

RESPONSE: The Revised Plan does not have a clearcut size limit of 40 acres in grizzly bear habitat since 40 acres is the required limit already determined by NFMA. The Plan does not repeat existing laws and regulations. There is a guideline which states: "For created openings, maximum distance to security cover should be 300 feet." The guideline is not used to benefit grizzly bear telemetry work. MO/CC/JR

Address Effects on Unscheduled EM Harvests on Grizzly Bear

COMMENTS: Clearly address EM timber harvests and road building, specifically in Prescription 2.6.1 (a). Even though these lands are not in the suitable base, they serve as a critical corridor for grizzly bear.

643

RESPONSE: The Revised Plan establishes a limit on EM, NIC related timber harvests and displays how much total timber harvesting is expected to occur within each BMU Subunit. Lands within prescription 2.6.1(a) are not included in the suitable timber base but, harvest could occur on the unsuited lands, following a site specific environmental assessment. Included in this assessment, should one occur during the life of this plan would be the no action alternative and environmental effects of this alternative and all action alternatives. The Revised Plan maintains suitable habitat for grizzly bear movements while studies are being done on the feasibility of corridors for grizzly bears.

The Revised Final Plan places a limit on EM harvest that can occur in the decade. Road building is controlled by the road density standard within Bear Management Units (0.6 miles/sq. mile OROMTRD and 1.0 TMARD). MO/JR

GRIZZLY BEAR - TIMBER

Include Appropriate Mitigation Measures in Timber Sale Contracts

COMMENTS: Include mitigation measures like those found in Forest Service Regulations CT 6.5 in all timber sale contracts.

643

RESPONSE: Forest Plans contain goals, objectives, standards and guidelines which provide management direction for future projects. Specific mitigation measures are developed during the analysis which is done for each site specific project. Appropriate contract clauses will be included. MO/JR

Non Support Harvest in Grizzly Habitat

COMMENTS: Prohibit timber harvest in BMU's and sensitive bear habitat areas because historic logging, fragmentation and roading contribute to diminishing grizzly bear habitat. Oppose Prescriptions 2.6 - 2.6.5 Grizzly Bear Habitat and 5.3.5 Timber because they allow too much timber harvest; explain why harvest is going to occur in grizzly bear habitat.

51, 136, 252, 293, 356, 389, 396, 611, 622, 640, 692, 695, 1194, 1273b, 1361, 1365, 1367, 1369

RESPONSE: Management Prescriptions 2.6.2 and 2.6.5 do not allow any timber harvesting. They are designed to be grizzly security areas. Timber harvesting is allowed in Management Prescription 5.3.5 according to specific standards and guidelines. The maximum amount of possible timber harvested during the next decade amounts to one to two percent of the forested acres in the BMU's. TMARD and OROMTRD are reduced in all of the BMU's. Grizzly bear habitat will improve from the existing conditions with the management direction in the Revised Plan. Timber harvest is allowed when compatible with grizzly habitat needs to maintain long-term the minimum of vegetation types in the BMUs. MO/JR

COMMENTS: Prohibit logging in grizzly bear areas to reduce habitat fragmentation and improve migration corridors.

179, 211

RESPONSE: Timber harvesting is allowed in Management Prescription 5.3.5 according to specific standards and guidelines. The amount of timber harvesting that may occur during the next decade amounts to one to two percent of the forested acres in the BMU's. TMARD and OROMTRD is reduced in all BMU's. Grizzly bear habitat will improve from the existing conditions with the management direction in the Revised Plan. Migration corridors are currently being studied, as outlined in the Grizzly Bear Recovery Plan. At this time, the Forest does not know the feasibility of migration corridors for the grizzly bear. The management direction contained in the Revised Plan will maintain future options for migration corridors if the studies prove their feasibility. MO

COMMENTS: Define what habitat improvements and activities for grizzly bear will be allowed in Prescription 2.6.5. Cite scientific references for these choices. Define what disturbances will be allowed in grizzly bear security

GRIZZLY BEAR - TIMBER

areas and how you will balance these disturbances with increased mortality risk and displacement.

1273b, 1369

RESPONSE: The objectives, standards and guidelines of Management Prescription 2.6.5 describe the kinds of improvements and activities that are allowed. For example, since the prescription has an OROMTRD standard of 0.0 miles per square mile, there will be road restrictions and road obliterations. Scientific references can be found in the FEIS, the Biological Assessment for Grizzly Bears, and Process Paper D. All documents are available to the public.

The combination of management prescriptions applied to the grizzly bear BMU's provides for improved grizzly bear habitat conditions. There are decreases in OROMTRD and TMARD in all BMU's. There are increases in the amount of area meeting core area criteria. These changes increase grizzly bear security. MO

COMMENTS: Further define how you will apply the 7000 acre standard of undisturbed habitat for grizzly bear protection. Define what percentage of the area needs to be maintained as undisturbed. One 7000 acre undisturbed area could conceivably be surrounded by timber sale areas.

1369

RESPONSE: The combinations of standards and guidelines requiring security areas of at least 7,000 acres in size, maintaining 70 percent security cover and 20 percent thermal cover, the OROMTRD and TMARD standards, plus numerous other standards and guidelines which must be followed, will make it impossible for one 7,000 acre undisturbed area to be surrounded by timber sale areas. MO

COMMENTS: The Plan and FEIS should include "core" and "security" areas to prevent timber harvesting in these designated BMU's.

1446

RESPONSE: The following Management Prescriptions meet core area criteria: 1.1.6, 1.1.7, 1.3, 2.3, 2.6.2, 2.6.5, and 3.1.2. It is not necessary to completely eliminate all timber harvesting in the BMU's to achieve the recovery goals for grizzly bears. MO

MAPS/REFERENCES

ATTACHMENTS TO LETTERS (Maps, References, Bibliographies, Articles)

RESPONSE: These materials were shared with appropriate managers, planners and resource specialists. More detailed responses can be found in specific resource areas in this appendix. AM

- SUMMARY:** 1. Map of roadless areas on the Targhee to replace Map 25. Includes a portion of their comments stating why a new map is needed: DEIS has an inadequate analysis of roadless areas on the Forest; issue a supplemental DEIS for public comment; and clearly identify roadless areas by name.
2. Map of specific areas using 5.3.6 Grizzly Bear Habitat (NIC for ASQ - small sales only, no cross-country, phase out sheep), near Jedediah Smith and Winegar Hole Wildernesses.
3. Prescription/Map of the Centennial Mountains showing an Ecosystem Linkage Corridor (2.2.1 a,b,c).
4. Bibliography citing 78 sources, mostly circa 1990s
5. Map of Idaho Wildlands Defense Coalition's wilderness recommendations with an outline of roadless areas in black, showing wilderness substantially increased throughout most of the Forest.
6. Satellite photographs of the Island Park area of the Targhee National Forest. Four photographs taken between 1974-1992 show the progression of extensive clearcutting on the Island Park and Ashton Ranger Districts claiming that the Forest's analysis of 60+ percent mature forest is flawed.
7. Copy of April 26 letter to Forest Supervisor Reese regarding inadequate analysis on roadless areas and wilderness recommendations in the DEIS.

643

- SUMMARY:** 1. An 85-page thesis discussing erosional impacts of hikers, horses, off-road bicycles, and motorcycles on mountain trails, with various charts, graphs, diagrams, and references.
2. Report about the denning of grizzly bears in the Yellowstone National Park Area.
3. Report about the effects of access on human-caused mortality of Yellowstone grizzly bears.
4. A letter discussing elk habitat effectiveness and elk vulnerability analysis with an attached map showing all districts and some specific areas.
5. A copy of a 21 question-and-answer brainstorm handout about roads, wildlife, trails, and so forth from the speakers at a Citizens Involvement Group access meeting.
6. Report about elk habitat effectiveness as influenced by roads and cover.
7. Sections from various documents discussing management of elk habitats and populations, and elk and road issues.
8. A Journal of Forestry September 1983 article describing elk habitat effectiveness using charts and graphs.

MAPS/REFERENCES

9. Map designating specific trails for ATV use in the Ashton and Island Park area. The routes require little construction and ATV users would welcome recreational opportunity available there.

1202

10. Two maps showing roads and trails in specific areas that should be open. Maps are very specific.

1202

SUMMARY: 1. Appendix A recommends the Targhee adopt an alternative from the Beaverhead Forest Plan's amendment using alternative approaches to grazing management and changing some riparian and range goals, objectives and standards.

2. Appendix B is a five-step planning approach for streams and other resource management issues, providing some grazing management guidelines, strategies, monitoring and evaluation.

432

SUMMARY: 1. Appendix A about the effects of access upon human-caused mortality of Yellowstone grizzly bears.

2. Appendix B about the denning of grizzly bears in the Yellowstone National Park area. Shows a study that indicates the exclusionary date for cross-country snowmobile use could be moved back to at least November 1 and not affect the bears plus there are no den sites on the Targhee save the den in the Plateau BMU.

3. Copy of a two-page letter to Senator Craig from United States Department of Commerce discussing aquatic conservation measures, land allocations, and roadless areas.

4. Appendix D showing the relationships of Rocky Mountain elk and Rocky Mountain mule deer habitat to timber management in the Blue Mountains of Oregon and Washington.

5. Appendix E summary of findings about cover, clearcuts, foraging, and so forth in "Elk-Roads-Logging Relationships".

6. Appendix F showing an application of existing knowledge for protection of big game habitat in timber sale design, layout and administration, giving specific guidelines about two kinds of cover.

7. Appendix G showing elk habitat relationships for Central Idaho and discussing reconciling land management activities with requirements of elk habitat.

8. Appendix H showing elk management by the Northern Region related to considerations in Forest Plan updates or revisions.

9. Appendix I discusses species management and habitat effectiveness, and recommendations for forest plans.

10. Appendix J shows the Timber Sale Program Annual Report Fiscal Year 1993 for the Targhee and contains grazing, water yield and economic account tables.

413

SUMMARY: Article dated January 1995 titled, "Resiliency", discusses forest landscapes, wildlife, timber, and other topics dealing with EM Sustainability.

275

MAPS/REFERENCES

SUMMARY: 1. Forest Health/Grazing Bibliography and References: 178 sources dated from 1923-1994. Mostly circa 1970s-1980s.

2. The effects of Ski Area Development on the Environment Bibliography: 43 sources dated 1970-1981.

3. Recreational and Other Impacts Bibliography: approximately 2000 sources dated predominantly circa 1970s and 1980s.

4. Report and Formal Comments on the Current and Potential Adverse Impacts of Winter Recreational Use in Yellowstone National Park and the Winter Visitor Use Management Planning Process by the U.S. Park Service (Biodiversity Legal Foundation: Boulder, CO) 1996. Forty-nine page report with an 83 page bibliography on Recreational and Snowmobile Use in Yellowstone National Park. The study addresses the environmental impacts of snowmobiling on wildlife, vegetation, and soils and analyzes the winter visitor planning process.

1365

SUMMARY: 1. Two identical maps for Alternative 2 summer motorized access and management changes that reflect a reduced number of road closures. Specific changes from the large areas 6.1 (b) in the Caribou to 6.1 (a).

2. Specific changes to 5.1.3 (a) Prescription areas, adding two areas in the Caribou to the suitable timber base.

767

SUMMARY: Map proposes additional road closures, indicating that the West Yellowstone roaded area is too dense for the summer motorized access in Alternative 3M, and highlighting short spur or parallel roads that should be reconsidered for closures.

690

SUMMARY: Provides eight references he co-authored about riparian habitat, grazing, and amphibian sampling related to spotted toads.

1343

SUMMARY: GIS Map of the grizzly bear areas and Centennials. Comments and references dealing with cumulative effects on grizzly bear management, especially in this area.

1348

SUMMARY: 1. References about spotted frogs, threatened and endangered species, ecological mystery, wildlife, and amphibians/reptiles.

2. Newspaper article from Juneau Empire 13 June 1996 titled "Logging Dead Trees May Actually Boost Fire Risk." Article details a situation in Alaska where slash burns and chip piles left from logging were ignited.

1277

SUMMARY: Three references about grizzly bears.

363

SUMMARY: Article titled "Telemetered Heart Rate of Three Elk as Affected by Activity and Human Disturbance," commenting about biological elk behavior; range; heart rate and activity biotelemetry system; ecological energetics;

MAPS/REFERENCES

white-tailed deer; bighorn sheep; mule deer, the movement and activities of cow elk; and the grazing of transplanted elk.

313

SUMMARY: Four references from 1982-1995 containing information on EM, fisheries, successional forests, and watersheds.

690

SUMMARY: Movements, Distribution, Mortality and Genetic Status of Bighorn Sheep in the Teton Range: Progress Report, citing preliminary findings on the status of the Teton Range bighorn sheep herd. Includes charts, graphs, and literature on mortality rates and seasonal movements.

699

SUMMARY: Article from Beef Today May 1996: 22, "A Settlement on Sediment" describing new research by the University of Wyoming on managing streambank vegetation.

267

SUMMARY: Thirty-six page graduate thesis and report on analysis of goshawk habitat at five spatial scales on the Targhee and how timber harvesting has affected goshawk nesting habitat over time. Report is entitled: Analysis of Goshawk Nesting Habitat at Five Spatial Scales in Undisturbed and Timber Harvest Territories on the Targhee National Forest.

1370

SUMMARY: Two newspaper articles from The Fall River Review, 18 April 1996, "The Forest Plan and Local Interest" and "The Pitfalls of Public Process."

1258

SUMMARY: Copy of a list of proposed wilderness areas for the Targhee from the Idaho Wildlands Coalition.

210

SUMMARY: "A Serious Newsletter for Serious Recreationists" article from the newsletter Idaho Outside in which Governor Batt states that this newsletter is a way to inform recreationists where their tax dollars are spent.

1390

SUMMARY: Eleven literature cited from 1971-1989 dealing with grazing, wildlife, bats, bighorn sheep and riparian areas.

389

SUMMARY: 1. Map showing Bigholes/Palisades Subsection with proposed Prescription 5.1.4 (d) highlighted.

2. Map showing a 6-plus square mile enlargement of the Kelly Canyon-Hawley Gulch area and recommending closing the area to snowmobile use.

701

MAPS/REFERENCES

SUMMARY: Bibliography of eight sources from 1968-1996 concerning wolverines, grazing, riparian areas, elk/deer hunting, breeding dens for bears and Henry's Fork Wetlands.

766

SUMMARY: An attached copy of a pamphlet with rewards for Eco-Terrorists involved in cattle killing, eco-sabotage, or pipe bombs in wilderness.

300

SUMMARY: Attached the Targhee National Forest 1985 Land Management Plan, 711 pages long.

1395

SUMMARY: Newspaper article from the Idaho Falls Post-Register, 16 May 1996, "Budget Lags While Forest Use Soars" about the less-than-expected revenue generated from recreation on the Targhee National Forest.

348

SUMMARY: One page copy of part of a resolution from the Idaho Republican Party stating opposition to Alternative 3M and the Draft Forest Plan and indicating support for the preferences of the Citizens for a User Friendly Forest.

1448

SUMMARY: Letter from David Hunte, Wildlife Veterinarian, Idaho Fish and Game to Stan Boyd, Director, Idaho Wool Growers Association, stating that the outbreak of pneumonia in bighorn sheep in Hells Canyon was not caused by domestic sheep but by their own strain of pasteurilla.

1188

SUMMARY: 1. Untitled article from Discover (November 1995) about species in tropical rain forests and the vital importance of species such as fungi, dead wood and old growth to the ecosystem. 2. Article from Casper Star-Tribune, 20 June 1996, "Bringing Back the Fire" on the benefits of burning to help wildlife, cattle and aspen. 3. Article from High Country News, 11 December 1995, "Outfitters Take Aim at Four-wheelers", about people using ATVs to hunt and retrieve game and the conflicts between this user group and outfitters. 4. Article from Jackson Hole News, 12 June 1996, "Man barred from Park for Snowmobile Trespass" about frequent snowmobile trespass into Grand Teton National Park and Jedediah Smith Wilderness.

1393

SUMMARY: Narrative and map of proposed changes for access for the Swan Valley - Teton Transmission Line along with a set of 37 standard BPA transmission line maintenance photo maps showing right-of-way, mile number, tower location, and access roads.

1279

SUMMARY: Furniture catalog entitled Grand Teton Furniture Collection from the Grand Teton Furniture Company, Inc.

268

MAPS/REFERENCES

SUMMARY: Letter-to-the-editor from Kent Briggs criticizing the motorized game retrieval proposal in Alternative 3M and support for Alternative 2.

278

SUMMARY: A water map showing existing wilderness areas and a copy of the Idaho Wildland Coalition's proposed wilderness areas for the entire state of Idaho.

1206

SUMMARY: Information and a map on ski trails and Forest Service roads showing specific areas for skiing.

628b

SUMMARY: 1. Five Ashton and Island Park Ranger Districts' Landsat MSS maps showing old/new clearcuts.

2. Article from the July/August issue of Inner Voice containing information on "Cattle and Sheep - The Forgotten Pathogens."

3. Cites 26 references from 1973-1994 with information on wildfires, biodiversity, vegetation, goshawk, fire, grizzly bears, and so forth.

1273b

SUMMARY: Cites 23 references from 1968-1994 (one he authored) containing information about fires and lodgepole pine.

489

SUMMARY: Lists three bibliographies upon which conclusions in their letter are based. Forest bibliography is untitled and lists 26 sources ranging from 1972-1996. The second is untitled and lists 71 sources mostly circa 1980s. The third is "Roads in Riparian Areas" and lists seventy-one sources circa 1970s-1980s.

1367b

SUMMARY: Authors of the 33-page article Draft Management Recommendations for Aquatic Conservation on Federal Lands in the Rocky Mountain West (Pacific Rivers Council: Bozeman, MT October 1995) argue that riparian areas and aquatic refugia must be identified and preserved, and they outline principles for management of these areas.

1367a

SUMMARY: Letter-to-the-Editor from Dick Marler dated 6/21/96 regarding restoring day-use at Warm River Campground.

1251

SUMMARY: A copy of a page from a West Yellowstone Chamber of Commerce bulk mailing sent to all chamber members. The form letter is from the Blue Ribbon Coalition urging chamber members to write the Targhee regarding road and trail closures.

395

SUMMARY: 1. A graph of The Bureau of the Census, Decennial Census of Population and Housing 1995: online fire STF1A population estimates; 1994:

MAPS/REFERENCES

CD-ROM STF1A; 1980: General Population Characteristics U.S. Department of Commerce, Washington D.C.

2. A graph from Forest acreage obtained from Payments to States from National Forest Receipts, fiscal year 1985, 1990, 1994, USDA Forest Service, Washington D.C. showing the 25% Fund/Acre was obtained by dividing 25% Fund payment as reported in Table III-21 of the Draft EIS by the amount of county acres inside Forest boundaries.

1368

SUMMARY: Two-hundred page State of Idaho Water Plan for Henry's Fork Basin containing maps, appendix, and several charts with detailed information on Henry's Fork Basin.

1207

MINING, MINERALS, GEOLOGY

General

COMMENTS: Restrict or limit mineral exploration and mining; do not issue permits or renew oil and gas leases until an EIS is completed; support more control of mining industries, but doubt the Forest Service can do so legally with outdated mining laws. Implement standards and/or guidelines stating that the Forest is not open to exploration and development/production of mineral resources unless otherwise specified in prescriptions; if protective standards, including standards for denial, are not included, it will be business as usual. Provide restrictions on soils, silt, gravel, solid wastes, slash, debris or chemicals deposited in areas where they may aggregate or become concentrated in surface waters. Define more clearly Forest requirements for mineral activities.

305, 389, 695, 697, 1365

RESPONSE: As a parallel process to the revision, the Targhee is preparing a FEIS covering oil and gas leasing which identifies forest land for leasing and conditions under which the lands will be offered for lease. The oil and gas FEIS will reflect revised management prescriptions so that both documents are compatible in resource management direction. In addition, the Forest is legally compelled by the Energy Security Act of 1980 and the Leasing Reform Act of 1987 to conduct a separate NEPA oil and gas leasing analysis. Close coordination is required between both documents.

Restrictions on mineral activities vary on the Forest by prescription areas. The majority of the Forest is open to mineral activity, but some of it is restricted, subject to valid existing rights.

All mining involving hardrock minerals, mineral materials, and leasable minerals are conducted pursuant to applicable laws, acts, and regulations. Those specific to hardrock minerals (gold, silver, lead, opal) are the General Mining Law of 1872, Multiple-Use Mining Act of 1955, Mining and Minerals Policy Act of 1970, Federal Land Policy and Management Act of 1976, and Forest Service Minerals Regulations (36 CFR 228, Subpart A).

Specific laws, acts, and regulations pertaining to mineral materials (common varieties of sand, stone, gravel, pumice, pumicite, and cinders) are the Materials Act of 1920, Multiple-Use Mining Act of 1955, Mining and Minerals Policy Act of 1970, Federal Land Policy and Management Act of 1976, and Forest Service Minerals Regulations (36 CFR 228, Subpart C).

Leasable minerals (oil and gas, phosphate, geothermal) are subject to exploration and development under leases, permits, or licenses under the Mineral Leasing Act of 1920, as amended; the Mineral Leasing Act for Acquired Lands of 1947; the National Environmental Policy Act of 1969; the Geothermal Steam Act of 1970; the Federal Land Policy Management Act of 1976; the Coal Leasing Amendments Act of 1976; the Surface Mining Control and Reclamation Act of 1977; the Multiple Minerals Development Act of 1977; the Federal Onshore Oil and Gas Leasing Reform Act of 1987; the Geothermal Steam Leasing Amendments Act of 1988; Forest Service Minerals Regulations (36 CFR 228, Subpart B; and specifically Bureau of Land Management Minerals Regulations (43 CFR 3201.1-6(f) which implement Public Law 98-473, the Geothermal Steam Leasing Amendments Act of 1988. JP

COMMENTS: Request a more thorough analysis and referencing of known and potential phosphate reserves on the Targhee, especially in Big Hole/Palisades,

MINING, MINERALS, GEOLOGY

Caribou Mountains, Centennials, and Teton range. Need to adequately consider these before exclusion for wilderness designation, and they deserve more than casual reference. Request acknowledgement in Index (Section III) of geothermal production and protection, and a citation of regulations pertaining to geothermal resources.

493, 691, 1351

RESPONSE: Interest in exploration and development of phosphate reserves are not anticipated until the Soda Springs Area Reserves in southwest Idaho are near depletion. Conservative estimates expect this event will not happen for the next 40-50 years.

The best potential for discovery of geothermal resources lies in the Island Park area of the forest. However, due to its proximity and uncertain geologic relationship to thermal features of Yellowstone National Park; language in the Geothermal Steam Act of 1988 that prohibits leasing in the Island Park Caldera; and conclusions denying leasing in the "Island Park Geothermal Area", USDA/USDI, 1-15-80; it is unlikely that this resource will ever be explored or developed. JP

MISCELLANEOUS

Air Quality

COMMENTS: A non-particulate indicator directly related to fossil fuel combustion should be included in air quality program monitoring.

1365

RESPONSE: Chapter V of the Revised Plan discusses air quality monitoring. Specific details regarding how monitoring will take place will be determined when the standards are quantified. LB

COMMENTS: By limiting logging and fire, excess CO² is not absorbed because stands of old trees do not absorb as much CO² as healthy, young trees growing. Targhee should consider its contribution to reducing global warming: the absorption of CO² by growing trees, the concurrent production of O², and the sequestering of CO² in wood products used in building. Calculations demonstrate that a 100-year harvest rotation would greatly offset CO² produced from burning of fossil fuels.

275

RESPONSE: Addressing global warming is outside the scope of the Forest Plan Revision. We acknowledge that CO² production and CO² consumption vary by various stand characteristics which are influenced by management activities. However, the range of these values would be quite small across the alternatives.

Converting large portions of the Targhee into some form of CO² absorption management regime would likely constitute a violation of the habitat needs for various species protected under the Endangered Species Act. It would also beg the larger question in global warming: if the CO² effectively entrapped in the tree is not effectively preserved, it will simply end up being released back into the atmosphere. The Targhee has literally no control over whether wood products fashioned from Forest timber will be effectively preserved. DP

COMMENTS: The Targhee is in the Yellowstone National Park class I air pollution zone and violates the Clean Air Act and Clarke-McNary Act if you go back to natural ecosystem management where seven times as much fire occurred.

275

RESPONSE: Forest Service air quality objectives are to "Protect air quality and related values, including visibility, on wilderness land designated class I by the Clean Air Act as amended in 1977" and to "protect air quality in wilderness areas not qualifying as class I under the same objectives as those for other National Forest System lands" (FSM 2120).

Prescribed burning activities are challenged by air quality restrictions but the Forest is not precluded from using this as a tool in meeting ecosystem management goals. LB

Cooperative Planning

COMMENTS: Cooperative planning include: coordinate planning with other federal agencies, such as the Beaverhead and Gallatin National Forests, Red Rock Lakes National Wildlife Refuge, Bureau of Land Management, and the Sheep

MISCELLANEOUS

Experimental Station; participate on the Henry's Fork Watershed Council; make explicit the necessity of cooperative planning among state and federal agencies and administrative units in the Greater Yellowstone area; and make specific, accountable provisions in the Plan for this cooperative management.

1276, 1333, 1365, 1387

RESPONSE: The Forest worked hard during the planning process to involve neighboring agencies, other organizations and the public as a whole in the development of the Revised Plan. The Forest conducted an Adjacency Study to better consider how management of the Targhee would fit adjoining land uses. We also conducted a number of information-sharing meetings with our neighbors. In keeping with the principles of ecosystem management, the Forest expects that coordination to continue. The Forest does not see the need to set up some kind of structure to ensure that this gets done, since it has been and will continue to be our standard method of operation.

The Forest actively participates and is involved with federal, state, and local agencies and organizations, such as those listed above. See the public mailing list in this appendix to see the breadth of contact through mailings alone. DP

COMMENTS: Incorporate information found in Upper Colorado River Basin (UCRB) study into the Plan; conduct ecosystem management conducted on a forest-by-forest basis. Consider the impact of not-yet-completed NFMA Forest Planning Rules change and the UCRB Management EIS in the Plan; inform the public of possible impacts of these documents; and use the best science from the UCRB EIS.

643, 1273b, 1343

RESPONSE: To the extent possible, the Targhee used UCRB information in preparing the Revision. Some of it was not completed or finalized in time for use in preparing the Revision. UCRB direction does not apply directly to the Targhee.

The Revision effort for the Targhee began in 1990--before the Forest Service formally adopted ecosystem management--and therefore practical implementation of EM on a forestwide basis remained an issue.

The Targhee considered the "not-yet-completed NFMA Planning Rules" in developing this Revision. Because they are not completed, it is impossible to speculate on their impact. DP

COMMENTS: Use this report as background information about the Targhee: the United Nations Food and Agriculture Organization World Resources: A Guide to the Global Environment 1996-1997, which states that the US lost 1.1% of its total forest cover in the decade 1982-1992, and that temperate forests suffered from intensive logging, air pollution, and fire suppression.

410

RESPONSE: The principles of ecosystem management require that the Forest look beyond the immediate boundaries of the Targhee in proposing its future management. In looking at ecosystem conditions, and beyond its boundaries, the Forest recognized the need to better address resource concerns on the Forest. To that end, the Forest reduced the scheduled timber harvest to sustainable levels; reduced cross-country motorized access; and provided

MISCELLANEOUS

improved riparian conditions. These efforts allow the Forest to continue to produce a wide range of goods and services for people while protecting ecosystems. DP

COMMENTS: The Forest Plan is part of a United Nations scheme to create a buffer zone around Yellowstone. Preserve our lands for Americans.

1264

RESPONSE: Employees continue to protect essential resource values on the Targhee, while providing a wide array of goods and services. The Forest has received no communications from the United Nations. DP

Cultural Resources

COMMENTS: Preserve and develop various cultural resources including the old dam on the Buffalo River, Yellowstone Railroad Tunnel and Trestles, Yellowstone Railroad sidings at Island Park and Thirsty Creek, Big Table Mountain Complex, and Camas Creek Arch. Work with the Island Park Historical Society and State Historical Society to review and prioritize "900" cultural resources on the Targhee.

696, 697

RESPONSE: Heritage resource preservation and interpretation opportunities are identified during heritage resource inventories and evaluations in compliance with the National Historic Preservation Act. We are currently focusing on the enhancement and interpretation of the Birch Creek Charcoal Kilns, and Mesa Falls Lodge. Other heritage resources will be prioritized in terms of funding, site significance, and cooperation with special interest groups such as the Island Park Historical Society. SW

COMMENTS: Homesteaders should receive the same respect for ancestors as do Native Americans.

1256

RESPONSE: Under the Archaeological Resources Protection Act of 1979 as amended in 1988, all historic properties 50 years or older receive the same consideration. AS

COMMENTS: Remain sensitive toward Native American cultural traditions when implementing management prescriptions.

1185, 1348

RESPONSE: Sensitivity to Native American cultural traditions is mandated by the American Indian Religious Freedom Act and the National Historic Preservation Act. The Final Revised Plan is in compliance with these documents. AS

COMMENTS: Follow procedures established in the National Historic Preservation Act Section 106 and Advisory Council regulations 36 CFR Part 800. Provide surveys, evaluations, and protection of significant historic and archaeological sites prior to disturbance.

389

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RESPONSE: This statute is routinely followed on the Forest. The direction is not repeated in the Forest Plan. AS

Visual Quality Objective in Bigholes

COMMENTS: No justification of VQO of maximum modification in the area of East Slope of the Bigholes (Prescription 7.1).

1277

RESPONSE: The prescription in this area was changed to 5.1.3 (b) in the Revised Plan. This prescription does not allow clearcutting and the VQO was reduced to a more conservative range of partial retention to modification. AS

Education

COMMENTS: For an up-to-date administration and informed public, make education an integral part of Forest management. Do a better job of educating about: degradation to the forest; and ecological, social, and economic implications of each alternative. Allocate funds to mount an education campaign on the biological roles of fire, insects and disease, road building, logging, grazing, and mining. Implement scientific standards accompanied by an active public education program. Educate farmers and loggers about forest devastation, such as that in Thailand where over 60% of forests were logged or cleared resulting in drought, erosion, unproductive lands, and dire social consequences.

399, 507, 1364, 1365

RESPONSE: Education is an integral part of the forest management program. The Forest recognizes the need to educate others and ourselves. The Forest provides educational opportunities at fairs, schools, field trips, outdoor events, with the media; in brochures and signing; in environmental documents and many other outlets within personnel, time and financial constraints.
DP/AM

Fungi

COMMENTS: Acknowledge role of fungi in the forest. Inventory fungal flora in various regions with various age classes. Use the data in developing plans to manage the ecosystem, and have a professional mycologist monitor and evaluate the fungi present in the Forest. Develop standards to limit the harvest of fungi species and other natural resources that could be negatively impacted by commercial or personal exploitation. (CROSS REFERENCE: Monitoring; Ecosystem Management)

731, 1273b

RESPONSE: Fungi are important to effective ecosystem function in a varied, complex way. Inventories have not been conducted on the Forest. This data is not essential to understanding Forest ecological processes or evaluating effects on fungi or other resources from proposed management direction in the Revised Plan. Commercial mushroom gathering is not significant on the Forest and no significant increase is expected to occur in the next decade. Personal gathering is minor and extremely limited in scale and largely associated with

MISCELLANEOUS

access availability by the public. The effects of incidental gathering that occur are equally limited and not significant. The access restrictions in the Revised Plan will likely limit mushroom gathering more than the current situation. Inventory, monitoring and evaluation by a professional mycologist are not believed to be necessary. Implementation of the Ecological Processes and Patterns direction for Properly Functioning Condition (Revised Plan, Chapter 2) will provide for sustainable conditions for fungi. No additional direction is needed to protect or allocate fungal resources. Should a concern develop which requires more specific action, the Revised Plan provides the necessary direction to respond. RR

Land Exchange

COMMENTS: Recommend land exchanges between the Forest Service and private land owners or public land agencies. Go ahead with such proposals because they would benefit local economies, protect critical areas, and reduce "strip" development along highways. Study and incorporate the proposals contained in the Fremont County Comprehensive Plan, Policy 5 (Page 11). Clarify why land exchanges are discussed in the old plan but not in the new plan. Include these in the Right-of-Way Plan, Endorsement Plan, and Acquisition Plan. Resolve conflicts between commercial leasing of state lands and Forest Service objectives.

65, 314, 697, 723, 1276, 1342, 1351

The Forest Service should not swap land with Targhee Ski Resort.

F-G-P(1)

RESPONSE: The Forest carefully considers all proposed land exchanges. The lands section in the Supervisor's Office is charged with monitoring a Lands Acquisition Plan and a Right-of-Way Plan, for instance. Because those plans are subject to annual update, they are not physically included in the Forest Plan Revision. DP

Planning Process

COMMENTS: Forest Supervisor and staff did an excellent job revising the Plan and EIS and they did a good job summarizing and presenting information to the public. Appreciate the hard work that went into revising the Plan; appreciate the Forest Service creating alternatives and inviting public comment because significant time and resources went into developing each alternative.

181, 331, 432, 725, 1177, 1269, 1398

RESPONSE: Thank you for expressions of support. DP

COMMENTS: Don't just keep and publish comments that agree with your plan; explain the reason for public input since the plan did not change to reflect public's desire to retain motorized use of trails; public comments indicate that people feel the government is excluding them from public lands and reforms are not in their best interests; and wouldn't have known about plan if "motorized" people hadn't advertised in the Post-Register. Plan revision process did not have true public involvement, led to polarization rather than consensus and acceded to demands of environmental groups. The planning process

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forces us to choose between the good, the bad, and the ugly and ended up with the ugly (3M), which is not acceptable.

219, 262, 453, 1202, 1365, 1448b

RESPONSE: The Revision process received extensive media coverage. Thousands are on the Revision mailing list. Public meetings occurred on Saturdays, weekdays and evenings in Idaho, Montana and Wyoming. The Forest used every avenue available to notify people about meetings.

All comments were reviewed and addressed. Many people disagree with the draft plan. Because a segment of public does not get its way does not mean they were ignored or excluded. In selecting the preferred alternative the Forest considered public and other agencies input; the entire body of established laws, regulations and other direction; science; other plans; the needs of the resource; economics; and social considerations. DP/AM

COMMENTS: The planning process established an adversative atmosphere, did not adequately disclose scientific information or legal constraints, and told state and federal agencies that they had same status as individuals and they must get consensus from citizens to implement their mandated goals. For future planning, use a complete scientific analysis in cooperation with other agencies, Indian tribes, and groups; conduct public scoping to determine needs and recommendations; use scientific analysis to determine methods of achieving goals; and present scientifically based alternatives to the public.

766

RESPONSE: The Forest worked to get the various members of the public and the various government agencies talking together and there were some successes. Some interpreted this as creating an adversarial atmosphere. The intent of the meetings was to allow people to work out their problems as they discussed them.

The special status of the Tribes and agencies working on the Revision was not abridged. It is guaranteed by law and regulation.

Since all power flows from the people, they can change results through the legislative process if agency meetings are unsatisfactory.

The Forest used and will continue to use the best available science. Scientists have different views as to what constitutes a complete scientific analysis. Scientific information was shared at meetings--such as one on Saturday dealing with wildlife and motorized access, and another that explained the FORPLAN model. The Forest will continue its efforts to improve cooperation, coordination, and scientific knowledge with the Tribes, agencies and interested groups. DP

Public Lands

COMMENTS: Oppose public lands being sold to private individuals, as happened in Texas where there now are no more public lands because setting aside public land is one of the smartest things America ever did. Public lands belong to all of us, are priceless and not for sale to highest bidder, and are irreplaceable. The key word is public, not private as some environmental groups and individuals think.

6, 348, 408, 1449

MISCELLANEOUS

The federal government takes land away from the public, and proposing more wilderness is extremist; take public lands back from the federal government.

1447a

RESPONSE: Your comments for and against public lands are acknowledged. The Revised Plan allows for land exchanges where high environmental values would be realized and where high environmental values could be irretrievably lost. Land exchanges are also targeted for inholdings that would make the Forest easier to manage. Site-specific NEPA documents are prepared for all land exchange proposals, allowing public concerns and comments. The Forest Service has no authorization to sell National Forest System lands. KA

Sensitive Plants

COMMENTS: Ensure compliance with procedure and biological requirements for sensitive plants.

1273b

RESPONSE: Compliance is required by Forest Service direction. DP

Island Park

COMMENTS: We plan to live in Island Park (IP) and practice low-impact living; everyone else should do the same. IP is our playground where we fish, hunt, and use RVs. Don't make it another Yellowstone where people are herded through on crowded highways. Force the snowmobile industry to clean up emissions because IP smells like oil in winter.

266, 407, 511

RESPONSE: The Forest will try to retain the natural setting and recreation opportunities that you enjoy in Island Park. The area is experiencing a great deal of growth and building on private land over which the Forest has no jurisdiction. Cleaning up snowmachine emissions is outside the scope of the Revised Plan. DP/AM

Two-Top, D-2

COMMENTS: Continue to deny the once-proposed Two Top Communication Site and recognize your responsibility to maintain aesthetic value of the area.

1276

RESPONSE: The Final Revised Plan does not establish Two Top as a communication site. The Forest recognizes the aesthetic value of the area. DP

D-2, D-3

COMMENTS: Close the Island Park, Ashton, and St. Anthony Ranger Stations and use the money for something else.

1321

MISCELLANEOUS

RESPONSE: We have been downsizing our organizations to meet budget limits and are currently managing the Ashton and Island Park Districts under one Ranger. In addition we are sharing many forest staff functions with the adjoining Caribou National Forest. The idea is to reduce overhead and put more of our resources on the ground. However, we also need to provide for service to visitors, so the offices will remain open. JR

Jedediah Smith Wilderness, D-3

COMMENTS: The Jedediah Smith Wilderness was better, had fewer people, less litter, less competition, before it was designated a wilderness.

645

RESPONSE: The act of designating a wilderness can increase its use and it can be "loved to death". However, the standards and guidelines adopted for the Jedediah Smith should help to address these concerns. JR

South Fork Snake River

COMMENTS: Manage South Fork in compliance with 1991 Snake River Activity/Operations Plan.

766

RESPONSE: The two management prescriptions identified for this area stipulate that the management direction contained in the Snake River Activity/Operations Plan applies. DP

Big Holes

COMMENTS: Do not log the west slope of the Big Holes as a means of fire prevention.

212

RESPONSE: Virtually all of what might be described as the west slope of the Big Holes falls into prescriptions 5.1.4(b), 3.2(g) and 2.7(a). Timber harvests are scheduled in the 5.1.4(b) prescription, but not in the others. No specific need is identified at this time to log this area for fire protection. DP

COMMENTS: Closing the Big Hole Mountains discriminates against those who do not have the money to pay the government for violating Wilderness designation. Allowances are made only for those with the money to pay, like Jackson Hole airport.

311

RESPONSE: The Revised Forest Plan does not recommend the Big Hole Mountains for wilderness. DP

MISCELLANEOUS

Clark and Teton County, D-5

COMMENTS: Work with the University of Idaho Department of Economics and Rural Sociology regarding management impacts on Clark and Teton Counties.

1384

RESPONSE: The Forest consulted the latest publications from the University of Idaho for use in our analyses. DP

Want Management Changes

COMMENTS: Recognize your duty to protect the natural heritage and not concede to logging contractors or consumptive uses because local biases and politics have led to mismanagement. Insure sustainability and protection of wildlife and resources. Keep Idaho wild and protect Targhee National Forest resources against those who want to use them up. Protect natural diversity and prevent extirpation of species because Forest Service has not taken an ecological approach in the past. Strengthen the DFPR because it is disheartening to fly over the forest and see all the clearcuts and provide tourists with a positive first impression. Protect watersheds, prohibit clearcutting, restore degraded areas, protect wilderness, secure migration corridors, and keep ORVs out of wilderness study areas, for our children's sake. Keep the Targhee as a place that is sacred, inspiring, and reminiscent of Handel's "Verdant Meadows, Stately Forests."

157, 189, 226, 293, 320, 613, 620, 654, 658, 766, 1273b, 1312, 1365, 1380, 1396, 1401

RESPONSE: The Forest is managing for a sustainable ecosystem; providing for natural diversity; and promoting the recovery of threatened, endangered or sensitive species. In doing this, people will still have the opportunity to use its goods and services.

The visual effects of the past mountain pine beetle epidemic and subsequent harvest of lodgepole pine are fading. The use of clearcutting is limited, watershed protection has increased, and efforts are underway to improve various resource conditions. The prescriptions identified in the preferred alternative provide important habitat connectivity. The Palisades Wilderness Study Area is being managed as directed by law.

The Forest acknowledges your impression that the Targhee is a place that is sacred, inspiring, and reminiscent of Handel's "Verdant Meadows, Stately Forests." We do not expect anything in the preferred alternative will change that impression. The preferred alternative is not Bradamante to your Ruggiero. DP

COMMENTS: There should be no change because cattlemen and loggers have always cared for the forest; leave things alone, there is too much wilderness now; the Targhee has been mismanaged and should consider the plan of the Teton County Commissioners; likes past management.

229, 293, 525, 738

RESPONSE: Alternative 1 would continue existing Forest management (with some changes) into the future. The Forest selected alternative 3M (Final Revised Plan) instead because it provides a better response to the various issues. We

MISCELLANEOUS

did not identify a conflict between the Revised Plan and Teton County's Comprehensive Plan as amended on March 11, 1996. DP

Consumptive Uses

COMMENTS: Oppose all logging, grazing, mining on the Targhee because of impacts on soil, water, wildlife, fish, vegetation, visual qualities, roadless and wilderness resources.

276

RESPONSE: Logging, grazing, mining, recreation and other human uses have impacts on resources. Human use is part of the ecosystem. The multiple-use mandate requires us to care for the land and serve the people. DP/AM

COMMENTS: Support removal of forest products because removal is no more harmful than fire and nature can recover from anything.

296

RESPONSE: Nature's recuperative powers are remarkable--though not unlimited. The Revised Plan provides a sustainable ecosystem that in turn, provides people with a variety of goods and services. DP

Population

COMMENTS: National Parks, National Forests and wilderness areas are exploding in use due to population explosion. Change the way we use land because people must realize that the more children they have, the more things will change. As population increases there will be a greater need to use our forests. If people are crowded into a smaller space, these areas will become overused.

250, 527

RESPONSE: The Forest anticipates increased use and the Revised Plan responds to it. DP

User Fees

COMMENTS: Establish a systematic-comprehensive system of user fees within the confines of law. Use funds to support mitigation of user impacts, ecosystem monitoring, acquisition of new lands, environmental education, and administrative costs. Integrate a permit system into the user fee system to control impacts in a high-intensity use area. Maximize public access while preserving biological diversity, and be available to a reasonable proportion of commercial and non-commercial users.

1365

RESPONSE: Establishing such a system is outside the scope of the Forest Plan. Direction for establishing fees comes from legislative action. Congress recently authorized (by the 1996 Omnibus Consolidated Recissions and Appropriations Act) a system for evaluation of fee collection potential for a variety of major types of recreation use. The Forest Service is currently evaluating new fee proposals known as "Fee Demonstration" projects to demonstrate the feasibility of a comprehensive system of user fees. This

MISCELLANEOUS

authorization allows 80% of fees to stay at collecting site for administration and maintenance. Permit systems are determined by area management plans and are also not part of the Forest Plan. AS

COMMENTS: Improve management of utility corridors. Designate road closures where there would be no effect on access to corridors for maintenance and emergency activities. Refer to the 1993 Western Regional Corridor Study when considering land use that may affect existing or proposed corridors. Provide access to and maintenance of Right-of-Way in accordance with special use permits, land use grants and easements. Encourage ROW vegetation management which reduces impacts while enhancing ecosystem values. Require utility companies to verify the condition of some access roads and the usefulness of several roads that cross streams.

Show the proposed line from Swan Valley Substation to Teton Substation and associated access roads; add the Targhee to Drummond line and the section of Drummond to Madison line from Macks Inn to Madison to the Forest Geographic Information System and maps. The management prescriptions for the Targhee to Drummond line in Table 1 were determined using Map #10, Alternative 3M, in the Forest Plan DEIS and may be misidentified in Table 1. Create a new management prescription with standards and guidelines for transmission corridors that applies to all current and potential corridors identified by the Western Utility Group. Reclassify all existing and potential transmission line corridors under Management Prescription 8.1 concentrated development area. Clarify in Forest Plan and EIS how transmission line corridors will be managed given the current management prescriptions in the DEIS. Allow utilities to adequately construct, operate and maintain lines and corridors.

1279

RESPONSE: The Forest basically agrees with your proposals and used the Western Utility Group's maps. The Revised Plan shows larger power lines with their designated corridors and applies the 8.1 prescription to them. The Plan shows existing lines and not potential, unless an approved location was identified. New proposals need an analysis. All other lines or corridors that run through prescription areas and forestwide standard and guidelines (FWSG) will apply. Most utility corridors will require a completed EIS, EA or MOU and an operations and maintenance plan for work activities within the corridors. LAB

COMMENTS: Because clearcuts destroy the aesthetics and possibly devalue property of an area, reconsider Objective 1, 5.2.2 - Silviculture practices cannot maintain visual quality, much less emphasize it; the Forest Service cannot compete with nature. Add as Objective 7, 5.2.2: "Maintain or enhance inherent values associated with fish, wildlife, and vegetation of the area."

325, 697, 1446

RESPONSE: The purpose of prescription 5.2.2 is to maintain visual quality through the use of "natural vistas." Therefore, clearcutting would not likely be used. The description states, "signs of commercial harvesting will generally not be evident." The objective (#1) is correct as written in the context of the prescription description. With the limited resource activity

likely to occur on this prescription, the additional objective (#7) as suggested is not warranted. DP

Intermingled Public/Private Lands

COMMENTS: The east slope of the Big Hole mountains is of high value for a variety of wildlife. This habitat is threatened because of human population growth in the Teton Basin area. Reconsider the 7.1(b) designation because it will lead to degradation of habitat and wildlife under the guise of fuel management.

643, 1277

This prescription allows timber harvest outside the ASQ and thus in areas not designated as suitable for timber harvest. "Fuels management" is too broad and vague to provide a basis for management in this ecologically diverse area fuels management should not be conducted to protect isolated homes and the Targhee National Forest should communicate this policy clearly to the public.

643, 1277

Prohibit Forest Service land exchanges that result in additional private development in areas along the existing Forest boundary.

643

At a minimum, predesignate the area currently outlined as 7.1(b) to match the adjacent prescription 3.2(g). Limited areas of concern for fuels management within this area could be identified and a supplemental NEPA document involving the public should be undertaken to evaluate actual fire risk, potential management options and their chances of success and impacts to other resources.

643

Concerned about the intermingling of public/private lands in this area because I am a home owner. However, it is ultimately the homeowners responsibility for fire breaks.

325

Explain to the public that the intention of this prescription was to construct a fire break to reduce the chance of fire for dwellings, and should apply to the west side of the Tetons. Recommend same prescription as Henry's Lake area rather than 7.1 (a&b).

1360

RESPONSE: The Forest considered a wide range of management intensities for this area. They included Recommended Wilderness (1.3), Elk and Deer Winter Range (2.7(a)), Semi-Primitive Motorized (3.2(g and h)), and Timber Management (5.1.3(b)).

Based on the prevailing and anticipated future use of adjoining private lands, legal requirements to address safety and property rights, the many issues facing the Forest, and the assessment of potential environmental effects, the Forest selected management prescription 5.1.3(b) in the Final Revised Plan. DP

MONITORING AND ENFORCEMENT

General Monitoring

COMMENTS: Management actions on the Targhee National Forest need to be monitored to ensure no negative environmental impacts occur; clarify how monitoring objectives will be met when objectives in 1985 Plan were not; monitoring activities to date reveal need for rigorous, ongoing monitoring of forest management; all monitoring and enforcement plans should include work load analysis; monitoring programs are needed to identify current status of forest plan relative to goals, identify accomplishments and future management direction; Chapter V, Monitoring and Evaluation does not really address those two topics well in relation to forest operations, especially as they relate to 3M, lacks ecosystem view and appropriate spatial and long term temporal perspective.

282, 389, 643, 690, 699, 766, 1446

RESPONSE: Forest Plan monitoring is required by regulations at 36 CFR 219 which implement the National Forest Management Act (NFMA). It is designed to measure whether or not the agency is complying with standards and guidelines in the Forest Plan, and whether or not that direction is bringing about the desired results.

Forest Plan monitoring is part of a larger program of monitoring which includes scientifically rigorous experiments and trials usually conducted by the research arm of the Forest Service; work program monitoring such as the administration of special use permits (such as for grazing) and contracts (such as for timber sales); and work required to show compliance with certain laws or regulations (such as regeneration surveys). In addition, individual projects may have monitoring associated with them as mitigation or other such commitment. This is explained in the first part of Chapter V of the Final Revised Plan.

Under one or more of the above, management actions will be monitored to show whether project outcomes and environmental impacts are within limits predicted or specified in the Forest Plan and project-level analysis and decision documents. We anticipate issuing a yearly report to the public on our findings.

The Monitoring and Evaluation Plan (Chapter V) in the Final Revised Plan complies with NFMA direction and will adequately monitor the application of management direction, and whether that direction is contributing toward achievement of desired conditions. This monitoring plan is more realistic and achievable than was the original Forest Plan monitoring plan. For example, the items monitoring Management Indicator Species in the original Plan called for monitoring populations of certain species that proved to be difficult or impossible to accurately count. The methods planned in the Final Revised Plan comply with NFMA requirements, are more practical to implement and will provide the information needed to determine if a course adjustment is warranted.

Funding of monitoring activities has been a concern for many years. Although we have tried to streamline the monitoring program we acknowledge that all items may not be funded. We have prioritized the items in the monitoring plan to indicate the information that is most crucial to operating the Forest under the revised guidance. On the basis of comments on the Draft we raised the priorities of several items including riparian forage

MONITORING AND ENFORCEMENT

utilization, achievement of road density standards and effectiveness of road closures. EF

Funding

COMMENTS: Monitoring is essential so commit enough funding to ensure it is carried out; effectiveness monitoring is important, and though it costs more, funding must be dedicated; clarify what decision process will be used to determine priority in allocating funds; clarify how the Targhee will monitor and enforce priority items with shrinking budget and staff; prioritization scheme must ensure that monitoring will be completed, monitoring must not be dependent on budget but be tied to each project, which also allows flexibility; funding must be provided to enforce restrictions on access or motorized use; to maintain a watchdog program, commit more funding to research and monitoring for adaptive management.

356, 432, 444, 643, 690, 695, 1273b, 1446

RESPONSE: We agree that monitoring is important to indicate the health of Forest resources and whether revised management is warranted. The full monitoring program outlined in the Final Revised Plan, though streamlined to an extent, is still expensive, and we anticipate it will not be fully funded in most years. We will do the best job we can to implement the plan by combining items with similar indicators, seeking out partnerships where appropriate, and other means.

Monitoring can be tied to individual projects when, for example, it is included in the mitigation of environmental effects. In these cases it is an integral part of the project decision, and project implementation may then be contingent upon funding of the monitoring. These monitoring items are usually specific to an individual project rather than forestwide. Adaptive management can be implemented in this way if a project includes new technology or scientific basis and should be rigorously studied. EF

Funding/Monitoring Recommendations

COMMENTS: Use citizen monitoring program to educate users on Forest regulations; take an adaptive approach to management and actively involve citizens in monitoring and project implementation; use personnel who previously administered timber activities to monitor and enforce Plan; establish a systematic-comprehensive program of user fees with the funds used to support ecosystem monitoring projects; incorporate monitoring into project development as planning, inventory, and monitoring are on same budget item; Monitoring and Evaluation Chapter should include how well management is meeting goals, and early warning system to permit timely adjustment if it is not.

282, 389, 1273b, 1312, 1337, 1365

COMMENTS: We agree that the public can play an important part in the overall Forest monitoring program. We look forward to the participation of individuals and user groups in monitoring activities as appropriate. Other avenues for public participation include partnerships and cooperative study agreements with academic institutions.

MONITORING AND ENFORCEMENT

Several surveys in recent years show a willingness on the part of the public to pay reasonable fees for the use of public lands to offset management expenses if services meet their expectations. We will look into opportunities to assess fees as appropriate and to use a portion of these monies for conducting monitoring.

Monitoring can be tied to individual projects when, for example, it is included in the mitigation of environmental effects. In these cases it is an integral part of the project decision, and project implementation may then be contingent upon funding of the monitoring. These monitoring items are usually specific to an individual project rather than forestwide. Adaptive management can be implemented in this way if a project includes new technology or scientific basis and should be rigorously studied.

We agree that forest plan monitoring should indicate how well management is meeting goals and objectives, and show when a change of management is warranted. The monitoring and evaluation plan in the Final Revised Plan complies with direction in the regulations implementing the NFMA and accomplishes these aims. EF

COMMENTS: Effectiveness monitoring will provide more useful information than implementation or validation monitoring; consider using photo plots as a monitoring tool.

432

RESPONSE: Photo points or plots have been used successfully in the past in many places as a monitoring tool. Trends in the condition of trails and riparian, upland and forest vegetation are but a few of the uses that can be made of this method. Video cameras and the advent of computerized image storage may provide opportunities for future use. We will consider any reasonably available tools in the Forest monitoring program where appropriate. EF

MULTIPLE-USE

Multiple-Use Comments

COMMENTS: Maximize multiple-use of the forest as the best way to get maximum income to citizens with minimum impact to the forest.

12, 271, 393

RESPONSE: The Forest recognizes the multiple-use mandate by the American people for managing their National Forests. DP

COMMENTS: Need to adequately acknowledge the principles of multiple-use. Obey the Multiple-Use Sustained Yield Act. Consider multiple-use in developing your Plan. Don't let excessive bureaucracy cripple multiple-use. Multiple-use has failed, not because it was a flawed concept, but because the federal government lacked the integrity to carry it out. Provide multiple-use in the revision -- it only directs what lands will be used for timber unless there is a legal restriction but, without wildlife standards for most of the forest, multiple-use management is violated.

309, 629, 714, 1340, 1369

RESPONSE: The Forest practices the principle of multiple-use management. Multiple-use does not mean that every use has to occur on every acre of forest. Forest management under the Revised Plan is a mix of management activities designed to address multiple-use management. For instance, much of the Forest will be managed as wilderness areas; as eligible wild, scenic, or recreational rivers; as grizzly bear habitat; for nonmotorized recreation use; for developed recreation; for timber management; and for range management. In addition, the Forest will protect important resources like air, water and visual qualities, and heritage resources.

Legislation and implementing regulations require the Forest to identify those lands which will be scheduled for timber harvest. Most of the Forest is not scheduled for timber harvest even though a great part of that land could legally be harvested. It is not scheduled for timber harvest for a variety of multiple-use reasons including wildlife needs, aesthetics, recreational uses, concerns relating to cost-efficiency, and resource protection needs.

The entire Forest is protected by all applicable laws and regulations, manuals, and handbooks whether the land is scheduled for timber harvest or not. Wildlife standards and guidelines exist on a forestwide basis. Individual prescriptions recognize that forestwide standards and guidelines (FWS&G) apply, but in some cases they specify a higher degree of resource protection than that afforded by the FWS&Gs.

Forest management under the Revised Plan is in compliance with the Multiple-Use Sustained Yield Act. All the alternatives presented in the EIS provide for sustainable harvest levels. DP

COMMENTS: Special interests or groups have more influence over determining uses than others; multiple-use is a right; animals' needs shouldn't outweigh the public's; and if loggers and grazers were going to hurt the land they would have done it years ago. Emphasize more uses such as logging, grazing, and recreation; emphasize less wilderness, animals, and environmentalists. Excessive bureaucracy is crippling effective multiple-uses. Local interests,

MULTIPLE-USE

hunters, fishermen, and wildlife must have more influence on determining multiple-use.

98, 268, 271, 285, 309, 439, 460, 461, 467, 468

RESPONSE: The Forest carefully considered all input, regardless of source, before arriving at a Final Revised Plan. Multiple-use management is the law. The American people, acting through their elected officials, set up a body of law and regulations under which Forest management is conducted.

This process can result in people unhappy with management of the forests since the laws are not passed by unanimous vote. The acrimony that ensues when the legislation was considered is revisited when the law is put into effect.

The Final Revised Plan has a multiple-use mix of management activities like logging, grazing, and recreation that are compatible with resource protection. The Revised Plan strikes a balance in which the needs of the resource are addressed and a wide range of goods and services are provided for the public. The Forest recognizes that our Revised Plan does not, and cannot, fully meet conflicting users' expectations. DP

COMMENTS: Past management over-emphasized timber or extractive uses; multiple-use must include fishing, hiking, wilderness, and/or environmental considerations. Valuing lands for timber to the exclusion of other uses is narrow-minded and antiquated. Choose an alternative with a balance of multiple-use and wilderness.

F-B(4), 185, 271, 625

RESPONSE: Thank you for your support of the Final Revised Plan. DP

COMMENTS: Disclose information on specifics of multiple-use and fisheries prior to their adoption.

1261

RESPONSE: The FEIS discloses information appropriate for a programmatic document. It includes consideration of other fishery studies like INFISH and the Draft UCRB publications. Additional analysis at a site-specific location will be conducted before actual projects are implemented. DP

COMMENTS: Oppose all logging, grazing, and mining because of impacts on all other resources especially in wilderness.

276

RESPONSE: These uses are consistent with the Forest Service's multiple-use mandate from the American people. Wilderness areas are managed pursuant to enabling legislation which normally eliminates logging and restricts mining and grazing. DP

COMMENTS: Ensure sustainable levels of wildlife, fish, recreation, and forest products.

174

MULTIPLE-USE

RESPONSE: The Forest provides for sustainable levels of ecosystem needs--including wildlife, fish, recreation and forest products. The Final Revised Plan is formulated with these ideas in mind. DP

NOXIOUS WEEDS

COMMENTS: In reference to Table III-1.1, "Noxious Weed Inventory" on Page III-38 of the DEIS: Please clarify if group of plants is listed by APHIS. Consider all plant species as part of a fully functioning ecosystem unless they are non-native.

1446

RESPONSE: Noxious weeds are not listed by APHIS; they are listed by the state. The species listed in the table are plants not native to the United States and have been designated by the States of Idaho and Wyoming as "noxious." When, in abundance, these plants are not part of a properly functioning ecosystem. WG

COMMENTS: DEIS needs to identify OHV and snowmobile use as a major source of noxious weed spread and address the implications of increased motorized use.

1365

RESPONSE: It is not the intent of the DEIS to identify all sources of noxious weed spread or the primary causes of infestation. Motorized recreation activity does aid in the spread of noxious weeds but is dependent on many factors. The Targhee has an approved forestwide EA for the control of noxious weeds. WG

COMMENTS: The DEIS does nothing to address the impacts of managing noxious weeds in the alternatives discussion, nor does it propose control strategy.

1368

RESPONSE: Noxious weeds and management are more clearly addressed in the FEIS in Chapters III and IV. WG

COMMENTS: The Targhee has too many noxious weeds and does little to limit weed spread. Could use grazing as a tool to control noxious weeds and add a standard requiring the use of weed free feed.

6, 333, 1312, 1351

RESPONSE: The Targhee has approximately 19,000 acres of noxious weed infestations. The number of acres treated yearly is dependent on budget and work force constraints. The Targhee has an approved NEPA document for the control of noxious weeds, which uses grazing as one of several approved control methods. All National Forest System lands require, through state law, the use of weed seed free forage of straw, hay, and mulch. WG

COMMENTS: Weeds are the biggest threat to viable ecosystem. Refrain from closing roads where old noxious weed infestation exist because this limits the ability to control the weeds.

432

RESPONSE: If needed for administrative purposes, "closed" (restricted) roads that are not permanently closed and obliterated will remain open for activities such as fire control, tree planting, or noxious weed control. For areas without road access, pack and saddle stock, biological control, mechanical control and backpack sprayers are available for use to transport people and supplies to weed infested areas. WG

RANGE

Social and Economic Concerns

COMMENTS: Grazing domestic livestock on the Targhee is supported. Respondents feel grazing should at least remain at current levels. Reasons supporting this use of the Targhee include: grazing can help sustain forest health; sustain rural economies; buffer Targhee from development pressure; enhance vegetation for wildlife; and, provide for multiple use.

153, 272, 285, 288, 300, 432, 473, 474, 514, 525, 661, 692, 709, 715, 720, 1202, 1259, 1335, 1391

Plan does not adequately recognize grazing as a part of the heritage and economic importance to Clark County. The value added to Clark County is very significant, with over 100,000 AUMs and a value of \$1040 per AUM per year, according to the IRS.

691

RESPONSE: A substantial livestock grazing program remains in effect under the Revised Plan which is consistent with management objectives for ecosystem management, wildlife, fisheries, and so forth. The projected levels of livestock grazing will maintain cultural heritages and most local livelihoods, while at the same time improve the land resource and value.

Although the Forest is not sure how the \$1,040 per AUM was generated, we recognize the economic importance of grazing to the area's economy. WG

COMMENTS: Grazing domestic livestock on the Targhee is not supported. Respondents feel grazing levels should be reduced and have more restrictions on implementation. Reasons for not supporting this use of the Targhee include: protection of habitat; protection of grizzly bear; protection of entire Greater Yellowstone Ecosystem; drastic increase in world population; and changes in the nature of beef production.

F-H(8), 7, 11, 77, 207, 266, 317, 328, 331, 650, 695, 733, 1185, 1203, 1299, 1335, 1348, 1392, 1393

RESPONSE: The Targhee is managed under the multiple use concept where potentially conflicting uses and values coexist. The consequences identified in Chapter IV of the FEIS project reductions in livestock use, commensurate with the management of other uses and consistent with numerous management objectives (ecosystem, wildlife, and riparian). Livestock grazing is an outcome of proper management of range and related resources. An actual adjustment (up or down) in AUMs will only occur with a site-specific analysis for each active allotment. WG

COMMENTS: Explain how the goals and objectives on page III-20 can be achieved while still maintaining grazing opportunities.

1446

RESPONSE: Livestock grazing is not the sole contributor to declining rangeland conditions. Fire, invasion of noxious weeds from a variety of sources, past inappropriate livestock grazing practices, road construction and recreation use are a few examples of causes contributing to the decline of riparian and rangeland health. As described in Process Paper J - Logic Used to Estimate Effects of Livestock Grazing on Riparian and Upland Vegetation,

RANGE

rangeland and riparian health can be improved with livestock grazing by implementing the Standards and Guidelines in the Final Revised Plan. WG

COMMENTS: All alternatives close an additional 98,214 acres to grazing. Do not think the analysis adequately provides the public an assessment of the economic impacts of closing this acreage.

228

RESPONSE: The 98,214 acres was an error in the DEIS; there are actually 95,408 acres. As explained in Chapter IV of the FEIS, the 95,409 acres are not presently grazed by livestock; in fact, some of these areas have not been grazed for nearly 10 years. There is no economic impact because no practical reduction in AUMs will occur. An economic analysis was conducted for the AUMs that would be lost when the sheep allotments would be immediately closed to improve grizzly bear and bighorn sheep habitat. These AUMs are authorized to graze on 125,853 acres. WG

Range Improvement Issues

COMMENTS: Supports the preferred alternatives' emphasis on riparian protection from cattle. Agree with the salting requirements and feels all new water developments should also be constructed outside riparian areas. (CROSS REFERENCE: Riparian, General)

204, 265, 697

RESPONSE: Thank you for your support. The Forestwide standards and guidelines and the Aquatic Influence Zone Prescription implement these concerns. WG

COMMENTS: Access behind locked gates on grazing allotments is crucial for permittees to effectively maintain fences and improvement structures. (CROSS REFERENCE: Access, Range)

432, 1378

RESPONSE: Permittees are allowed access behind locked gates to maintain range improvements as documented in the forestwide standard: "Permittees are allowed motorized access to maintain facilities. AMPs and annual operating plans will include direction that motorized access must be less than 1 to 2 vehicles per week. (This permitted access is not included in the OROMTRD) (S)" WG

COMMENTS: Cattle should be required to be quarantined for three days before they are turned on to National Forest land, to help prevent noxious weed spread.

204

RESPONSE: This is outside the control of the Forest Service. Only the States of Idaho or Wyoming could impose a quarantine on livestock. WG

RANGE

Site-Specific

COMMENTS: Range management guidelines for School Section Creek-Modoc Creek should be amended to include measures for minimizing conflict with grizzly bears and other predators.

1348

RESPONSE: Livestock grazing that occurs in grizzly bear management units (BMUs) have specific conditions that apply. School Section Creek and Modoc Creek are not within grizzly BMUs and so will not be managed with those special conditions. Future conflict could warrant site specific analysis.

Other predator conflict will meet the direction specified in the 1996 APHIS-ADC Environmental Assessment for Predator Damage in Southern Idaho which incorporates the existing Targhee National Forest direction. WG

COMMENTS: The following areas have prescriptions emphasizing range management; however, these areas contain or are near roadless areas and should be in prescriptions with wildlife habitat emphasis: Diamond Peak (lower elevations), Italian Peak (most of area), and Garfield Mountain (central portion).

695

RESPONSE: The Forest decided on the management for this portion of the forest and chose it as the preferred management. WG

Timber

COMMENTS: There should be no grazing in aspen and/or conifer regeneration areas.

697

RESPONSE: The Revised Plan provides for protection of regenerating conifer/aspen on a forestwide scale. This issue/concern is best handled within the framework of a site-specific project level or landscape level analysis where aspen and conifer regeneration are identified as key issues. WG

COMMENTS: Page III-21 (AMP) should read: "salting will also be placed at least 500 feet away from aspen and conifer regeneration (plantation and natural) that are less than two feet tall." A linear measurement would be better than a time measurement.

283

RESPONSE: Your suggested change was not adopted because there is a forestwide guideline in the Revised Plan that provides for the management of conifer regeneration and the placement of salt. WG

RANGE

Riparian

COMMENTS: Grazing is a major problem on some streams, but there is nothing mentioned about standards and guides for aquatic resources. Streams must be protected. (CROSS REFERENCE: Riparian, General)

359, 695

RESPONSE: Prescription 2.8.3, Standards and Guidelines for range and riparian and the Rangeland Monitoring Protocol will protect riparian areas and riparian-dependent species. The measures prescribed are based on research and on work conducted elsewhere and are the measures accepted by the Forest. RM

Questions Analysis

COMMENTS: Primary deficiency with the range program in the Plan and DEIS are: 1) inadequate utilization levels in riparian areas; 2) use of unreliable and/or outdated and unscientific data to estimate range condition and make predictions; and, 3) lack of a well conceived monitoring program. (CROSS REFERENCE: Riparian, Stubble Height)

432, 643, 690, 1194, 1206, 1401

RESPONSE: The riparian and upland utilization levels, the utilization standards, and other standards and guidelines will achieve the desired results. The standards and guidelines provide a moderate rate of recovery of degraded riparian and aquatic systems together with a moderately high level of quality fisheries habitat. Scientific literature supports this.

The data used to analyze the consequences in the FEIS was generated from the District range data files, which are updated annually. The foundation information in the range files are range analysis surveys conducted on the forest, for all but nine allotments (1,813 acres). This information is 25 to 30 years old. Those data were converted to Ecological Status in 1986 and were used in the 1991/1992 AMS. Based on professional judgement (sound principles conducted by well trained individuals), range trend is reflected in the FSRAMIS data base as riparian or upland acres estimated or verified as meeting, moving toward, or not meeting forest plan management objectives.

Each district provided estimates of how the capacity for each allotment would be affected by each of the alternatives. A 500 page document contains information about every Targhee allotment open to grazing. The consequences for each allotment, by alternative, is documented in terms of both AUMs and/or livestock numbers.

A rangeland monitoring protocol will assist in Forest Plan implementation. This will also outline the monitoring procedures for utilization and trampling criteria. Permittees will be trained by Forest personnel in implementing this protocol and will be held responsible for meeting the Standards and Guidelines of the Revised Plan. WG

COMMENTS: Page V-20, DFPR, Streambank trampling: to have a plan where an EIS approves something that has yet to be developed is not acceptable.

432, 643

RANGE

RESPONSE: The intent of this monitoring item is to help in the development and validation of this parameter. Some monitoring techniques are already available, but the Targhee wants to develop a site-specific monitoring protocol using methods that are proven reliable. WG

Wildlife

COMMENTS: Establish a standard and a monitoring plan for total use by both wildlife and livestock to determine if standards for livestock use are achieving the desired objectives for wildlife.

389, 643

RESPONSE: The grazing utilization standard applies to maximum allowable use of plants regardless of animal species (wildlife, livestock, or a combination of both). No matter which animal species utilized the plants as forage, livestock will be removed once the desired utilization level is achieved. Monitoring items for riparian and upland forage are outlined in Chapter V and a Rangeland Monitoring Protocol (in development). WG

COMMENTS: Too much utilization of upland shrubs and grasses on winter range degrades capacity and sustainability.

FS-9

Reserve as much forage as possible for wildlife, especially in winter ranges by reducing grazing.

389, 1203

RESPONSE: The standards and guidelines were modified in the Revised Plan to better address the winter range issue on a forestwide basis. This issue is best handled within the framework of a site-specific project level or landscape level analysis such as an Allotment Management Plan where big game winter range and livestock grazing are identified as key issues. WG

COMMENTS: The Targhee should consult with USFWS on all allotments within the grizzly bear Recovery Zone.

1446

RESPONSE: During the development of the Revised Plan, the Targhee formally consulted with the USFWS. Additional consultation will also occur during the NEPA process for site-specific range management proposals. MO

COMMENTS: Livestock have not impacted the wildlife other than to help them by creating more water holes.

661

RESPONSE: Impacts of livestock grazing on wildlife are complex. Some species are benefited by livestock grazing and some species are adversely affected by livestock grazing. The Revised Plan addresses numerous livestock/wildlife issues relating to grizzly bear, bighorn sheep, riparian areas, and winter ranges. MO

COMMENTS: Use the following habitat treatment standards for sage grouse: Vegetation manipulation (fire, herbicide, and mechanical treatments). Grazing

RANGE

management: To improve spring breeding habitat, manage for a healthy understory of perennial grasses and forbs and fall stubble height of ≥ 7 inches. To improve brood rearing habitat, manage to produce a fall stubble height of ≥ 4 inches.

766

RESPONSE: Forestwide standards and guidelines for big sagebrush/grassland habitats will provide for all species which use this habitat, including sage grouse. Future project level activities will consider sage grouse habitat needs on a site-specific basis. MO

COMMENTS: Wildlife will have to be accountable for use of forage (Page III-21, S&G 1). If it exceeds acceptable limits, agency responsible for wildlife management will have to remedy situation.

432

RESPONSE: Your comment is acknowledged. Management of wildlife populations is the responsibility of the state, although the Forest Service coordinates with the appropriate agency in wildlife management activities. WG

COMMENTS: Water developments should be prohibited in areas that will dramatically affect the quality and quantity of forage for wildlife & big game distribution.

389

RESPONSE: This concern is best handled within the framework of a site-specific project level or landscape level analysis such as an Allotment Management Plan where big game winter range and livestock grazing are identified as key issues. Also, the standards and guidelines were modified in the Revised Plan to better address the winter range issue on a forestwide basis. WG

COMMENTS: Removal of livestock carcasses or complete incineration is the only alternative that will prevent a bear from using the carcass. Grazing permits should assure such.

389

RESPONSE: This direction is presently incorporated into livestock grazing permits within Grizzly Bear Management Units. WG

COMMENTS: Add the following to Allotment Management Plans: management should maintain or improve edge, edge contrast, food & cover for wildlife; maintain key forage species in grass, forb & shrub communities on seasonal range; and develop an integrated range/wildlife condition class objective.

389

RESPONSE: The Revised Plan addresses these concerns in a variety of ways, such as: new upland forage utilization standards and guidelines; new riparian forage utilization standards and guidelines; aquatic influence zone management prescription; and management prescriptions 5.1.4, 5.3.5, and 5.4 which require maintaining large blocks of cover. MO

RANGE

COMMENTS: There is no analysis of existing or planned habitat conditions of small mammals, either those associated with range or with old growth.

1369

RESPONSE: The Revised Plan addresses these concerns in a variety of ways such as: Forestwide standards and guidelines for downed woody debris, old growth habitat, late successional forests, big sagebrush/grassland habitat, forage utilization, or snags. No small mammal populations were identified as threatened, endangered, proposed, or sensitive species, nor are they used as Management Indicator Species. MO

COMMENTS: There are no wildlife standards in range areas. This implies there are no wildlife values in these areas that can be impacted by domestic livestock. There are no standards for birds and small mammal habitat on grazing allotments. They are strongly influenced by amounts of litter thus profoundly impacted by grazing.

1369

RESPONSE: The forestwide standards and guidelines for wildlife apply to the grazing allotments, unless there is specific direction that overrides the wildlife standards and guidelines. The range utilization standards and guidelines apply to all species of animals which use the range forage. The aquatic influence zone management prescription benefits wildlife. Cross-country OHV travel is not allowed, which benefits wildlife. The forestwide standards and guidelines for big sagebrush/grassland habitats provide habitat for all species of wildlife which use this type of habitat. The consequences identified in Chapter IV of the FEIS project reductions in livestock use, commensurate with the management of other uses consistent with numerous management objectives (ecosystem, wildlife, riparian, and so forth). Livestock grazing is an outcome of proper management of the range and related resources. MO

COMMENTS: Nesting swan habitat cannot be managed without considering grazing; there are no grazing standards.

1369

RESPONSE: The aquatic influence zone management prescription applies to all trumpeter swan habitat. Also, forestwide standards and guidelines for trumpeter swans specifically addresses livestock grazing. MO

COMMENTS: There are no standards for wolf populations that may recover on the Targhee. There will be an unavoidable conflict between wolves and domestic livestock, the Plan indicates livestock will automatically take priority.

1369

RESPONSE: Forestwide standards and guidelines implement the requirements for the reintroduction of gray wolves as per the direction documented in the 1994 FEIS for the Reintroduction of Gray Wolves to Yellowstone National Park and Central Idaho, as described in Chapter III of the FEIS. WG

RANGE

COMMENTS: There should be no grazing in high quality grizzly bear food production areas.

1273b

RESPONSE: The Revised Plan will phase out domestic sheep grazing on an opportunity basis in all grizzly bear management units. Cattle grazing will be allowed, but must be done in accordance with specific forestwide standards and guidelines for grizzly bear habitat. MO

COMMENTS: To provide for big game security it also is necessary to direct livestock use away from big game security areas.

1273b

RESPONSE: We held several elk workshops with State Fish and Game agencies. Livestock use was not identified as an important consideration related to elk security for the Revised Plan. MO

COMMENTS: The Forest Service has only a preliminary understanding of what RNV is and so winter range for wildlife could not be adequately managed, i.e. grizzly controlled.

643

RESPONSE: This issue/concern is best handled within the framework of a site-specific project level or landscape level analysis where winter range and Properly Functioning Conditions (PFC) of winter range ecosystems are identified as key issues. The Revised Plan serves as an "umbrella" document for the environmental analysis of proposed projects at the Forest or Ranger District levels. The Revised Plan is not intended to provide or analyze specific "how to's" of project implementation. WG

COMMENTS: AMPs should be required to include number of AUMs needed to sustain deer and elk on their summer and winter ranges, as well as total AUMs of forage available on each allotment.

1206

RESPONSE: Forestwide standards and guidelines for forage utilization include the forage used by wildlife. Additional analysis and management direction will be handled within the framework of a site-specific project level or landscape level analysis where big game forage, habitat conditions, livestock grazing are identified as key issues. MO

COMMENTS: Should not close vacant allotments in Situation 2 habitat on D2 and D5.

413, 693, 767

RESPONSE: The sheep allotments in Situation 2 habitat on the Island Park and Teton Basin Ranger Districts will have grazing phased out on an opportunity basis as described in the Revised Plan. This is being done to support the recovery goals for grizzly bear. MO

RANGE

COMMENTS: Disclose the role of the Animal Damage Control (ADC) and include analysis of the impacts ongoing ADC activities will have on native wildlife species.

1364

RESPONSE: As per the direction specified in the 1996 APHIS-ADC EA for Predator Damage Management in Southern Idaho; the USDA Animal and Plant Health Inspection Service-Animal Damage Control (APHIS-ADC) carries out predator control activities on the Forest. The APHIS-ADC EA incorporates the existing Targhee direction, which analyzed the impacts to wildlife. WG

COMMENTS: On page III-20, wildlife should be considered a basic natural resource and forage production should be considered before other consumptive uses.

389

RESPONSE: The Revised Plan provides suitable habitat for all species of wildlife as far as we can discern. Forage production and forage utilization standards and guidelines apply to wildlife and domestic livestock. MO

Monitoring/Implementation

COMMENTS: Estimate what portion of the grazing allotments will actually receive monitoring of upland forage utilization.

643, 1206

RESPONSE: Utilization monitoring will be conducted in key areas on grazing allotments using key species. Key areas are representative of the suitable rangeland and are areas that are sensitive to changes in livestock management. Data extracted from these areas will be indicative of the management of the areas represented. The number of key areas on any specific allotment depends on the complexity of the allotment. This issue/concern is best handled within the framework of a site-specific project level or landscape level analysis where monitoring of livestock grazing is identified as a key issue. WG

COMMENTS: Explain whether overall use in an allotment will be averaged or will any use exceeding the standard be subject to management intervention.

643

RESPONSE: Briefly, livestock grazing capacity is based on proper use of key species in key areas. Each pasture or unit within a grazing allotment is evaluated. Allotments usually have one or more units/pastures, but in some cases the entire allotment is the unit/pasture. This is usually the case on allotments with small acreages or where having more than one unit is not practical. Accurate actual use records for each unit/pasture on the allotment are essential. The number of use days a unit/pasture receives when proper use is reached on key areas under a specific stocking rate and management scheme is the figure verified as the carrying capacity. Capacity is calculated by a ratio of utilization achieved per use days by livestock per grazing unit or pasture.

RANGE

If utilization standards in an allotment are exceeded, the Forest Rangeland Management Specialist has several management options, including removal of livestock from the unit or pasture. WG

COMMENTS: Show a point in time when maximums will be measured or achieved.
FS-9

RESPONSE: Utilization monitoring can occur more than once a year, depending on the resource issues and values associated with the allotment. This issue/concern is best handled within the framework of a site-specific project level or landscape level analysis where monitoring of livestock grazing is identified as a key issue. WG

COMMENTS: Clearly ensure that the South Fork is managed in compliance with 1991 Snake River Activity/Operations Plan. Make provisions to that plan to reduce grazing/riparian habitat conflicts on FS - BLM land.

643, 766, 1194

RESPONSE: The Revised Plan adopts all direction identified in the Snake River Operations Plan, which was jointly developed between the BLM and the Forest Service. Within this Plan is specific direction for livestock management activities and forage utilization criteria. The Revised Plan will amend the utilization standards in the Snake River Operations Plan, as needed. WG

COMMENTS: The success or failure of the Targhee to achieve range goals & objectives will depend on monitoring. Therefore state honestly what level of funding & priority status will be and own up to the fact that it probably won't get done. Livestock operators must be made to take more responsibility for monitoring through Targhee educating and holding them, through permits, accountable.

644, 1206

RESPONSE: The Forest has a process in place to take action, as necessary, to achieve better management practices in uplands and riparian areas. Presently, there are numerous methods that determine utilization levels and compliance with the terms and conditions of grazing permits. Monitoring items for riparian and upland forage in Chapter V show that, where concerns (wildlife or watershed) are present more monitoring will be done. This monitoring item was elevated to Priority Group 1. Funding levels on the Forest are appropriated by Congress, and, depending on the allocation, may effect the level of intensity of monitoring in any given year.

A monitoring protocol will assist in outlining the monitoring procedures for both utilization and trampling criteria. Permittees will be trained by Forest personnel in implementing this protocol and are responsible for meeting the Standards and Guidelines of the Final Revised Plan. WG

COMMENTS: BMPs for grazing were developed by the SCS. These are only supposed to be used as planning guidelines, not monitoring.

432

RANGE

RESPONSE: The Targhee does not use grazing Better Management Practices developed by the Soil Conservation Service (now known as the Natural Resource Conservation Service). The Forest decided on the components of the standards and guidelines for livestock management and the components of the forestwide monitoring program. WG

COMMENTS: Supports that plans will be flexible enough to incorporate any new scientific information concerning sensitive species.

1446

RESPONSE: Your comment is acknowledged. The Revised Plan is adaptable to changing conditions. WG

DFPR/DEIS

COMMENTS: Clarify whether utilization levels are averaged forestwide or if any use exceeding the standard is subject to intervention. Place more emphasis on maintaining/improving resource value ratings and less on utilization levels to be consistent with ecological approach. Only 10% of allotments have allotment management plans and these must have higher priority. Increase in timber sold or livestock grazing is possible without plan amendment, so therefore an increase in old growth habitat should also be possible without amendment. Clarify meaning of double starred note on page V-10, it appears to be an excuse for Forest to not meet legal and ethical responsibilities.

282, 389, 413, 643

RESPONSE: Livestock grazing capacity is based on proper use of key species in key areas. Each pasture or unit within a grazing allotment is evaluated. Allotments have one or more units/pastures. In some cases the entire allotment is the unit/pasture. This is usually the case on allotments with small acreages or where having more than one unit is not practical. Accurate actual use records for each unit/pasture on the allotment are essential. The number of days a unit/pasture receives when proper use is reached on key areas under a specific stocking rate and management scheme is the figure verified as the carrying capacity. Capacity is calculated by a ratio of utilization achieved per use days by livestock per grazing unit or pasture. WG

In-place direction for the administration of grazing on allotments is designed to protect resources and ensure compliance with established standards and guidelines. Utilization studies and exclosures (used as "baseline" comparisons) are monitored across the Forest to determine if use levels are appropriate. As the Forest's work force decreases, the Forest will depend more on the permittees to help with monitoring, to move their livestock when needed and to maintain improvements and fences. The Revised Plan, allows for a cooperative monitoring strategy (including water quality monitoring) that will result in good quality Forest resources. RM

Resource Value Rating (RVR) is defined as the value of vegetation present on an ecological site for particular use or benefit. RVRs may be established for each plant community capable of being produced in an ecological site, including exotic or cultivated species. The Targhee does not have site-specific RVRs established for any rangeland vegetative community. This issue is best handled at the site-specific project level. Utilization

RANGE

studies are part of the short term monitoring programs. Implementing the utilization levels described in the LMP will achieve desired DVCs (ecological status) of its rangeland resources. WG

A analysis shows that currently 8.7% of the forested acres on the Targhee National Forest meet the definition of old growth as described in "Characteristics of Old Growth Forests in the Intermountain Region" (USDA Forest Service 1993). Forestwide standards and guides provide that a minimum of 10% of forested acres in each principle watershed should meet old growth characteristics, where such vegetation exists. The existence of more or less than this amount would not necessitate a Forest Plan amendment. However, a change in the guideline based on new information would require that the Plan be amended. EF

Regarding the Monitoring and Evaluation Plan on page V-10 of the Draft Revised Plan, the double-starred note at the end of the item for monitoring of Water Quality Limited Streams (WQLS): This note is not intended to provide an avenue of relief from this monitoring item. The note stresses the importance of conducting the monitoring shown in the item, which is to verify the water quality in listed streams. The Forest boosted the item to a #1 priority between the draft and final Revised Plan. EF

COMMENTS: Wording on pages III-20 thru III-22 should be changed to read that data will be collected, not should be collected.

389

RESPONSE: The word should is usually used in the context of a Guideline (G) and the word will is most often used with a Standard (S). Your comment was used to check the appropriate wording for standards and guidelines. WG

COMMENTS: Utilization rates in Table 1 page III-21 are consistently 5-10% higher than levels recommended in the scientific literature and should be modified.

389

RESPONSE: The utilization standards for upland vegetation in this table were modified. They were reduced 5% between draft and final. The revised utilization levels are considered to be maximum levels unless a written rationale is provided by an interdisciplinary team to deviate from these by increasing the maximum utilization standard. Utilization levels are dependent on site-specific circumstances such as kind of livestock, season of use, ecological status of the vegetation, management objectives for the area, stocking rate and intensity, and key plant species. Utilization monitoring can occur more than once a year, depending on the resource issues and values associated with the allotment.

This concern is best handled within the framework of a site-specific project or landscape level analysis where monitoring of livestock grazing and utilization levels are identified as key issues. Some references used in the development of these utilization criteria include: Desk Guide October 1993 Intermountain Region Ogden Utah, USDA Forest Service. Forage Utilization Standards and Guidelines for Pacific Northwest Region, USDA Forest Service, (A Process Paper by Dr. Leonard A. Volland, April 18, 1990);

RANGE

Managing Intermountain Rangelands-Sagebrush Grass Ranges, Intermountain Forest and Range Experiment Station, USDA Forest Service (Blaisdell, Murray, and McArthur), October, 1982; livestock Grazing Impacts on Rangeland Ecosystems, Holechek, July/August, 1980; application of New Theories on Plant Responses to Grazing, Rasmussen, Utah State University, 1995; Effects of Livestock Grazing at Proper Use on the Dixie National Forest, October 1995; and Winward, A.H., personal communication on September 24, 1996. WG

COMMENTS: Establish standards and guides for forage utilization standards, for upland and riparian areas.

FS-9

RESPONSE: The utilization Standards and Guidelines are located in Chapter III of the Revised Plan under Range. WG

COMMENTS: Section on grazing in an RNA should be reworded to say: "Prohibit livestock grazing, except when it is used to approximate a natural grazing regime for maintaining the native vegetation. No salting, water developments or other range improvements are allowed in RNAs." (s) (CROSS REFERENCE: RNA)

612

Standards & Guides for range are grossly inadequate.

643

RESPONSE: Both the FEIS and the Revised Plan were significantly modified to address these concerns. As changed, the grazing standards and guidelines in Management Prescription 2.2 in the Revised Plan are now consistent with policy identified in FSM 4063 and the Establishment Records for existing RNAs. WG

COMMENTS: Page III-49 last paragraph. The last sentence should read "Prior to the establishment of six breeding pairs, depreddating females and their pups will be captured and released at or near the site of capture, one time prior to October 1. If depreddations continue, or if six packs are present, females and their pups will be removed."

1446

RESPONSE: The last sentence was corrected to read as you have stated it in the Revised Plan. MO

COMMENTS: On page 84, the word "consider" should be changed to "use" to be consistent with the other areas.

1446

RESPONSE: Your comment was considered. The Forest decided that "consider" was still appropriate for management of this portion of the forest. WG

COMMENTS: Page III-122, Range, last paragraph. This item should be replaced with the statement shown under 3.A, on page III-21 to be consistent.

1446

RANGE

RESPONSE: This is not inconsistent because these are two separate issues. One page deals with dispersed recreation and the other deals with conifer regeneration. WG

COMMENTS: Page III-20, Objectives - Under objective 3, change the Roman numerals to ordinal numbers for consistent format.

1446

RESPONSE: Thank you for your observation. WG

COMMENTS: Reword the following guideline so that it does not suggest that projects can only be done if the FS provides 50% of the necessary funding... Range Standards and Guidelines 3.E on page III-22.

1446

RESPONSE: The Forest decided not to add your suggested changes. WG

COMMENTS: Summarize and/or elaborate on the outlined process in the National Programmatic Agreement, option 2 referenced on page III-22, Range Standards and guidelines 3.G.

1446

RESPONSE: Briefly, this agreement guides the Forest compliance with the National Historic Preservation Act (NHPA) for rangeland management activities. Option 2 provides criteria and standards for determining inventory areas and methods, the circumstances that prompt heritage resource evaluation, and standard protective management measures. This lengthy agreement (20 + pages) is located in the Forest files. The Revised Plan does not include specific direction found in manuals, handbooks and Memorandum of Understanding. WG

COMMENTS: Rewrite Range goal #2 as: "Domestic livestock grazing is permitted where it does not conflict with the maintenance of plant and litter cover, nutrient recycling, forage for wildlife species, seed production, or the restoration and maintenance of riparian communities.

1194

RESPONSE: Your comment was considered. The Forest decided on the components that made up the Range Goal #2 as the preferred goal statement. WG

COMMENTS: Statement on livestock conversions on page III-21 in 3C should only allow conversions if "they will serve" resource needs. (wildlife, soils, recreation).

341, 389

RESPONSE: Your comment was considered. The Forest decided to remain with the same components that made up the Standards and Guidelines. WG

COMMENTS: List criteria on page III-20 that will be used to determine desired vegetative conditions for site specific areas.

1446

RANGE

RESPONSE: This concern is best handled within the framework of a site-specific project level or landscape level analysis. Desired Vegetation Condition is a reliable indicator that can be measured with various monitoring criteria. DVC is modified in the glossary of the Revised Plan to read as follows: Desired Vegetation Condition (DVC): For both riparian areas and nonforested uplands is defined as: The specific future condition of rangeland resources, aquatic habitat, and water quality that meet management objectives identified in the Forest Plan, Allotment Management Plans, or other documents. Additional clarification can be found in the nonforested vegetation section of Chapter III of the EIS. WG

COMMENTS: The guideline for vegetation (DFPR III-8) should be a standard, and should require only native species for vegetation.

697

RESPONSE: Your comment was considered. The Forest decided this should remain a guideline. WG

COMMENTS: Prescription 5.3.5 on page III-137 says "Cattle grazing is allowed"; clarify whether it would be allowed only where map 29 does not indicate that grazing is to be phased out.

695

RESPONSE: The "Phase Out" only applies to sheep allotments in the grizzly bear BMUs and in critical bighorn sheep habitat. Cattle grazing will continue and is not scheduled to be "Phased Out" in grizzly bear BMUs or bighorn sheep habitat. WG

COMMENTS: The level of precision implied by last statement on (DFPR, Page V-29) is completely unrealistic.

489

RESPONSE: We agree that this level of precision (within 1%) is not realistic. This monitoring item in the Revised Plan is modified to read as follows: When the forestwide standards and guidelines for biodiversity (sagebrush/grassland habitats) are not within the specified ranges, an evaluation by a qualified cadre of individuals (Interdisciplinary Team) will evaluate the site(s) on a project level or landscape level basis to determine a course of action. WG

COMMENTS: Very much opposed to the forestwide standard (DFPR, Page III-22) that livestock conversion must be evaluated and approved by a cadre of IDT specialists. Missing from this group is someone concerned about the rancher. Specialists may be consulted, but approval must remain with the District Ranger & permittees.

267, 290, 310, 404

RANGE

RESPONSE: Your comment was considered. We intend to continue to use the Interdisciplinary Team specialists. Section 8 of Public Law 95-514 the Public Rangelands Improvement Act of 1978 allows for permittee involvement with their grazing allotments. WG

COMMENTS: Modify the 2nd paragraph at top of Page III-22 by: inserting after "conversion" something like, " and restoration of range deteriorated by previous use" and; adding to the second sentence, "and must be completed to the satisfaction of the District Ranger before permission to convert goes into effect."

341

RESPONSE: Your suggestion was considered but not adopted. WG

COMMENTS: Page II-5, Alternative 2, first paragraph: says grazing will continue at current levels but Tables on pages S-11 and IV-60 both show reductions.

413

RESPONSE: Page II-5 was not correct. The information on S-11 and IV-60 were correct. WG

COMMENTS: The standard as stated for this issue (DFPR III-100, watering facilities) is weakened to a guideline by words "appropriate mitigation measures."

697

RESPONSE: Your comment was considered but not adopted. WG

COMMENTS: The monitoring indicator (page V-29) of number of allotments with or without rotation grazing seems to tie the hands of local manager by demanding rest or rotational grazing systems.

432

RESPONSE: Between draft and final this monitoring item was dropped. WG

COMMENTS: Monitor cultural resource sites on grazing allotments consistent with the national programmatic agreement. These sites must be identified and a monitoring schedule provided to be able to assess selected alternative.

1455

RESPONSE: Under this agreement, the Targhee has a monitoring plan in place. This monitoring plan was added to the Revised Plan as a standard. CGW

COMMENTS: Standard restricting conversion of cattle to sheep should also apply to grizzly bear habitat.

643

RESPONSE: Your comment was considered but not adopted. WG

RANGE

COMMENTS: Issue of grazing, as presented in the plan, is vague and arbitrary. There seems to be no agreement on range as an issue. Try cooperating more with other agencies like the USDA Sheep Experiment Station.

612d, 630, 1333, 1398

RESPONSE: Grazing is not one of the seven key issues that drove the selection of the preferred alternative. The Forest reached agreement on many issues that either affected grazing or were affected by grazing. The Targhee cooperates with the US Sheep Experiment Station; they hold an active grazing permit on the Forest. WG

COMMENTS: Vegetation (Page III-8): The Forest Plan failed to give direction for sensitive or threatened plant species on the forest. The Forest Service Manual Section 2670.45 (see section on forest carnivores for language).

The DFP failed to comply with the direction given to Forest Supervisor by the FSM. The DFPR needs to implement this by explicitly stating this direction in the S&Gs for vegetation the protection of sensitive plant species and develop a monitoring plan for known populations of species with limited distribution.

In another related vegetation issue, there should be standards in the Forest Plan for special forest products. At this time there are only two objectives. The plan should include limits of harvest to protect fungi species and other natural resources that could potentially be negatively impacted by commercial or personal exploitation. This could be included in the first objective by stating that standards and guidelines will be developed that amend that Forest Plan after each special forest product's needs are evaluated.

1273b

RESPONSE: Your comments were considered, but not adopted because there is adequate direction in existing Forest Service Manuals. It is not appropriate to restate manual direction or policy in the Revised Plan. However, the Forest did develop additional goal statements and standards for the management of Threatened, Endangered and Sensitive plants. WG

COMMENTS: DFPR fails to determine livestock grazing suitability as required by NFMA.

1206

RESPONSE: Chapter III in the FEIS is modified to include a section on grazing suitability. Except for nine allotments covering 1,813 acres, livestock capability is determined for all allotments open to grazing. WG

COMMENTS: Range goals refer to DVC but have no identification of those conditions.

1206

RESPONSE: This concern is best handled within the framework of a site-specific project level or landscape level analysis. Desired Vegetation Condition is a reliable indicator that can be measured with various monitoring criteria. DVC is redefined in the glossary of the Revised Plan as follows:

RANGE

Desired Vegetation Condition (DVC): For both riparian areas and nonforested uplands is defined as--The specific future condition of rangeland resources, aquatic habitat, and water quality that meet management objectives as identified in the Forest Plan, Allotment Management Plans, or other documents. Additional clarification can be found in the nonforested vegetation section of Chapter III of the EIS. WG

COMMENTS: Range Objective 1 does not define mid and late seral stages for riparian areas.

1206

RESPONSE: This concern is best handled within the framework of a site-specific project or landscape level analysis where identifying ecological status of sites are identified as key issues. The ecological status of a site is measured against the Potential Natural Community (PNC) for a specific area. PNC is the biotic community that becomes established on an ecological site if all successional sequences were completed without interference by humans under present environmental conditions. Natural disturbances such as drought, flood, wildfire, grazing by native fauna, insects, and disease, are inherent in its development. The PNC may include acclimatized or naturalized non-native species. Early seral ecological status is 0-39% of PNC; mid seral ranges from 40%-59% of PNC, late seral ranges from 60%-85% of PNC and PNC is considered to be greater than 86% of PNC. WG

COMMENTS: AMP standards and guidelines contain no direction to complete range inventory which AMS said was necessary to develop adequate management plans.

1206

RESPONSE: Times have significantly changed since the development of the Analysis of Management Situation. Budgets do not facilitate gathering this type of data, nor are updated range analysis needed to develop adequate Allotment Management Plans (AMP). Using other available information such as utilization and trend studies, adequate AMPs can be implemented to achieve the goals and objectives of site-specific landscape or allotment analysis.

Two important tasks are needed to implement a successful AMP. The first is administration by the Forest Service of the grazing permit and the second is monitoring. This monitoring item was elevated to a Forest Priority Group 1. Funding levels on the Forest are appropriated by Congress and, depending on the allocation, may effect the level of intensity for monitoring each year. WG

COMMENTS: The Targhee is repeating a pattern of denial with regard to livestock grazing. It is essential that environmental impacts of grazing have a central place in planning/decision process. DFPR and DEIS seriously deficient in this area.

1365

RESPONSE: Grazing is not one of the seven key issues that drove the selection of the preferred alternative. The Forest reached agreement on many issues that either affected grazing or was affected by grazing. The FEIS and Revised Plan accurately reflect the grazing situation on the forest. An actual

RANGE

adjustment (up or down) in AUMs will only occur with a site-specific analysis for each active allotment open to grazing. WG

COMMENTS: Page III-21 AMP; guidelines 1-3 should be standards.
1365

RESPONSE: Your comment was considered, but not adopted. WG

COMMENTS: AMP monitoring (Page V-29) should be FP Group 2.
1365

RESPONSE: Your comment was considered, but not adopted. WG

COMMENTS: The Forest Service has designated as a standard that all administrative sites will comply with forest wide standards and guidelines for livestock pastures. However, no other livestock pastures are required to meet this compliance. Forest Service should clarify this discrepancy, and justify management of select livestock pastures by guidelines rather than standards.
389

RESPONSE: Your comment was considered, but not adopted. WG

COMMENTS: Range goal #2 states that domestic livestock grazing will be managed "to promote the desired conditions of various resources..." The plan should be more specific as to how this will be accomplished i.e. in a measurable way. Stating that "grazing systems will be implemented on all grazing allotments by 2007" does not provide sufficient detail to evaluate this proposal.
643

RESPONSE: This goal will be met by identifying specific issues/concerns within the framework of a site-specific project or landscape level analysis. The Revised Plan serves as an "umbrella" document for the environmental analysis of proposed projects at the Forest or Ranger District levels. The Revised Plan is not intended to provide or analyze specific "how to's" of project implementation. WG

COMMENTS: Recommend range goal #2 be changed to the following: Domestic livestock grazing is permitted where it does not conflict with the maintenance of plant and litter cover, nutrient recycling, forage for wildlife species, seed production, and the restoration and maintenance of riparian communities. The accompanying objectives should also be changes to read as follows: By 2007, improve all upland acres currently reported as being in unsatisfactory ecological condition to satisfactory condition; By 2007, grazing systems will be implemented on all grazing allotments to meet the range goal for uplands noted above; and by 2007, improve the ecological status of all riparian habitat presently in unsatisfactory ecological condition to satisfactory ecological condition.
643

RESPONSE: Your comments were considered, but not adopted. WG

RANGE

COMMENTS: A standard should be added to prohibit season-long grazing unless the land in question meets the goals of the plan and site-specific studies show that season-long grazing will not be detrimental to the health of the land.

1206

RESPONSE: Your comment was considered, but not adopted. WG

COMMENTS: There is a contradiction on EIS, pages III-35, 36: at the bottom of page III-35, concern is expressed whereby upland non-forested areas are trending toward a predominance of mid and late seral stage. But in the 2nd paragraph on page 36, "satisfactory ecological condition is defined as being in mid-seral stage or higher."

489

RESPONSE: The FEIS was modified to correct these contradictions. WG

Vegetation

COMMENTS: Does not believe that forest-wide utilization standards and guidelines are adequate and will meet the DFCs. Recommend either changing proposed utilization to levels supported by scientific literature, or providing site-specific evidence that the proposed levels will meet water quality, watershed, fisheries and sagebrush-grassland ecosystem objectives.

389, 643, 766

RESPONSE: The Forest changed the upland Forage utilization standards between draft and final. The proposed standards were reduced 5%. Utilization standards and other standards and guidelines (wildlife, watershed, standards and guidelines for example) will achieve desired results. The utilization standards and guidelines provide for a moderate rate of recovery of degraded riparian and aquatic systems together with a moderately high level of fisheries habitat quality. As a result of this, the uplands are likely to respond as well. Scientific literature supports this prediction. WG

COMMENTS: Application of generic utilization levels to all shrubs is inappropriate.

389

RESPONSE: This concern is best handled within the framework of a site-specific project or landscape level analysis where shrub utilization is identified as a key issue. Until there is site-specific analysis, the Forestwide utilization standards and guidelines will apply and will achieve desired results. WG

COMMENTS: Recommend more emphasis on resource value ratings for rangelands and less on utilization levels. RVRs are more of an ecological approach. Establish goals for RVRs greater than 50 (i.e., good to excellent).

389

RANGE

RESPONSE: Resource Value Rating (RVR) is defined as the value of vegetation present on an ecological site for particular use or benefit. RVRs may be established for each plant community capable of being produced in an ecological site, including exotic or cultivated species. The Targhee does not have site-specific RVRs established for any rangeland vegetative community. The ecological status of a site is measured against the Potential Natural Community (PNC) for a specific site.

PNC is the biotic community that would become established on an ecological site if all successional sequences were completed without interference PNC humans under present environmental conditions. Natural disturbances such as drought, flood, wildfire, grazing by native fauna, insects, and disease, are inherent in its development. The PNC may include acclimatized or naturalized non-native species. Early seral ecological status is 0-39% of PNC; mid seral ranges from 40%-59% of PNC; late seral ranges from 60%-85% of PNC and PNC is considered to be greater than 86% of PNC. Determining ecological status of sites is part of the long-term trend monitoring program. Utilization studies are part of the short-term monitoring programs. Implementing the utilization levels described in the Revised Plan will achieve desired DVC's for rangeland resources.

Establishing goals/objectives for RVR's greater than 50 was considered, but not adopted because if RVR's greater than 50 were established for all vegetation communities across the forest, then Desired Vegetative Conditions might not be met. DVC is redefined in the glossary of the Revised Plan as follows: Desired Vegetation Condition (DVC): For both riparian areas and nonforested uplands is defined as -- The specific future condition of rangeland resources, aquatic habitat, and water quality that meet management objectives as identified in the Forest Plan, Allotment Management Plans, or other documents. Additional clarification can be found in the nonforested section of Chapter III of the EIS. WG

COMMENTS: Further reductions in grazing does not produce a long term forest health and development. "No use" does not automatically translate to "wise use."

1448b

RESPONSE: Your comment is acknowledged. A substantial livestock grazing program remains in effect under the Revised Plan. It is consistent with numerous management objectives (ecosystem, wildlife, riparian, and so forth). Livestock grazing is an outcome of proper management of the range and related resources. The projected levels of livestock grazing allow us to improve a variety of resources and values. An actual adjustment (up or down) in AUMs will only occur with a site-specific analysis for each active allotment open to grazing. WG

COMMENTS: Livestock grazing causes changes in vegetative composition. This is demonstrated on page III-19 where it is noted that grazing has shifted species composition on 32% of riparian areas.

643

RESPONSE: Your comment is acknowledged. WG

RANGE

COMMENTS: FRES level D should not be considered as part of the management goal because it is not consistent with the desired future conditions.

1446

RESPONSE: As defined, FRES level D is consistent with multiple use objectives. This concern is best handled within the framework of a site specific project or landscape level analysis. WG

COMMENTS: Reduce the standard for retaining 50% of the fine organic matter in activity areas. 65% ground cover is high for some natural rangelands. Tall forb plant communities in the Centennials does not meet this requirement. Most sedimentation problems do not come from the uplands.

432

RESPONSE: The "indicator" section (page V-9) also states "an equivalent percentage if the site cannot naturally attain the minimum percentage mentioned above." In other words, if a site cannot attain the 65% ground cover naturally, than a different percentage requirement would be identified based on what it can naturally attain. DM

COMMENTS: Conflicts between livestock grazing and habitat conservation need to be identified for all riparian, aquatic and wetland habitat. Method for conflict resolution should be developed.

389

RESPONSE: These concerns are best handled within the framework of a site-specific project or landscape level analysis where conflict with livestock grazing is identified as a key issue. WG

COMMENTS: Define "forestwide" forage utilization standards in the Plan. List prescription standards for high value wildlife habitats and/or areas susceptible to domestic livestock grazing.

389

RESPONSE: The forestwide Utilization Standards and Guidelines apply to most areas of the forest and are used in conjunction with additional standards and guidelines included within each management prescription. The forestwide range standards and guidelines, in Chapter III of the Revised Plan, were modified to include more direction for other resources such as wildlife and fisheries. Site-specific utilization standards are best handled within the framework of a site-specific project or landscape level analysis where utilization is identified as a key issue. WG

COMMENTS: Research and relevant scientific literature has shown cattle and sheep are a significant cause of increased tree distribution and density in many western forests, and can reduce fire frequencies thus changing savannah to forest.

1365

RESPONSE: Your comment is acknowledged. WG

RANGE

COMMENTS: The EIS must also address grazing as a cumulative effect in timber sales and must specifically define how grazing is to be considered in the context of ecosystem management.

1365

RESPONSE: This concern is best handled within the framework of a site-specific project or landscape level analysis. The Revised Plan serves as an "umbrella" document for the environmental analysis of proposed projects at the Forest or Ranger District levels. The Revised Plan is not intended to provide or analyze specific "how to's" of project implementation. WG

COMMENTS: The emphasis being placed on the needs of indicator species and patch size in the new Plan and not on the health of the range resource will eventually decrease the rangeland available to the point that the rancher will not be able to afford to use the land.

432

RESPONSE: A substantial livestock grazing program remains in effect under the Revised Plan. It is consistent with numerous management objectives (ecosystem, wildlife, riparian, and so forth). Livestock grazing is an outcome of proper management of the range and related resources. The projected levels of livestock grazing will allow us to maintain cultural heritage and most local livelihoods while at the same time improve a variety of resources and values. WG

COMMENTS: Review cumulative effects section for upland forested and upland nonforested ecosystems in that it seems to predict forest changes if fire is suppressed rather than being allowed to function in a natural role.

695

RESPONSE: This is best handled within the framework of individual fire management plans that will be developed for various areas of the forest (refer to the Goals and Objectives for Fire in the Revised Plan - Chapter III). How a fire might be handled is dependent on a number of site-specific variables and is best analyzed at a finer scale versus forestwide. This concern is best handled within the framework of a site-specific level or landscape level analysis where fire management and cumulative effects, are identified as key issues. WG

COMMENTS: Planning documents only hint at how the forest would use livestock grazing as a means of insuring sustainable conditions through vegetation manipulation. There should be more detail.

489

RESPONSE: This concern is best handled within the framework of a site-specific project level or landscape level analysis. The Revised Plan serves as an "umbrella" document for the environmental analysis of proposed projects at the Forest or Ranger District levels. The Revised Plan is not intended to provide or analyze specific "how to's" of project implementation. WG

RANGE

COMMENTS: There are no goals identified for what vegetation will be like in 10 years.

697

RESPONSE: Forestwide Goals and Objectives for vegetation are identified in the Revised Plan. The Revised Plan serves as an "umbrella" document for the environmental analysis of proposed projects at the Forest or Ranger District levels. DVC is a reliable indicator that can be measured with various monitoring criteria. DVC is redefined in the glossary of the Revised Plan as follows: Desired Vegetation Condition (DVC): For both riparian areas and nonforested uplands is defined as--The specific future condition of rangeland resources, aquatic habitat, and water quality that meet management objectives as identified in the Forest Plan, Allotment Management Plans, or other documents. Additional clarification can be found in the nonforested vegetation section of Chapter III of the EIS. WG

COMMENTS: Use the grazing resource or it will deteriorate and be replaced by shrub and timber encroachment. Grazing sheep and cattle offer time control necessary to sustain range resources, can be useful tool in fire suppression and can increase/enhance wildlife forage.

333, 432, 691, 1239

RESPONSE: Your comments are acknowledged. WG

COMMENTS: Unclear why drafts do not say why only 26,400 acres of upland range will be improved in 10 years. Disclose what percentage of total degraded range this represents.

1369

RESPONSE: Presently; 89,221 acres of "uplands" do not meet Desired Vegetation Conditions (DVC). The 26,400 acres represents 29.6% of the total upland acres not meeting DVC. Livestock grazing is not the sole contributor to declining rangeland conditions. Fire, invasion of noxious weeds from a variety of sources, past livestock grazing practices, road construction, and recreation use are a few examples of causes contributing to the decline of riparian and rangeland health. As described in Process Paper J - Logic Used to Estimate Effects of Livestock Grazing on Riparian and Upland Vegetation, rangeland and riparian health can be improved by livestock grazing by implementing the Standards and Guidelines in the Final Revised Plan. WG

COMMENTS: The increase shown in nonriparian and riparian acres meeting DVC comes from the allotments with sheep removed or where cattle reductions are made.

432

RESPONSE: You are not correct in your assumption. As described in Process Paper J - Logic Used to Estimate Effects of Livestock Grazing on Riparian and Upland Vegetation, rangeland and riparian health can be improved by implementing the Standards and Guidelines in the Final Revised Plan. WG

- - -
RANGE

COMMENTS: Trampling is a poor measurement: it will not work except to move the grazing tool off the resource and additional monitoring costs.

432

RESPONSE: The trampling monitoring criteria are not intended to remove grazing from the Targhee. The intent of this monitoring item in Chapter V is to help in the development of this parameter so that it is reliable and specific to the Targhee. The Forest changed both the Streambank Trampling and Riparian Forage Utilization monitoring items to a Forest Priority 1. A monitoring protocol will assist in outlining the monitoring procedures for both utilization and trampling criteria. Permittees will be trained by Forest personnel in implementing this protocol and will be held responsible for meeting the Revised Plan Standards and Guidelines. WG

COMMENTS: Clarify what a "naturalized" species is.

1446

RESPONSE: A naturalized species is any species of flora or fauna that occurs in an area that is not originally native to the area. It is an introduced or alien species that is now permanently established and reproducing spontaneously (without human fostering). WG

COMMENTS: Please quantify the "reasonable time" for the specific project or activity as so stated on the section on pages III-73, 76, 80, 84, 103, and 105.

1446

RESPONSE: A "reasonable length of time" is tied to a specific project. A "one size fits all" approach is not appropriate for quantifying "reasonable time". With this Revised Plan a reasonable length of time could range from one to ten years after the Record of Decision is signed depending on each circumstance. WG

Sheep Management Issue

COMMENTS: Phase out sheep allotments as proposed. The FEIS needs a schedule for closure.

643, 1273b, 1277, 1393

RESPONSE: Sheep allotments located within the grizzly bear recovery area are identified in Appendix III of the Revised Plan for Process Paper L - Sheep Allotments affected by grizzly bear, bighorn sheep and watershed conditions). The Process Paper, and Chapter IV of the FEIS show some sheep allotments will be immediately closed and others will be phased out on an opportunity basis. WG

COMMENTS: Sheep can be a very ecologically sound way to combat noxious weeds.

432

RANGE

RESPONSE: Sheep grazing is a useful tool for controlling some patches of noxious weeds. The Targhee practices integrated pest management to control noxious weeds including biological control methods such as livestock grazing. WG

COMMENTS: It is unimaginable that forest management supports the removal of sheep from the Centennial Mountains.

432

RESPONSE: Sheep allotments that are located within the grizzly bear recovery area are identified for removal (see Appendix III of the Revised Plan for Process Paper L - Sheep Allotments affected by grizzly bear, bighorn sheep and watershed conditions). The sheep allotments in the Centennial Mountains will be phased-out on an "opportunity basis," not immediately closed. Opportunity basis is defined in the glossary of the Revised Plan. WG

COMMENTS: Economic loss to local economies from phasing out sheep grazing is too great. Object to phasing out sheep grazing to protect the grizzly bear.

F-F(6), 413, 1180, 1354, 1363, 1398

RESPONSE: A substantial livestock grazing program remains in effect in the Revised Plan and it is consistent with numerous management objectives (ecosystem, wildlife, riparian, and so forth). Livestock grazing is an outcome of proper management of range and related resources. The projected levels of livestock grazing allow the Forest to maintain cultural/heritage values and local livelihoods, while improving a variety of resources and values at the same time. WG

COMMENTS: Does not agree that livestock conversions must be evaluated and approved by an Interdisciplinary Team (IDT).

F-F(6)

RESPONSE: Using an Interdisciplinary Team to evaluate livestock conversions, in conjunction with range permittees, provides the most thorough and complete evaluation of the pros and cons on a case-by-case basis. Conversions are not approved by the ID Team but by the appropriate line officer with ID Team input. WG

Sheep General

COMMENTS: Sheep entry/exit in Moose Creek conflicts with big game winter range.

293

RESPONSE: This concern is best handled within the framework of a site-specific project (AMP for example), or landscape level analysis where big game winter range and livestock grazing are of paramount concern. WG

COMMENTS: Page III-22 should read, "Do not convert from a cattle allotment to a sheep allotment within bighorn sheep habitat or in a grizzly bear BMU."

1446

RANGE

RESPONSE: All sheep allotments in grizzly bear BMUs and bighorn sheep habitat are scheduled to be phased out on an opportunity basis in the Teton Range subsection and the Island Park portion of the Centennial Mountain subsections.
WG

COMMENTS: Sheep grazing can have a considerable impact on mountain goat summer range; impacts were not in drafts. (CROSS REFERENCE: Wildlife, Mountain Goats)
389, 766

RESPONSE: The Forest considered your comment and after summary analysis, determined there is no conflict between domestic sheep and mountain goats on summer range on the Targhee; therefore, no additional analysis in the DFPR or DEIS was needed. Impacts can occur on winter range and those changes are included in the Revised Plan. WG

Bighorn Sheep

(CROSS REFERENCE: Wildlife, Bighorn Sheep)

COMMENTS: Keep domestic sheep out of big horn sheep habitat, or have a buffer zone of at least three miles. (CROSS REFERENCE: Wildlife, bighorn sheep)
181, 212, 274, 293, 389, 1247, 1277

RESPONSE: The Forest has already implemented protection measures to reduce the transmission of disease between domestic sheep and bighorn sheep. In addition, the Revised Plan provides some new management direction. What the Forest has already done: on the west slope of the Tetons, 45,700 acres of bighorn sheep habitat do not have domestic sheep grazing at this time. These 45,700 acres include all areas currently used by bighorn sheep. Domestic sheep are not grazed on the west slopes during the seasons when "nose-to-nose" contact with bighorn sheep is likely to occur. Therefore, the potential for disease transfer is low, there is no forage competition, and there is no displacement. In the Lionhead area, there is no domestic sheep grazing. Therefore, the potential for disease transfer is zero, there is no forage competition, and there is no displacement.

New management direction contained in the Revised Plan will phase out domestic sheep grazing on the west slope of the Tetons on an opportunity basis; phase out winter domestic sheep grazing in the Medicine Lodge Subsection; evaluate additional opportunities for adjusting domestic sheep grazing while the phase-out program is in progress; and allow no conversions from cattle allotments to domestic sheep allotments within bighorn sheep habitat. MO

COMMENTS: Recent research indicates that a pneumonia problem experienced by bighorns can not be passed on by domestic sheep. Therefore, cannot have standard (Page III-21).
432, 1188

RESPONSE: Pneumonia can be transferred, therefore, your comment was considered, but not adopted. WG/MO

RANGE

COMMENTS: Implement Teton Range Bighorn Sheep Working Group's Strategic Plan.
690, 1395

RESPONSE: Portions of the working group's Plan were adopted. The Forest added new management direction in the Revised Plan and a new section on bighorn sheep in the FEIS. Process Paper D also contains new bighorn sheep information. MO

RECREATION

Environmental Impacts Associated with Camping

COMMENTS: Protect vegetation in and around campgrounds, especially dispersed campsites, by developing dispersed camping standards and goals; signing; developing guidelines for edging, maintenance and graveling of vehicle use areas; closing campgrounds; and enforcing these conditions even on Sunday. Measure soil loss at campsites by a permanent calibrated stake because Frissell Condition Class method is inadequate.

697, 1312, 1365

RESPONSE: Site surveys conducted during the summer of 1996 indicate that the dispersed campsite conditions are not as poor as suggested in the DEIS. The 4.3 Dispersed Camping Management Prescription and Standards and Guidelines established in the Revised Plan along with the monitoring requirements will adequately prevent significant adverse affects. These guidelines include a new Dispersed Camping Protocol (Process Paper X) for monitoring dispersed campsites. The Frissell method will be used only in wilderness and roadless areas. The 15% detrimentally disturbed soil standard will be used at all other dispersed campsites. AS

COMMENTS: Define a standard of no more than x number of campsites per trail mile or lake basin and define acceptable location (e.g. 50-100 ft. from streams, 100-200 ft. from lakeshores). (CROSS REFERENCE: Riparian)

1312

RESPONSE: These standards were developed for campsite and trail user density in the Jedediah Smith Wilderness and are described in the Process Paper. The Limits of Acceptable Change (LAC) process will be used to monitor resource changes. The dispersed campsite prescription (4.3) also contains direction for improved management of these sites. AS

COMMENTS: Restrict motorized access to dispersed campsites and to picnic sites to within 300 feet of an existing road or trail; add language to Dispersed Recreation Use standards & guidelines so that would-be OHV violators do not exploit this access. (CROSS REFERENCE: Riparian)

643

RESPONSE: The Forest changed the wording for the dispersed camping standard regarding access within 300 feet of a road, to clarify that the intent is not for any activity but for parking and dispersed camping. The new wording is "Unless otherwise posted, motorized access is allowed for parking, and dispersed camping, within 300 feet of roads and trails which are open for motorized use." This wording would not allow general OHV use of the 300 foot area. AS

Economic Impact of Recreation to the Economy

COMMENTS: Recognize the importance of recreation to the local and state economy in general tourism. Road and trail closures and additional wilderness will adversely impact tourism. Explain how reducing motorized OHV recreation will continue to attract visitors for the same number of days and for the same job compensation. Support the shift from a timber-based to a recreation-based

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economy. Object to the reduced employee compensation from recreation-based jobs. Refigure the compensation table concerning jobs in the timber sector because it is inaccurate to show employee compensation from recreation remaining at existing levels.

98, 168, 215, 226, 228, 292, 358, 392, 413, 621, 643, 702, 1242, 1322, 1335, 1345, 1364

Analyze the economic impact of decisions since 1985 and the future economic impact of each alternative in order to adequately address the issue of the local economy.

393

RESPONSE: The FEIS analysis indicates that the total recreation use would not change much between alternatives and that a shift towards more non-motorized opportunities in some areas may have only a slight effect of slowing tourism and road development. This analysis supports the economic conclusion of little change in the economy based on recreation opportunities.

Fortunately the Forest enjoys a surplus of recreational opportunities relative to existing and predicted use levels. The most noteworthy exception to this is motorized use of trails. The Forest expects trail usage to reach capacity under the preferred alternative due to increases in use and reductions in the trails open to motorized use. When that happens, any one of a number of different combinations may occur: usage could level off; people may tolerate increased crowding and usage would continue to rise; or usage could reduce to a new level. As population pressures continue to grow, people may become accustomed to higher degrees of crowding; find ways to recreate on less-crowded dates; find other opportunities for motorized use off-forest; or take up a different form of recreation.

Although rapidly rising and well represented, motorized trail use is a small part of the total Forest recreation picture. Even substantial changes in this category of recreation is insignificant at the Forestwide level of consideration. It is possible that nonmotorized forms of recreation may increase enough to compensate for possible reductions in motorized use.

The Forest agrees that recreation-related employee compensation is lower paying than timber-related employee compensation. The table shows employee compensation associated with recreation increasing from existing levels, not staying the same. DP/AS

COMMENTS: Manage the Targhee to provide tourists with a positive image as they make their way to Yellowstone.

226

RESPONSE: This is the intent of the Visual Management Prescription 5.2.1 along Highway 20 north of Ashton. AS

COMMENTS: Oppose limiting recreation because if people are limited to fewer areas in which to recreate they will over populate those areas still available, get frustrated and leave, taking tourist dollars with them.

413

RESPONSE: Recreation is like any other resource use; there are physical, biological, and social limits as to how much use can occur in an area without conflicts or adverse consequences to other resources or activities. The EIS

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indicates the potential for displacement of some users and the possibility of loss of some recreation opportunities. AS

COMMENTS: Recognize the importance of the tourism-recreation industry in Idaho and the importance of national Forest land to the state's economy.
1345

RESPONSE: We added information to Chapter III of the EIS under the heading "Wilderness and Recreation Resources" to indicate the significant effect of the Targhee resources on tourism in Idaho. AS

COMMENTS: Oppose motorized game retrieval because ORVs will spoil the roadless areas that I wrote about in my commercially-successful hiking book and I will no longer be able to make a living from my book.
392

RESPONSE: The Forest dropped game retrieval from the Revised Plan so there will be no effect as suggested here. AS

Provide Recreational Opportunities

COMMENTS: The Forest fulfills our need for recreation. Prefer Alternatives 2 and 3M because of the recreational opportunities provided in each. Oppose Alternative 3M because unlimited recreation is restricted; Alternative 3M gives no consideration to handicapped access to recreation.
F-M, 97, 98, 135, 216, 272, 288, 289, 291, 306, 313, 324, 328, 528,
529, 608, 614, 623, 631, 634, 638, 642, 713, 737, 1371, 1376, 1449

RESPONSE: Recreation is one of the multiple uses provided by national forests and will remain an important resource on the Targhee. No alternatives have unlimited recreation. Direction for accessible facilities is provided in Appendix A of the Revised Plan. AM/AS

COMMENTS: Quantify planned increases in Persons-At-One-Time (PAOT) with site development.
FS-11

RESPONSE: Increases will be done at the project level of planning. As indicated in the FEIS, increases in PAOTs will be minor and will occur from "little, new site development." AS

Restrict Recreational Opportunities

COMMENTS: Want recreation growth controlled and natural resources prioritized because Forest managers are obligated to protect the resource and because studies show human disturbances are primarily responsible for unhealthy forests.
643, 1365

RESPONSE: Humans are part of ecosystems. The Revised Plan meets the multiple use mandate by balancing natural resource needs with human needs, particularly in the area of recreation. Recreation use results in small areas of

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disturbance to soils and vegetation but generally there are no large-scale effects. The standards, guidelines, and monitoring plans are adequate to meet recreation growth and protect the resources. AM/AS

Hunting

COMMENTS: Consumptive recreation such as hunting causes negative impacts on wildlife populations by altering feeding patterns, population structure, and behavior and by causing mortality.

1365

RESPONSE: While it is true that hunting does disturb wildlife, hunting seasons and methods are controlled by State agencies. The prescriptions, standards and guidelines in the Revised Plan will minimize the negative impacts. AS

Fishing

COMMENTS: Address and preserve public fishing access.

1276

Fishing and other consumptive forms of recreation can have a negative impact on eagles, waterfowl and other birds.

1365

RESPONSE: Public fishing access will be maintained. While it is true that fishing and other recreation does disturb wildlife, the prescriptions and standards and guidelines in the Revised Plan will minimize the negative impacts. AS

Caving

COMMENTS: Do not mark caves or encourage this type of recreation because it causes a decline in the number of sensitive wildlife populations.

1365

RESPONSE: Cave management direction is under the forestwide standards and guidelines section entitled Physical Elements/Caves. AS

Climbing

COMMENTS: Rock climbing negatively impacts critical nesting times for birds.

1365

RESPONSE: The Forest created a forestwide Standard "Restrict climbing and other human disturbances when necessary to avoid adverse impacts at known falcon nest sites." AS

RECREATION

Boating Environmental Impacts

COMMENTS: Restrict motorized boating access to protect resources. Boating causes harmful impacts to birds, chemical pollutions and plant mortality. Monitor and enforce boat launching regulations to prevent bank disturbances.
209, 650, 697, 1365

RESPONSE: The Aquatic Influence Zone prescription direction regarding 15% soil displacement provides a control for when restrictions on boat launching are needed to prevent disturbance. Motorized restrictions are determined in individual river management plans done at the project level of planning. Levels of boating use are determined through monitoring and individual river planning. AS

Mountain Biking

COMMENTS: Do not take away the enjoyable activity of mountain biking on trails and roads in the backcountry because mountain bikers act responsibly and do not harm wildlife or the environment.
1385, 1449

RESPONSE: The Revised Plan does not take away most mountain biking opportunities. It provides direction to improve trails for such uses. AS

COMMENTS: Consider impacts of mountain bike use on the environment; explain how the growth rate of 5-10% was determined.
1365

RESPONSE: Impacts of mountain bike use are considered in the summer access analysis. The growth rate is determined from observations, local bike sales and national use trends. AS

COMMENTS: Discourage mountain biking and other mechanized travel from core wildlife areas.
1446

RESPONSE: Restrictions are placed on mechanized travel in areas such as winter range during the fall, winter, and spring impact periods for wildlife. They are not restricted from grizzly bear core areas as bike use is considered equivalent to hiking in terms of potential impacts. AS

Incompatible Use ~ Summer

COMMENTS: Separate users in order to enhance recreation experience and prevent user conflicts. Focus on separating motorized from non-motorized activities: ORVs from hikers, horseback riding concessionaires from cabin sites, and ORVs and logging from fishing and hunting areas. Place campgrounds and ORV trails in already developed areas; create more trails; enforce access restrictions and separate recreationists. Redesign areas that are designated for use by both motorized and non-motorized recreational users because of safety hazards, conflicts, noise, and crowding.
618, 632, 651, 1345, 1365, 1371, 1457

RECREATION

RESPONSE: The Revised Plan initiates actions to separate motorized and non-motorized uses in more areas than the current plan. Motorized use is restricted to fewer miles of roads and trails and cross-country OHV use is restricted to 7% of the Forest. The Revised Plan provides a goal to redesign trails for motorized and non-motorized uses so that they will be able to withstand use with relatively minor maintenance. AS

COMMENTS: Place all campgrounds and ORV raceways near already developed areas.

1371

RESPONSE: We are not planning any new campgrounds or development of any ORV "raceways". AS

Environmental Impacts from Recreation

COMMENTS: Monitor and allocate funds for recreation impacts on the Forest ecosystem. Step up monitoring of dispersed campsites, trails, shore banks, wildlife, habitat, wilderness, and user group conflicts. Enforce regulations. Use the best possible science from all disciplines when calculating recreational impacts on the ecosystem.

697, 1365, 1371

RESPONSE: Several monitoring and evaluation systems are established in the Revised Plan to determine impacts of OHV use; dispersed camping; trail impacts; and wilderness use. These should be adequate to determine if goals, objectives, standards and guidelines are being met. AS

COMMENTS: Consider zoning (core reserves, inner buffers, central buffers, outer buffers, matrix, and corridors) as a way to manage environmental impacts of recreational activities.

1365

RESPONSE: This was considered and in several cases (developed recreation or dispersed recreation) separate distinctions were made. Future designations are likely for water recreation to separate users, as indicated in the EIS, under winter access analysis. AS

COMMENTS: Establish a comprehensive fee system (within the confines of existing law) that is used to mitigate recreational impacts, monitor projects, buy new land, subsidize environmental education programs and for administration costs.

1365

RESPONSE: This is up to Congress. The Targhee will implement all existing, authorized fee systems. AS

Monitoring Methods

COMMENTS: Monitor 20% rather than 10% of dispersed campsites and wildlife winter range; provide staff with trail bikes; eliminate user groups from the monitoring process; create comment cards to monitor conflicts.

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Monitor trail design and how useable trails are in order to prevent erosion; monitor the number of campsites per trail mile or lake basin.
629, 1312, 1365

RESPONSE: Based on initial field analysis during the summer of 1996, the level and frequency of monitoring described in the Revised Plan is adequate. For example, dispersed campsite impacts were less than originally estimated, therefore, a more intense monitoring level was not warranted. These sites were also reviewed for wildlife winter range monitoring and trail conditions and were found adequate.

Comments from user groups are always accepted as input for analysis and as an indication of possible monitoring needs or deficiencies. AS

Recreation vs Protection Priority

COMMENTS: Change Forest Priority Group Column: change user satisfaction to Group 3; change seasonal trail use impacts to soil and vegetation, and recreation/wildlife conflicts to Group 1.

1365

RESPONSE: Your comments were noted and considered. The requested changes were not made. AS

Mitigate Recreation Impacts

COMMENTS: Clarify how recreational impacts will be mitigated; establish a fee and permit system to mitigate impacts.

1365

RESPONSE: Recreational impacts are mitigated by the Standards and Guidelines in the forestwide and prescription direction. Monitoring and evaluation processes determine when mitigative action (management direction implementation) is needed. Fee permit systems are in place in most developed sites to help control use and mitigate impacts. AS

COMMENTS: Monitor the condition of trails not by trail width but by how useable the trail is (if parallel trails are being created, or if trail is too eroded or boggy to use).

1312

RESPONSE: The monitoring direction in Chapter V of the Revised Forest Plan does not refer to trail width. Soil and vegetation conditions on and adjacent to the trails will be monitored. AS

COMMENTS: Monitor and enforce boat launching regulations to prevent increasing areas of bank disturbance.

697

RESPONSE: The Aquatic Influence Zone Prescription direction regarding 15% soil displacement would generally control when such use restrictions are necessary. AS

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COMMENTS: Monitor the number of campsites per trail mile or per lake basin because this is a better indicator of impacts than measuring the condition of campsites.

1312

RESPONSE: The number of campsites that users may see from their site (Indicator #1) is one of the factors measured in the wilderness monitoring plan for the Jedediah Smith Wilderness. AS

COMMENTS: Recognize that improper trail design, not the type of use, is the main cause of erosion (p. V-17).

629

RESPONSE: The goals and objectives in Chapter III address the problem of poor or insufficient designs/construction standards for trails in an effort to avoid erosion of the trail head or adjacent areas. AS

Allow Recreation in the Spirit of Multiple Use

COMMENTS: Manage the Forest for multiple use; balance the needs of natural resources with what will be politically viable. Don't lock out people from recreation, particularly motorized recreation, because the opportunity to perform all types of recreation in the Forest has been historically established, is good for the economy, and is what sets our region, including Jackson Hole, apart from others in the country and makes it special.

12, 135, 278, 342, 490, 608, 614, 625, 631a

RESPONSE: As indicated in the Consequences Section, Chapter IV of the FEIS, the Forest is still managed for multiple uses, including recreation. Most recreation uses and opportunities are not significantly reduced from existing levels. There will be somewhat fewer motorized opportunities and a slight increase in non-motorized opportunities. AS

COMMENTS: Recognize that a poll commissioned by the USFS found that most Americans want National Forests used for recreation and wildlife protection rather than lumber production.

1364

RESPONSE: Your comment was noted and considered. AS

Motorized Use from a Recreational Standpoint

COMMENTS: Want more motorized recreation because of the sense of freedom associated with it and the convenience it provides people who have limited time to enjoy the Forest. Make a motorized corridor along the entire Yellowstone ecosystem. Treat motorized users equally.

285, 300, 645, 1193, 1346, 1365

Want more motorized restrictions to protect natural resources, vegetation (especially in alpine areas above timberlines), waterways and wetlands. Study past, current and future impacts from motorized recreation on the environment; conduct a flora and fauna inventory and assessment of OHV impacts on habitat; and use an adaptive management approach incorporating the

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best science. Develop education programs to communicate OHV restrictions to the public. Replant damaged areas using funds from state ORV stickers and fines.

212, 219, 650, 1365,

Partner with the Idaho Department of Parks and Recreation ORMV Program to provide the motorized recreation user an excellent return on his/her fees that were used to develop ORMV facilities in the Targhee National Forest.

629

RESPONSE: The Revised Plan limits OHV use in cross-country areas and some wildlife habitat and monitors actual use impacts to determine if restrictions are appropriate and effective. A proactive approach is being taken to improve trails for motorized use in a concentrated area of the Big Hole Mountains. Education programs about OHV restrictions remain ongoing. Restoration work comes from federal, state and private funds on a grant, cost-share or other cooperative agreement basis. The State determines the use of the funds they collect. Fines collected by federal law enforcement officers return to the national treasury.

The Forest will continue the partnership currently underway with the Idaho Department of Parks and Recreation to reconstruct motorized trails to improve the quality of recreation opportunity for ORMV (Off-Road-Motor Vehicles) owners and natural resources. AS/AM

COMMENTS: Prove that with fewer miles of roads and trails open for motorized use there would be a decrease in motorized recreation and an increase in non-motorized recreation.

629

RESPONSE: The analysis does not indicate there would be a decrease in motorized recreational use. The summer access cumulative effects analysis states that opportunities (miles of designated roads and trails and open acres) decrease, but that continued increasing use levels will create congestion and decrease recreational experiences. AS

Research Natural Areas

COMMENTS: Close off recreation entirely or severely limit it from Research Natural Areas in order to prevent negative environmental and scientific impacts. (CROSS REFERENCE: Special Areas: Research Natural Areas)

612, 1181

RESPONSE: All management activities, including recreation, within Research Natural Areas are managed at levels that do not degrade the characteristics of the Natural Area. There is no need to close these areas entirely. AS

Outfitter And Guides - Economics

COMMENTS: Issue permits for non-obtrusive guided and outfitted services such as backpacking and mountain biking - not just for private ranches - because there is great economic potential for these businesses.

1183

RECREATION

RESPONSE: Decisions on outfitter-guide proposals are made as specific project applications are submitted. Applications are reviewed against public need, competition, interest and the capacity determination objective in Chapter III of the FEIS. AS

COMMENTS: Do not jeopardize outfitters and guides because of unreasonable changes to emphasize wildlife in the new plan.

387

RESPONSE: Existing outfitter-guide operations will probably not be jeopardized by any of the decisions in the Revised Plan. As indicated in the EIS, additional opportunities for outfitting may be less, especially for motorized activities. AS

COMMENTS: Use smaller timber sales designed for local business and for rehabilitation work to restore degraded fish and wildlife habitats so that there is more wildlife which in turn benefits local outfitters & guides.

204

RESPONSE: The size of timber sales has not adversely affected outfitter opportunities. During the time of intensive timber harvest, outfitting continued to increase with the increase in numbers of visitors. AS

Monitor Outfitters and Guides

COMMENTS: Add monitoring element to track the quality of public services offered by outfitters; work with professional outfitters guides.

1183, 1312

RESPONSE: It is unnecessary to include such an element in a Forest Plan. Quality of service is covered by the administration of the special use permit which provides for an annual performance rating of each outfitter's operations. AS

COMMENTS: Address the increase of commercial outfitters and guide use from 4,500 to 21,000 in the DEIS.

643

RESPONSE: The Forest is unaware of any such increase being mentioned in the Plan Revision or DEIS. This comment may be in reference to some project specific proposals recently being considered by the Island Park District which is not a Forest Plan consideration. AS

COMMENTS: Define "low level of use" when regarding outfitter and guide use in objective 8.

1249

RESPONSE: This term is defined in the Jedediah Smith Wilderness Environmental Assessment Process Paper which states, "a limited number of day use permits may be used...in areas where the standards will not be exceeded." AS

RECREATION

Outfitter and Guide Permits

COMMENTS: Control outfitter and guide use through a permit process. Ensure that the permits are compatible with the objectives for the security area. Include the same standard for range permittees on Page III-91, in the Recreation, Outfitter and Guides section.

1276, 1446

RESPONSE: Outfitters are managed through a special use permit process. The operation plans for these uses are reviewed for compatibility with objectives for areas where operations occur, prior to approval. These grazing standards are not applicable to outfitters and guides, therefore this change was not made. AS

COMMENTS: Develop outfitters and guide standards and guidelines including a standard to limit outfitter and guide special use permits from December 1 - April 30, especially in prescription 2.7 to protect big game crucial winter range. (CROSS REFERENCE: Wildlife - Elk, Winter Range)

389, 1247

RESPONSE: Outfitters are subject to the same winter range restrictions as the general public. There are currently few outfitter operations within winter range areas. Future proposals are subject to environmental analysis and compliance with the management direction of the Plan. AS

COMMENTS: The overuse of resources by outfitters and guides diminishes the availability of resources for those unable or unwilling to use their services. For example, they put a tremendous pressure on fishing resources. Use a permit system to have guides teach techniques, biology, and ethics rather than catching fish.

697

RESPONSE: Outfitted recreation is a relatively small portion of the total hunting and fishing use on the Forest. Most outfitters teach their clients about the environment and the history of the area during trips. Such activities are described in the Operations Plan which is part of their special use permit. AS

Outfitter and Guide Access

COMMENTS: Do not allow outfitters to cut new trails or to use non-system trails.

329

RESPONSE: New trails can not be developed without the required environmental analysis. The Forest is unaware of any new trails being approved or developed. Outfitters are free to use any areas of the Forest including non-system trails, following the same rules and regulations as the general public. AS

RECREATION

Outfitter and Guide Standards and Guidelines

COMMENTS: Change the following guidelines to standards: Page III-86: The Outfitter/Guide should be a standard; the Timber guidelines should be a standard; Page III-99: the first G should be a S; Page III-121: the last Road and Trails guidelines should be a standard; the fire Recreation and Outfitter/Guide guideline should be a standard. The fire circles guideline should be a standard. The first sentence of the boat launching guideline should be a standard.

1365

RESPONSE: These comments were noted and considered. The requested changes were not made. AS

Jedediah Smith Wilderness

COMMENTS: Designating this area as Wilderness ruined the recreational experience because it brought more people and guided outfitters to the area.

645b

RESPONSE: Designation occurred prior to and outside the Plan Revision process. The analysis and planning approach for the Jedediah Smith indicates that the areas has not been ruined by recreationists and outfitters. Monitoring is designed to prevent wilderness values from being degraded in the future. AS

Wilderness

COMMENTS: Requests information on how commercial/recreational use (hut skiing operation) fits into future plans for proposed wilderness.

191

RESPONSE: Guided skiing operations would be allowed to continue. Facilities such as huts would not be allowed in the wilderness. AS

Rivers

COMMENTS: Provide more rivers to fish, float and enjoy because of population growth.

382

RESPONSE: The Goals, Objectives, Standards, Guidelines and Prescriptions of the Revised Plan significantly improve or maintain the quality of streams for these areas. The analysis indicates there will be no adverse effects as a result of the Plan. AS

COMMENTS: Ban motorized use on recreational rivers during desirable recreational seasons and in desirable recreation areas.

F-K(3)

RECREATION

RESPONSE: Motorized use is often considered appropriate on rivers designated by Congress as "Recreational Rivers." Decisions on possible restrictions are made on individual river management plans in the future. AS

COMMENTS: Withdraw the management area described on pp. III-82 to III-84 from suitable timber base as harvest is inappropriate for an Eligible Recreational River.

1273b

RESPONSE: It is not part of ASQ. See the Timber in section Chapter III which says, "not included in suitable timber base." AS

Roads and Trails

COMMENTS: Support road closure and reduced trail maintenance in order to control the amount of recreation people can do in the Forest. Open roads and trails for recreation and more Forest personnel maintaining trails. (CROSS REFERENCE: Access)

46, 48, 51, 643, 1365

RESPONSE: The Revised Plan provides opportunities for continued motorized use of trails while protecting the natural resources. There is no proposal to reduce trail maintenance, and the FEIS indicates that more trail maintenance will be needed and will occur. AS

COMMENTS: Write standards to define the requirements for trails; goals are inadequate.

697

RESPONSE: Trail standards are determined at the regional and national levels. The Revised Plan has adequate goals, standards, guidelines, and prescriptions, as well as monitoring and funding direction to meet trail requirements. AS

COMMENTS: Indicate the practices intended to provide for the recreational potential associated with the Continental Divide National Scenic Trail; consider and plan for the visual resource as seen from the trail, the location of the travel way, the status of its development, and provisions for monitoring and evaluation.

345

RESPONSE: The management for this trail is analyzed in the environmental analysis for the trail designation. Detailed management practices are considered in project specific analysis rather than in a forest plan. The management direction in the Revised Plan is adequate for monitoring the valuable assets of the Continental Divide Trail. AS

COMMENTS: Define what historic recreational use means.

1361

RESPONSE: This generally refers to the types and amounts of recreational use in a given area. AS

RECREATION

Recreation Standards & Guidelines Need Revisions

COMMENTS: Recreation impacts on the environment and the analysis is flawed. The analysis needs more data/studies; better science; stronger language; standards rewritten; objectives eliminated; statements amended; and guidelines changed to standards - for the purpose of reducing negative environmental impacts and recognizing that limits to recreational growth and development may be necessary.

489, 695, 1365, 1395

Include a future management direction for outdoor recreation in the Management Prescription section - follow NFMA section 219.21.

1345

RESPONSE: The Revised Plan contains management direction for recreation as required by NFMA. These are in the Forestwide Standards, Guidelines, Goals, Objectives within each management prescription. The Analysis of the Management Situation fully analyzes the recreation opportunities and resource characteristics required by NFMA. Analysis of current conditions and potential consequences is based on scientific data and knowledge of an interdisciplinary team of biological and social scientists. AS

COMMENTS: Develop standards and guidelines to help achieve the goal to minimize winter recreation impacts on wintering wildlife (p. III-17).

389

RESPONSE: A new standard was added to the Revised Plan to restrict cross-country snowmachine use from all inventoried winter range. AS

COMMENTS: Revise goal to read: "Provide a high quality winter recreation experience to accommodate current and future use. On big game winter ranges, minimize impacts of winter recreation use."

1202

RESPONSE: The Goal was revised to read: "Provide a quality winter recreation experience while minimizing conflicts between motorized and nonmotorized use and wintering big game." AS

COMMENTS: Write standards to define the requirements for trails; goals are not adequate.

697

RESPONSE: The standards are covered by manual and handbook policies for trail design and maintenance. AS

COMMENTS: Define what we want the Forest to be like (regarding camping) in 10 years.

697

RESPONSE: The Revised Plan's goals, objectives, standards and guidelines provide that definition. AS

RECREATION

D-4

Big Holes/Palisades/South Fork of Snake

COMMENTS: Revise the statement on p. III-49, under Desired Future Condition, to recognize that this subsection provides quality non-motorized recreation too. Include the word "non-motorized" in the statement.

629

RESPONSE: The Desired Future Condition for the subsection is rewritten in the Revised Plan to include a reference to non-motorized experiences. AS

COMMENTS: Keep Palisades/South Fork of Snake River closed to winter, cross-country motorized use to protect crucial big game winter range.

629, 766

RESPONSE: Most of the winter range in this area is placed in the winter range prescription and is thereby closed to all cross-country travel. Also, the area not in the winter range prescription is closed to cross-country snowmachine travel. AS

Kelly Canyon

COMMENTS: Recognize the importance of Kelly Canyon-Hawley areas as cross-country skiing areas because most of the acreage is for snowmobilers and cross-country skiers need a place to ski; keep the area open after the ski hill closes; close the area to winter motorized cross-country use to protect crucial winter range.

F-L(3), 658, 766

RESPONSE: The Forest recognizes the importance of this area for cross-country skiing. An objective and standard within the Big Holes Subsection in chapter III provides specific management direction to maintain these opportunities. The Forest revised the Alternative 3M map to show a prescription 5.1.4(d) which closes the area described to cross-country motorized travel. The ski hill is open to the general public use for cross-country skiing once the resort is closed for the season. AS

Caribou Subsection

COMMENTS: Clarify which type of use will be allowed here (motorized or non-motorized) and specify such in the Desired Future Condition statement; correct the inconsistencies between the DFC statement on p. III-53 and Objective 1 under "recreation"; include a statement that allows motorized use, since the area currently provides it and will in the future.

489, 629, 643

RESPONSE: The text is rewritten to indicate a DFC for both motorized and non-motorized to match existing conditions. The objective is now consistent. AS

RECREATION

D-5

Grand Targhee Ski Resort

COMMENTS: Do not allow impediments to potential expansion of the Grand Targhee Ski Resort. Plan ahead (including working with the Idaho Department of Commerce and the Governor's Office) to remove impediments and to meet present and future demands for ski resorts; indicate under Goals and Objectives that Grand Targhee Ski Resort will continue to grow and expand in the Recreation Resource Section (219.21).

248, 389, 618, 697, 1342, 1345

RESPONSE: The Revised Plan provides no impediments to expansion of the Grand Targhee Ski Resort. A Master Plan was approved in 1995 for resort development. The Forest added direction to the Teton Range Subsection narrative that the Forest will follow the intent of the Master Plan and FEIS mitigation. AS

COMMENTS: Develop standards and guidelines identifying how much land is available for ski area expansion and where and under what conditions future land exchanges would be considered; stop legal delays due to lack of management direction; protect areas adjacent to Grand Targhee Ski Resort as areas of potential expansion.

248, 618, 1277, 1342, 1345

RESPONSE: Land available for ski area expansion is contained within the 4.2 prescription for Kelly Canyon and Grand Targhee Resorts. They will be developed within approved Master Plans. Any land exchanges are handled as project specific proposals outside the Forest Plan. AS

COMMENTS: Correct map in Alternative 3 Prescriptions to show Grand Targhee Ski Resort as a 4.1 Developed Recreation Site, or as a 4.2 Special Use Permit Recreation Site.

248

RESPONSE: It is shown as a gray, 4.2 prescription area on Alt. 3M map. AS

Jedediah Smith Wilderness Area

Climbing

COMMENTS: Allow bolts for climbing only at rappell points and other key anchor points to emphasize self-reliance and discovery - not a ladder of bolts.

1312

RESPONSE: This is addressed by ongoing management and monitoring of the wilderness and within current policies. Direction is not needed in a forest plan. AS

RECREATION

Fishing

COMMENTS: Include a statement that fish stocking for recreational purposes is not permitted (as stated in Opportunity Class I, EA).

1277

RESPONSE: If such a statement was made in the draft Jedediah Smith Environmental Assessment, it was in error. Such stocking is appropriate in waters, such as Fish Lake, noted in the legislation for designation. AS

Teton Range Subsection

COMMENTS: Revise statement under Recreation - Monitoring Item - Conflicts between all forms of recreation and wildlife to say, "It is expected that monitoring partnerships can be developed with state wildlife agencies, state recreation agencies, possibly recreation user groups, and for bighorn sheep in the Teton Range, with Grand Teton National Park."

699

RESPONSE: It is standard practice to coordinate and cooperate with other agencies and user groups in monitoring wildlife and/or recreation and the Forest will continue to do so for the next 15 years. Such direction is inappropriate for inclusion in a Forest Plan. AS

Teton Canyon

COMMENTS: Develop a management plan to protect and manage recreational use in Teton Canyon because the Mail Cabin - Stateline areas and the Teton Pass back-country area are already getting a lot of skiing use and there is not enough parking now.

329

RESPONSE: This may be done later as a project-level plan; however, it is not appropriate in a Forest Plan analysis. AS

Teton County

COMMENTS: Serve the increasing recreational needs in Teton County because the population has made the largest gains between 1990-1995.

314

RESPONSE: The Goals, Objectives, Standards and Guidelines of the Revised Plan address this need. AS

Big Hole Mountain (Prescription 3.2(g))

COMMENTS: Favor both non-motorized and semi-primitive motorized recreation in this area as long as the motorized recreation is restricted to a well-designed and well-marked loop trail system; such a trail system would minimize resource damage and take pressure off the Jedediah Smith Wilderness.

1312

RECREATION

RESPONSE: Your comments are noted. The management direction in the Plan will create a well-designed and maintained motorized trail system in this area. AS

COMMENTS: Offer both semi-primitive motorized and nonmotorized recreation.
1312

RESPONSE: The 3.2 Prescription text was revised under the Recreation Opportunity Spectrum heading to indicate a range of opportunity from semi-primitive non-motorized (SPNM) to roaded natural appearing (RNA). We discovered that the ROS inventory shows non-motorized areas in the Big Holes. AS

Manage for Recreation, Not Timber

COMMENTS: Manage for recreation rather than timber harvests. Fairly compare environmental impacts caused by recreationists versus impacts caused by timber harvests. Do not allow logging and grazing impacts to go inadequately monitored, reported and regulated. Rewrite chapter II-2 so that it does not reflect a predisposition against recreation. Manage for sustainable levels of all resources including both timber and recreation.

174, 208, 280, 293, 308, 341, 621, 1203

RESPONSE: The Plan and FEIS address all resources with no predisposition against recreation. Each resource area has Goals and Objectives based on the Desired Future Condition (DFC) expressed by the public during the issues analysis. DFC direction states that "Commodity production such as timber, firewood, mining, livestock forage, or outfitter and guide services are conducted at sustainable levels." The DFC also states, "Growing and diverse recreational, cultural, visual....needs are accommodated based on the capability of the ecosystem to sustain these uses." All resources will be monitored to determine if Standards, Guidelines, Goals and Objectives are being met. AS

COMMENTS: Change the wording in Chapter II, p. II-2 so that it reflects an attitude that both logging and recreation should be managed to minimize user conflicts, and not a predisposition against recreation as is currently written.

341

RESPONSE: Logging is covered under the Economic Component on the next page. Recreation is simply addressed as one activity under the first Social Component DFC. There is no predisposition against recreation. AS

Allow Recreation in Wilderness

COMMENTS: Manage the wilderness as a "recreation area" because this would allow managers better choices for all concerned.

665

RESPONSE: We are managing the wilderness for its nonmotorized recreational and biodiversity values as required and allowed by the Wilderness Act. AS

RECREATION

COMMENTS: Oppose wilderness designations because wilderness imposes limits on recreationists and Forest managers. Manage wilderness as "recreation areas" because more land is needed to accommodate recreation pressure in the back country and roadless areas are vital to recreation.

291, 643, 665, 704, 1377

RESPONSE: It is true that wilderness designation results in the need for careful management of recreation use to prevent adverse effects on wilderness. However, these areas are sensitive to use impacts and must be managed regardless of the wilderness designation. Therefore there is little loss of nonmotorized recreation opportunity. AS

Prohibit Recreation in Wilderness

COMMENTS: Eliminate/prohibit trailhead facilities from Opportunity Class I areas.

1312

RESPONSE: Trailhead facilities are not included within the Class I areas, since facilities are not allowed within the wilderness. Developed trailheads are in Prescription 4.1. AS

Effects of Recreation in Wilderness

COMMENTS: Explain the Limits or Acceptable Change (LAC) system and whether it will allow additional recreational use and increase degradation in wilderness areas; include statistical data on the magnitude and trends of recreational activities on wilderness and nonwilderness; address recreational impacts on wilderness and non wilderness; clarify how impacts will be mitigated.

325, 699, 1365

RESPONSE: The LAC system is described in the Jedediah Smith Wilderness process paper referred to in the EIS and is part of the Revised Plan. Acceptable change is determined by degree of change in the resource or social factor to be monitored as shown in the monitoring plan. As indicated in the wilderness consequences section of the EIS, additional use expected to occur within the wilderness should result in, "Little cumulative impact or secondary effects." This is a result of the monitoring process that detects unwanted changes in biological, social or other factors. Mitigation occurs as a result of implementing corrective actions listed in the monitoring Plan in the EIS. AS

Effects of Recreation on Wildlife

COMMENTS: Concern about the negative effects of recreation on wildlife. Minimize these effects - create a recreation use management program using correct scientific data and manage conservatively until this data becomes available; discourage recreational use in wildlife zones (a.k.a. cores or corridors); protect amphibians by not placing roads and trails near marshes and seasonally wet meadows; create a standard that controls the location of campsites and trails in peregrine falcon habitat; establish minimum approach

RECREATION

distances to wildlife; and conduct a forest-wide flora and fauna inventory and study the recreational impacts on these species. (CROSS REFERENCE: Wildlife) 643, 1365, 1446

RESPONSE: The Revised Plan contains management direction for recreation as required by NFMA. These are in the Forestwide Standards, Guidelines, Goals, Objectives and management prescriptions. The Analysis of the Management Situation fully analyzes the recreation opportunities and resource characteristics required by NFMA. Analysis of current conditions and potential consequences is based on scientific data and knowledge of an interdisciplinary team of biological and social scientists. AS

COMMENTS: Any and all human activity, in this case recreation, negatively impacts wildlife as numerous studies prove. Harmful recreational pursuits are nature viewing, hiking, backpacking, horseback riding, camping, skiing, hunting, fishing, boating, rock climbing, caving, mountain biking, snowmobiling, and small aircraft. Conduct scientific studies to analyze past, current, and future impacts on the ecosystem, and adapt management based on the findings; with an emphasis on limiting/prohibiting all human activities on the Targhee National Forest if any past, current, or potential impacts are discovered.

1365

RESPONSE: The effects of recreation activity on winter and summer habitat are well documented in scientific studies. These were noted in the AMS and considered in the analysis process. The Revised Plan adopts considerable direction to respond to this concern and minimize potential effects. AS

COMMENTS: Clarify how campsite facilities will facilitate recovery of Threatened and Endangered species.

1446

RESPONSE: Developed campsite facilities can concentrate use away from threatened and endangered species habitat; or facilities such as bear-proof food boxes can prevent conflicts. AS

COMMENTS: Coordinate with Idaho Fish and Game to develop watchable wildlife programs.

1446

RESPONSE: Such coordination is an ongoing administrative effort. AS

Effects of Recreation on Bighorn Sheep

COMMENTS: Protect bighorn sheep habitat from negative recreational impacts by regulating recreation: close campgrounds, prohibit new trails and campsites, and prohibit domestic sheep in key bighorn sheep areas; include a standard that prohibits all human activity on crucial bighorn sheep range from Dec. 1 - April 30; add an objective to the Designated Wilderness - Opportunity Class I,

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II, and III objectives that eliminate recreational use in bighorn sheep winter range in the Jedediah Smith Wilderness Area between Dec. 1 - April 30. (CROSS REFERENCE: Wildlife, Bighorn Sheep).

389, 699

RESPONSE: Bighorn sheep habitat on the Forest is within designated wilderness, proposed wilderness, and semi-primitive backcountry areas. These areas already have limited access. Concerns about possible or potential adverse effects of recreation activity have not provided substantive documentation to support the claim that recreation activity is adversely affecting bighorn sheep populations. For the Revised Plan, an objective was added to work with the Intermountain Research Station to establish a credible research project on the effects of recreation on bighorn sheep on the west slope of the Tetons. Standards or guidelines such as the proposed date restriction will be determined based on results from the research. MO

Protect Riparian Areas from Recreation

COMMENTS: Give special protection to riparian areas because they are important wildlife habitat. Address impacts recreationists (horses, ATVs, campers and picnickers) have on riparian areas; explain why there are no access density guidelines for riparian corridors; and develop management objectives that are compatible with other resource protection objectives. Want management approaches in riparian and aquatic diversity areas to include: modifying recreational facilities, changing maintenance practices, limiting use, or closing areas; and educating people about these measures. Specific approaches include: restricting motorized recreation and mountain bike travel altogether in riparian areas and Aquatic Influence Zones; restrict motorized crossings of streams and wetlands to roads and trails; prohibiting new roads, including temporary roads in riparian and aquatic habitat; prohibit dispersed camping entirely in riparian areas and Aquatic Influence Zones; prohibit recreation within 50-100 feet of a watershed, increase 300 foot corridors along designated roads; do not allow motor vehicles within 25 feet of stream banks, springs, or wet meadows except on designated routes and stream crossings; enforce restrictions (CROSS REFERENCE: Riparian)

FS-3, FS-5, FS-8, FS-9, FS-10, 212, 643, 1367, 1369, 1446

RESPONSE: All these concerns are addressed in the dispersed camping prescription; the riparian prescription; and the OHV Standards, Guidelines, Monitoring and Evaluation requirements. AS

COMMENTS: Address the impacts recreationalist (horses, ATVs, picnic, campers) have on riparian areas because they are harder on an area than livestock and firewood gathers.

FS-3

RESPONSE: There is no data or evidence to this effect. In fact, research shows that hooved animals have more impact than hikers and bikers. Depending on the location, intensity and duration of any type of activity, adverse consequences can occur. AS

RECREATION

Recreation in Grizzly Bear Areas

COMMENTS: Prioritize grizzly bear management over recreation; install educational posters at trailheads; develop goals, objectives and standards for proper sanitation and how to travel and camp in Special Use Permit Recreation Sites in grizzly bear recovery zones. (CROSS REFERENCE: Wildlife, Grizzly Bear)

179, 643, 1446,

RESPONSE: This has basically been accomplished through development and use of the grizzly bear guidelines. Information and a law enforcement restriction order regarding recreational activities in grizzly bear habitat are posted at trailheads. When area occupation and conflict are known or likely, additional emphasis is placed on notifying the public entering the area. AS

Increased Winter Recreation

COMMENTS: Commit funds to provide adequate increased winter recreation use. Unease about winter use increasing and growth referred to in the findings of negative environmental impact from winter use in Yellowstone National Park. Analyze current winter use, including safety, wilderness trespass, and demand for developed areas and develop policies to prevent future negative impacts to the environment and recreationists. Develop acceptable use levels and a policy for determining when levels will be reconsidered to avoid unacceptable conditions.

643, 1342, 1367(b)

RESPONSE: The forestwide goals, objectives, standards, and guidelines should resolve these concerns. We added a goal to the Final Revised Plan to use the guidelines anticipated from the pending Greater Yellowstone Winter Visitor Use Management Assessment by the year 2000. These guidelines help us plan for capacities and avoid conflicts and adverse conditions. AS

COMMENTS: Clarify the statement: "promote opportunities for backcountry winter recreation" and whether this means motorized. Clarify whether the Plan has any method of receiving funds to manage this use and the expense of backcountry accidents.

643

RESPONSE: This is intended to mean non-motorized. The Forest can develop cooperative agreements for groups to collect funds to manage these areas. AS

COMMENTS: Discuss how the increase in the number and miles of marked and groomed snowmobile routes will affect winter recreation users.

1351

RESPONSE: This was done in the FEIS, Chapter IV under the heading "Winter Access - Cumulative Effects." The Forest added some additional analysis of potential effects on snowmobile opportunities. AS

COMMENTS: Provide more information on the existing condition and growth of winter use activities and analyze the impacts of providing increased winter

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recreation opportunities in order to develop levels and a policy for when levels will be reconsidered to avoid unacceptable conditions.

643

RESPONSE: The Forest added text to the winter access section of the FEIS to indicate the growth in this activity. We also added a goal to the Final Revised Plan to incorporate guidance from the Greater Yellowstone Winter Visitor Use Management Assessment in future winter recreation planning. AS

Effects of Winter Recreation on Wildlife

COMMENTS: Concerned about the negative effect of winter recreation on wildlife including snowmobile use on crucial elk and deer winter range. Explain the rationale for permitting cross-country snowmobile use on 66% of crucial elk and deer winter range. Minimize negative impacts by including: establishing minimum approach distances; revising goals and developing standards and guidelines; reducing noise impacts by requiring ski area developers to use noise-limiting devices and low noise equipment, reducing speeds, and limiting duration; and incorporating the Teton Front Winter Recreation Plan and its ORV restrictions and crucial big game winter habitat objectives. (CROSS REFERENCE: Wildlife)

389, 766, 1202, 1365, 1446

RESPONSE: The new standard of the Revised Plan prohibits cross-country snowmachine use in winter range areas. Designated routes through winter range were selected to minimize potential effects on wintering wildlife. The winter management direction, prescription, Winter Travel Plan, and winter recreation/wildlife monitoring requirements address the concerns of the Teton Front Winter Recreation Plan. AS

COMMENTS: Minimize winter recreation use in habitats for all Threatened, Endangered & Sensitive Species and big game. (CROSS REFERENCE: Wildlife)

1446

RESPONSE: This is accomplished by Goals, Objectives, Standards and Guidelines for Threatened, Endangered, and Sensitive Species as stated in Chapter III of the Revised Plan. AS

Effects of Winter Recreation on Wolverine

COMMENTS: Protect wolverine denning habitat by creating a 8 km buffer in wolverine denning habitat from Jan. 1 - May 31 and restrict recreational activity (e.g. skier/snowmobiler) for the remaining winter season; plan for non-motorized and motorized recreation in high elevation areas to protect wolverine dens. (CROSS REFERENCE: Wildlife, Wolverine)

766, 1185, 1348

RESPONSE: Surveys are currently underway and an objective was added to the Final Revised Plan to identify denning areas and determine actual use. An assessment will be completed following data gathering and will include recreational management direction. AS

RECREATION

Economic Importance of Winter Recreation

COMMENTS: Concern about winter recreation's importance to the economy because more wilderness designations will destroy Idaho and Wyoming communities that rely on heliskiing and snowmobile businesses. Recognize the importance of ski area development by working with the Idaho Department of Commerce and the Governor's Office to ensure present and future demand for downhill skiing will be met; downhill skiers represent a substantial commitment of money.

358, 618, 1342, 1345

RESPONSE: Although the Revised Plan recommends some areas for wilderness designation, it takes an Act of Congress to make it happen. In the interim, existing motorized uses which do not degrade the roadless areas' wilderness character are allowed to continue. That was and continues to be the case with the Italian Peaks, Lionhead and the Idaho portion of Winegar Hole areas, recommended for wilderness designation ten years ago. When Congress designates an area as Wilderness, they have the option to continue motorized uses, but that is highly unlikely. Usually a newly designated wilderness bill will prohibit heliskiing, snowmobiles and all motorized uses. The Forest is always willing to work with the Idaho Department of Commerce and the Governor's Office to address the needs of downhill skiers. DP

Winter Incompatible Use - Conflicts

COMMENTS: Separate winter users in order to enhance the recreation experience and prevent user conflicts, especially between cross-country skiers and snowmobilers. Need more cross-country ski areas because the speed, noise, and pollution from snowmobiles impacts their enjoyment of the forest. Alleviate user conflicts by developing an overall winter recreation management plan (similar to ski area Master Plans) that includes specific (by type of use) and clear allocations of users among cross-country skiing, snowmobiling, downhill skiing, and general snowplay. Submit this plan for public input as required by NEPA; fund this plan by developing a statewide licensing organization.

618, 643, 697, 1263, 1342, 1345

RESPONSE: We added a goal to the Final Revised Plan to use the guidelines from the pending Greater Yellowstone Winter Visitor Use Assessment by the year 2000 to establish a few non-motorized winter activity areas. This should help reduce conflicts and adverse conditions. AS

HeliSkiing

COMMENTS: Do not support more wilderness because heliskiing will be prohibited from wilderness areas which will force heliskiing tour companies out of business and devastate local economies. Prove that there is evidence of lasting damage from helicopter skiing over the previous decades. Heliskiing recreation is important to lives and peace of mind. (CROSS REFERENCE: Wilderness)

F-E(2), F-K(2), 172, 281, 358, 366, 405, 521, 642, 647, 712, 1123, 1183, 1189, 1342, 1373, 1385, 1454

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Allow heliskiing in areas that are already disturbed/developed to protect the Wilderness.

1393

More adequately address heliskiing in the DFPR; heliskiing industry could rally in support of a fair plan that balances multiple-use with wilderness.

358, 402, 625

RESPONSE: Although the Revised Plan recommends some areas for Wilderness designation, it takes an Act of Congress to designate an area. In the interim, existing motorized uses, including heliskiing, which do not degrade the area's Wilderness character, are allowed to continue. DP

COMMENTS: Small aircraft, glider planes, and wing aircraft cause stress response in wildlife.

1365

RESPONSE: Your comment was noted and considered. We are unaware of any adverse effects on wildlife. We are aware of some possible effect on nesting peregrine falcon. Potential aircraft effects on planning considerations is noted in the forestwide guideline for peregrine. AS

Cross-Country Skiing

COMMENTS: Increase/preserve cross-country ski areas.

711

RESPONSE: The Plan direction will increase or preserve cross-country skiing opportunities. A new goal was added to the Final Revised Plan which directs the establishment of a few additional areas of non-motorized winter activity by the year 2000. AS

Dog Sledding

COMMENTS: Designate dog sled trails.

697

RESPONSE: We did not designate separate trails at this time. Dog sleds are free to use groomed snowmachine trails. In the future, dog sled trails may be designated according to guidelines from the pending Greater Yellowstone Winter Visitor Use Assessment. AS

Downhill Skiing/Developed Recreational Facilities/Ski Resorts

COMMENTS: Emphasize in the Recreation Resource section (219.21): Appraise developed recreational facilities and their ability to meet present and future demand; consider established facilities, regulation of use, and recreational opportunities when planning for future demands; plan and implement off-road vehicle use to protect land, promote safety and minimize user conflicts.

389, 618, 697, 1345

RECREATION

RESPONSE: The Revised Plan contains management direction for recreation as required by NFMA. These are in the Forestwide Standards, Guidelines, Goals, Objectives and management prescriptions. The Analysis of the Management Situation fully analyzes the recreation opportunities and resource characteristics required by NFMA. Analysis of current conditions and potential consequences is based on scientific data and knowledge of an interdisciplinary team of biological and social scientists. AS

COMMENTS: Take a cautious approach and consider the impacts developed recreational facilities and ski resorts have on wildlife and the environment including the air, soil, vegetation and water. Develop an objective that adjusts the use level of developed facilities consistent with other resource management objectives (e.g. aquatic and riparian health). Make no decisions until they are funded and after fully considering a comprehensive scientific study that examines and monitors cumulative past, current and future environmental impacts caused by developed recreational facilities and ski resorts. Incorporate limits on the numbers and affect of recreationists: create visual buffer zones, channel traffic, establish a permit and fee system; educate the public; and develop ski areas in areas of low sensitivity (matrix areas).

643, 1365

RESPONSE: The Revised Plan takes a conservative approach to potential effects of recreation on the environment and provides numerous mitigations to avoid adverse effects. The winter range prescription is an example of these conservative efforts. AS

COMMENTS: Include under Goals, Objectives and Standards/Guidelines a management direction for developed ski areas because lack of direction might cause legal problems/delays in future ski area expansion projects.

248, 618, 1342, 1345

Include in the Management Prescriptions, standards and guidelines identifying how much land is available for ski area expansion and where and under what conditions any future land would be considered.

248, 618, 1342, 1345

RESPONSE: We added management direction to the Final Revised Plan for the Teton Range Subsection to require the intent of the 1994 Master Plan FEIS and 1995 Master Plan for Grand Targhee Resort to be followed. Both Grand Targhee and Kelly Canyon are mapped in the 4.2 Special Use Permit Recreation Site prescription which provides additional management direction. AS

COMMENTS: Develop programs to use ski areas (developed recreational sites) year-round to meet growing demands of recreationists.

1342, 1345

RESPONSE: This development is the responsibility of each resort owner within the scope of their approved Master Plan. AS

COMMENTS: Make the permit approval process, including NEPA requirements, the same for all ski areas in Idaho.

1342, 1345

RECREATION

RESPONSE: This is a policy matter that is outside the scope of a forest plan document and decisions. AS

COMMENTS: Consider seismicity when designing, building, and siting facilities.

389

RESPONSE: This is a routine consideration for all publicly occupied buildings which require plan review by Forest Service regional engineering staff. AS

COMMENTS: Develop an objective that determines what allowable levels of use are consistent with other resource management objectives (e.g., aquatic and riparian health) and then adjust the level of developed facilities accordingly.

643

RESPONSE: An objective is not needed. We indicate in the Final Revised Plan and EIS (Chapter IV - Developed Recreation) that only minor additional facilities are proposed as shown in the implementation schedule. This was determined after analysis of demand, adjacent public and private facilities and the condition of existing facilities. AS

COMMENTS: Fund a monitoring and evaluating program for the impacts caused by ski resorts. Fully consider and utilize substantive scientific data on the impacts of ski resorts. Develop ski resorts in areas of low sensitivity to developmental impacts (matrix areas) in order to minimize negative impacts; if not possible then do not develop in the area in question.

1365

RESPONSE: Master Plans with supporting environmental analysis were approved for both existing ski resorts. The approval for these resorts requires certain levels of monitoring for wildlife, wilderness and community development concerns. A detailed review process for all future development projects at Grand Targhee is in place and has been functioning successfully for two years. There are no other inventoried potential ski area sites on the Forest other than Kelly Canyon and Grand Targhee. AS

RESEARCH NATURAL AREA

Research Natural Areas - General Recommendations

COMMENTS: Recommend more Research Natural Areas (RNAs). Improve and revise current and proposed network of RNAs so that they represent all habitat types and are of sufficient size to derive meaningful and useful data.

163, 1365

RESPONSE: At this time, there are three proposed and nine existing RNAs on the Targhee. This list of proposed RNAs is identical to that of the Forest Service Regional Office in Odgen, Utah and the Intermountain Research Station in Missoula, Montana. There are no other proposals for RNAs.

The existing and proposed RNAs on the Targhee meet the standards required for establishment and management. It is not the intent of the RNAs program to have all habitat types on a specific forest represented in RNAs located on that same forest. WG

COMMENTS: Use goal and objective statements to reference the process for recognizing RNAs needs; identifying new candidate areas; and delineating the purpose of these areas to preserve a wide spectrum of pristine representative areas that typify important ecosystem types.

1181

RESPONSE: The direction for the management of existing RNAs and the establishment of proposed RNAs is located in Forest Service Manual 4063. The Targhee does not restate manual direction or policy in the Revised Plan. WG

COMMENTS: Identify proposed and existing RNAs by name and objective, with a brief description of their values. The status of proposed RNAs is not adequately addressed in the Draft; the fate of proposed RNAs should be determined by including them in the alternatives, in the management area prescriptions, and elsewhere in the documents. RNAs should be placed in a single Forest Plan Management Area. Reasons for dropping certain areas from consideration must be disclosed.

612, 1181

RESPONSE: The RNA sections in both the FEIS and Revised Plan are modified in response to public comments. Identification of proposed and existing RNAs, with a brief description of their values in Chapter III and effects by each alternative in Chapter IV of the FEIS were added and changes to Management Prescription 2.2 in the Revised Plan. WG

RNAs - General Recommendations (continued)

COMMENTS: Do not put RNAs under title "Unique Ecosystems" because they are intended to feature representative as well as unique systems, title "Research Natural Areas." Do not place RNAs under the terrestrial ecosystem since they also have aquatic and riparian elements. Place RNAs in the section on Ecological Processes and Patterns since they are reference areas for monitoring, research, conservation and education within context of understanding Range of Variability and because they help in the understanding of ecosystem management.

612

RESEARCH NATURAL AREA

RESPONSE: Your comment was considered and discussed. Because the Forest believed that to adopt the change would create confusion both internally and externally, we chose not to adopt this proposal. Keeping RNAs under Unique Ecosystems does not effect on-the-ground management. WG

COMMENTS: Need to agree on which proposed areas were dropped from further consideration and document those decisions with written concurrence from the R4 INT/RNAs Committee. List specific names of established and proposed RNAs in DFPR and DEIS; include maps. Provide more information on individual areas in the DEIS, such as RNAs acreage and vegetation types represented. Link the revised goal and objective statements to a presentation of various plant communities and an assessment of the conservation status of these elements of biological diversity. Disclose the effects of managing for maintenance of biological diversity through RNAs management prescription in the EIS.

1181

RESPONSE: Presently, the Targhee, the Regional Office (R4), and the Intermountain Research Station all agree on the proposed RNAs. The FEIS and Revised Plan were modified to include the names and locations of proposed RNAs, as well as acres and vegetation types. More detailed information on proposed RNAs is located in Targhee resource files. WG

COMMENTS: Rewrite portions of the management area prescription that do not meet the intent of RNAs management policy. Describe the relationship between the Forest Plan and Establishment Record in the management area description. Modify the standards and guidelines section to be consistent with the FSM policy guidelines; reference Establishment Record as source of specific prescriptions; and indicate that management activities that fall outside the Establishment Record and must be approved by Station Director, Intermountain Research Station. Show that all restoration and rehabilitation management activities must be approved by the Station Director.

Reword description area to include more precise and thorough description of RNAs; the variety of purposes they serve; on what basis they are selected; and how they should best be managed. Include proposed restrictions on recreational, extractive, or consumptive uses. Reword goal statement: "Maintain natural conditions by allowing ecological processes to prevail with minimal human intervention.

612, 1181

RESPONSE: The FEIS and the Final Revised Plan are significantly modified to address these concerns. As changed, Management Prescription 2.2 in the Revised Plan is now consistent with policy identified in FSM 4063 and the Establishment Records for existing RNAs. WG

Specific Revisions/Corrections

COMMENTS: DEIS incorrectly mentions 3 proposed RNAs when there are 4 areas.
612

RESPONSE: This error is corrected in the FEIS. There are only three proposed RNA's on the Forest (see Table III-21 FEIS). WG/CC

RESEARCH NATURAL AREA

COMMENTS: Recommend the following corrections to DFPR, pages III 72-75, Description: Replace "steering committee" with R4/INT Station RNAs Committee; Add monitoring to list of RNAs uses; Replace "... are good examples of physical or biological units"; with "provide excellent examples of common and unique ecosystems..."; Add "direct" before "human intervention"; Omit statement on interpretation of special features; Omit current sentence on road or trail; State that timber harvest is not allowed; and omit sentence on livestock grazing - it is not correct. Suggest replacement language: "Generally RNAs are closed to grazing unless grazing is necessary to approximate natural grazing regime.

612

RESPONSE: "Steering committee" was replaced in the text with "R4/INT Station RNAs Committee" as suggested. The entire Management Prescription 2.2 in the Revised Plan was modified to incorporate all policy and direction identified in FSM 4063. Recommendations 2 through 8 were not adopted because they either: restate FMS direction; are presently incorporated into the Establishment Records for existing RNAs; or, because historical use, at the same levels, are not deemed threatening to the values of the RNAs. WG.

Management Prescriptions

COMMENTS: Maintain consistent direction across the national network of RNAs. The Forest Plan should state that RNAs are closed to motorized use and indicate where there are exceptions due to special situations. Mountain bike use is also not permitted within RNAs - this needs to be indicated in the Plan. In general, discourage horse/packstock use in RNAs, and where this use occurs it should be restricted to trails. Not a good idea to allow horse/packstock travel, especially as it may influence distribution of weeds. Perhaps impose a weed-free hay requirement for stock use in RNAs.

Address integrated pest management, noxious weeds, special forest products. Make the following changes: Allow natural outbreaks of native insects and diseases to proceed without intervention unless they are a substantial threat to important resources inside or outside RNAs boundary. (S) Use control methods which minimize disturbance to natural values of the RNAs. (S). Control populations of exotic (non-native) plant and animal species where feasible. Use control methods which minimize threats to native species. (G). Harvest of special forest products will not be allowed within RNAs.

Add general standard: Protect the natural condition of the ecosystem and its processes and any species or values for which the RNAs was proposed. (S)

(Soil & Water): Soil and water standards and guidelines are not consistent with the intent of RNAs. Minimize human impacts; this includes some traditional watershed restoration practices. Not really justified in post-fire rehab seeding - the value of an RNAs is to let nature take its course. Watershed rehab structures are not allowed in RNAs. Seeding, especially of non-indigenous species is not desirable. Eliminate this section There is no such section for designated wilderness management area prescription.

(Fish & Other Aquatic Resources): In addition to present wording, make statement indicating stocking of non native fish is not permitted.

RESEARCH NATURAL AREA

(Recreation): Allow non-vehicular recreation, except when it is a threat to the values for which the RNAs was proposed. (S) Utilize restrictions or closures under 36 CFR subpart B when necessary to protect the area from actual or potential damage due to public use. (S) Delete Item "ROS - Primitive to semi-primitive motorized." Motorized use is not allowed in RNAs.

(Trails): Keep present language on trails.

(Timber): Replace second standard (Timber) "No timber harvesting..." with "Prohibit logging and wood gathering activities."

(Range): Omit current language in Draft Forest Plan. Livestock grazing is not allowed in RNAs unless it is deemed necessary as a tool to manage vegetation to mimic natural grazing regimes. Cannot think of any situation on Targhee where livestock grazing is justified. Reword: "Prohibit livestock grazing except when used to approximate a natural grazing regime for maintaining the native vegetation. No salting, water developments or other range improvements allowed.

(Ecological Processes - Fire/Fuels): Add: "Prescribed fire plans for RNAs will be developed in conjunction with the Intermountain Station, and approved by Station Director" -- at the end of prescribed fire guideline.

612

RESPONSE: The entire Management Prescription 2.2 in the Revised Plan is modified to incorporate all policy and direction identified in FSM 4063. All recommendations proposed were not adopted because they: restate FMS direction; are presently incorporated into the Establishment Records for existing RNAs; or, historical use, at the same levels, are not deemed threatening to the values of RNAs. WG.

COMMENTS: Prescribed fire may be needed to maintain ecological processes and the current statement regarding fire use (pg III-73) should reflect this.

Change language in "Physical Elements, Soil and Water" pertaining to burned area rehab and the other three guidelines to show that restoration and rehabilitation will be incident specific and must be approved by the Director.

To effectively attain the prescription goal of maintaining natural processes, no "semi-primitive motorized" use, ROS classification must be "primitive." More exacting restriction on recreational use should be defined (i.e., horse and packstock limited to roads and trails; no motorized use, summer or winter). Recreation use of RNAs raises paradoxical issues of balancing public use with pristine, representative, natural conditions; and use threatens the perpetuity of such conditions. Management strategy similar to LAC may be appropriate.

1181

RESPONSE: The entire Management Prescription 2.2 in the Revised Plan is modified to incorporate all policy and direction identified in FSM 4063. All recommendations proposed were not adopted because they either: restate FMS direction; are presently incorporated into the Establishment Records for existing RNAs; or, historical use, at the same levels, are not deemed threatening to the values of RNAs. WG.

RESEARCH NATURAL AREA

COMMENTS: Allow prescribed burning in RNAs in accordance with the RNAs Established Record in that prescribed fire (management and natural ignition) may be used to maintain fire dependent ecological processes and to provide a natural range of fuels, understory vegetation, and successional stages where specific direction is not provided, or modification is needed. Prescribed fire plans in these areas should be developed and approved by the Research Station Director.

612, 1181

RESPONSE: The entire Management Prescription 2.2 in the Revised Plan was modified to incorporate all policy and direction identified in FSM 4063 relevant to prescribed fire. All recommendations proposed were not adopted because they either: restate FMS direction; or are presently incorporated into the Establishment Records. WG

United States
Department of
Agriculture

Forest Service

Intermountain
Region

Targhee
National
Forest



Appendix A

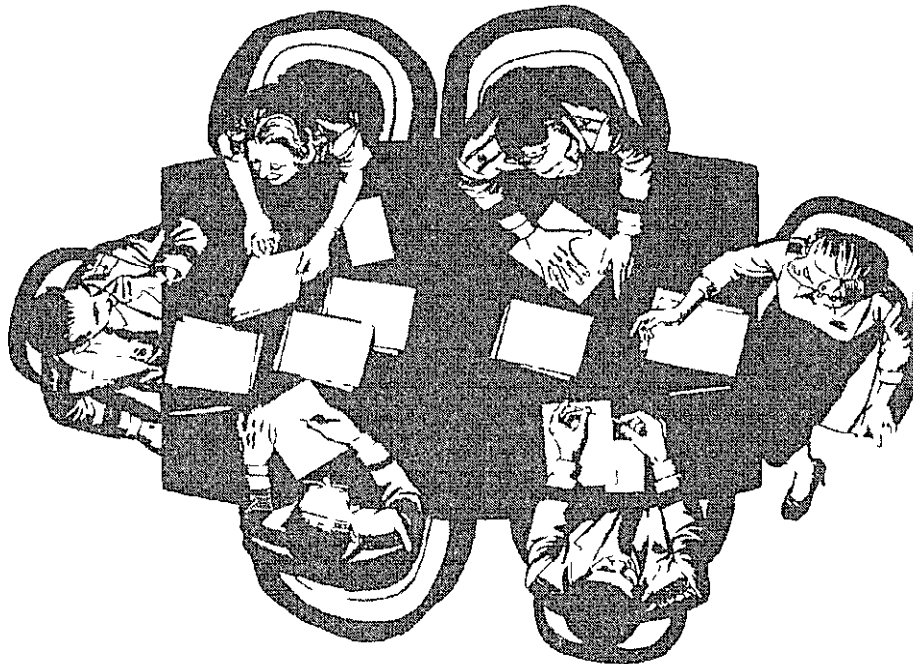
Response To

Public

Comments

Volume II

Targhee National Forest
1997 Revised Forest Plan



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RIPARIAN - FISHERIES

Habitat Protection

COMMENTS: Protect fish (mostly cutthroat trout) and fish habitat and restore some past damage to these areas from logging and grazing. The Preferred Alternative does not do enough to effect needed change; support stronger management.

13, 62, 136, 150, 157, 158, 162, 168, 174, 178, 181, 194, 208, 226,
271, 278, 282, 308, 318, 323, 400, 519, 610, 621, 627b, 629, 631, 640,
643, 651, 652, 659, 662, 666, 697, 739, 1177, 1243, 1327, 1328, 1364,
1365, 1367a, 1369, 1446, 1448a, 1458

RESPONSE: The Revised Plan places more emphasis on fisheries. It contains new goals for fisheries and special objectives and guidelines to identify and better protect all native cutthroat trout habitats. DD

Specific Habitat Protection

COMMENTS: City of Irwin supports cutthroat trout habitat protection because it is valuable in the Palisades region for aesthetic and economic reasons.

1244

Burns Creek, a tributary of South Fork of the Snake, is one of the few spawning streams left and should be protected.

632

Garns Mountain roadless area supports the most important tributaries of the South Fork of the Snake including Burns Creek and Pine Creek.

1337

RESPONSE: The Revised Plan recognizes the aesthetic, economic, and scientific values of maintaining viable populations of native cutthroat trout and new goals, objectives, and guidelines were developed to identify and better protect all native cutthroat trout habitats. DD

COMMENTS: Extend boundary widths in Island Park and Madison Plateau subsections to 300 feet unless site-specific scientific data indicates otherwise.

1446

RESPONSE: The boundary width used within these subsections was based on an evaluation of the geology, landform, and slope. During project planning, they can be increased or decreased based on site-specific analysis. DD

Analysis Flaws

COMMENTS: Recommends using Prescription 2.8.1 to expedite recovery rates and to achieve a higher level of quality cutthroat trout habitat. (CROSS

REFERENCE: Riparian, Stubble Height)

FS-7

RESPONSE: Although Prescription 2.8.1 would expedite recovery and achieve a higher level of quality cutthroat trout habitat than the selected prescription, the Revised Plan strengthens the selected 2.8.3 Prescription by

RIPARIAN - FISHERIES

adding new goals, objectives, and guidelines to identify and better protect all native cutthroat trout habitats. DD

COMMENTS: Cutthroat are declining in upper Snake, and less than one percent of observed fish in Warm River are cutthroat. In the Greater Yellowstone Ecosystem, Yellowstone cutthroat exist in only ten percent of historical stream habitats due to habitat degradation, yet planning documents fail to address this issue in any substantial manner.

643

RESPONSE: The population status of native cutthroat trout on the Forest and throughout their entire home range is described in the FEIS and in the Biological Evaluation for native cutthroat trout. The Revised Plan contains new goals, objectives, and guidelines to identify and better protect all native cutthroat trout habitats. DD

COMMENTS: Table III-7 portrays a bleak picture of cutthroat trout status, and though Alternative 3M included improvements over past management, it is not pro-active enough in managing timber harvest and livestock to maintain and restore Yellowstone cutthroat.

643

RESPONSE: The Revised Plan strengthens the 2.8.3 Prescription by adding new goals, objectives, and guidelines to identify and better protect all native cutthroat trout habitats. DD

COMMENTS: For all streams found to contain native trout, the Plan needs a standard requiring the immediate adoption of a minimum 300 foot buffer zone and minimum 6" stubble height, with road closures effectively implemented and grazing management plans adjusted to protect streams.

1276

RESPONSE: The buffer widths and stubble-height requirements adequately protect native trout habitat. In addition, the Revised Plan contains new goals, objectives, and guidelines to identify and better protect all native cutthroat trout habitats. DD

COMMENTS: Stream classifications systems and/or riparian area sensitivity levels should be established to evaluate importance of each stream.

697

RESPONSE: This recommendation was considered but later dropped. The Revised Plan allows for additional analysis to be used, as needed, to address site-specific situations. The Revised Plan also contains new goals, objectives, and guidelines to identify and better protect all native cutthroat trout habitats. DD

COMMENTS: Management actions to date by federal land managers have not adequately protected or improved the condition of federally managed watersheds and riverine ecosystems in the Region. Existing national forest management

RIPARIAN - FISHERIES

plans do not reflect current science because a comprehensive, landscape level conservation strategy is lacking.

1367a

RESPONSE: The Forest Service is involved in many on-going, broad scale conservation efforts. The Intermountain Region is participating in the Interior Columbia Basin Ecosystem Management Project, the implementation of the Inland Native Fish Strategy, and several species-level conservation strategies. The Revised Plan incorporates many of the conservation measures discussed in these broad scale conservation efforts. DD

COMMENTS: The most effective strategy to ensure the long-term health of the Region's watersheds and fish habitat in the region is to a) protect biologically key watersheds and riparian areas from potentially destructive management activities, and b) take all necessary steps to prevent irreversible damage to these areas from landslides, mass erosion, sedimentation, wind drying and wind erosion.

1367a

RESPONSE: The Revised Plan designates 17 of the 39 Forest watersheds as Native Trout Watersheds which receive special management emphasis, including protection. All Research Natural Areas and Special Management Areas (areas with unique cultural, botanical, geological, or zoological values) are identified and receive special management emphasis, including protection. DD

Specific Alternative Support

COMMENTS: Supports Alternatives 4, 5, and 6 because cutthroat trout are a "sensitive" species and a maximum number of miles should be protected for fish and fishing.

1206

Support Alternative 6 because it provides for a reduction in the number of stream crossings from the present number of 5,680 to 1,204. Would end all timber harvest in head water areas, and reduce the detrimental effects of roads and OHV use the most.

1367b

RESPONSE: Alternative 6 was not selected, because it did not provide the overall advantages to all the resources that Alternative 3M does. The Revised Plan places a higher emphasis on fisheries. It contains new fisheries goals and new objectives and guidelines to identify and better protect native cutthroat trout habitats. DD

Fishing and Fisheries

COMMENTS: Does not support fish habitat improvements that emphasize recreational fishing opportunities.

1273

RESPONSE: The Revised Plan provides direction to plan and implement a variety of fish habitat improvements. Whether these improvements benefit fish habitat, recreational fishing, or both, is determined through site-specific

RIPARIAN - FISHERIES

analysis which evaluates ecological capabilities, social needs, and economic needs. DD

COMMENTS: Trout could be one of the Targhee's most sustainable harvests but lack of trout is caused by the inability of the streams to support fish food chains and to supply sufficient sensitive breeding areas.

1392

RESPONSE: The ability of a particular stream to support trout is determined by its biological potential and the amount of fish mortality (fishing pressure). The majority of fish-bearing streams on the Targhee are in a "good" condition class. Those that are below a "good" condition receive greater emphasis under the Revised Plan. The Revised Plan also contains new goals, objectives, and guidelines to identify and better protect native cutthroat trout habitats. DD

COMMENTS: Public fishing access points need to be addressed more thoroughly.

1276

RESPONSE: Public fishing access sites were analyzed early in the planning process (refer to Analysis of Management Situation document). No new sites are planned for development, although maintenance and minor improvements to existing access sites is expected. DD/AS

COMMENTS: Fishing can potentially impact population and behavior of fish species.

1365

RESPONSE: The Targhee coordinates with Idaho Fish and Game and Wyoming Game and Fish when planning and implementing activities which could impact the level or type of fishing. DD

Alternative 3M

COMMENTS: Does not support Alternative 3M Riparian Management because on-going surveys will show cutthroat trout populations are in poorer condition (DEIS Table II-I) and that subspecies will be nominated for consideration as threatened and endangered under Endangered Species Act.

308, 1367a

TNF should be using the criteria prescribed by INFISH. It does not appear the Plan has adequately considered the study.

FS-7, 1367a

RESPONSE: The Revised Plan includes the eight riparian goals from INFISH; new objectives to survey native trout populations and habitats, to define recovery needs and opportunities; and new guidelines to improve management of livestock grazing. It designates 17 of the Forest's 39 primary watersheds as Native Trout Watersheds and places more emphasis on protection and restoration of native trout habitats and populations. DD

RIPARIAN - FISHERIES

COMMENTS: 3M standards and guides unfairly single out timber and grazing as contributing to declining fisheries.

432

RESPONSE: The effects of timber harvest (including road construction and use) and livestock grazing on fisheries resources is evaluated in the FEIS. Effects vary by alternative based on the amount of timber harvest and livestock grazing permitted. Alternative 3M is selected as the "preferred" alternative, because it provides the best balance for all resources within an acceptable level of environmental effects. The standards and guidelines found in the 3M Alternative meet the desired future conditions of the Revised Plan.
DD

COMMENTS: Could not find any discussion why the key indicators in 3M were the preferable conditions (e.g., estimated thresholds of minimum stream miles with adequate habitat to support cutthroat trout.) Should be presented in an analysis.

1177

RESPONSE: The indicators in the FEIS display the effects between alternatives for specific aspects of each alternative. The indicators do not represent good or bad conditions or outcomes. The rationale for selecting the Preferred Alternative 3M is specifically described in the Record of Decision. DD

COMMENTS: Recommends the NFMA and FSM should be included as central reasons for revising the Plan, and the ESA should be used as a planning tool to accomplish the purposes of the NFMA and FSM.

1446

RESPONSE: The National Forest Management Act and related FS Manuals have not changed substantially from the time the original Forest Plan was prepared. The original Forest Plan and the Revised Plan are in compliance with NFMA. The Endangered Species Act was a primary consideration in preparing the Revision and its provisions are addressed. In many ways, ESA serves as part of the foundation for the Revision. DP

COMMENTS: The DFPR should include existing populations of cutthroat requirements and population trends to each species.

1364

RESPONSE: Management of fish populations is the responsibility of the States. The Revised Plan contains several major objectives including the need to coordinate with the States of Idaho and Wyoming to reassess the health of native cutthroat trout populations throughout the Forest, define species recovery needs, and determine which habitats are vital to recovery. DD

COMMENTS: Page III-58, Designated Wilderness - Opportunity Class I, Objective I: Suggest the Targhee National Forest adapt the State of Wyoming's Fishery Management Plan for wilderness fisheries because this is a state jurisdictional responsibility.

389

RIPARIAN - FISHERIES

RESPONSE: The Targhee coordinates with the States of Idaho and Wyoming in the management of wilderness resources, including fisheries. The Forest Service has the responsibility to coordinate with State fish managers to ensure that fish stocking does not compromise Federal interests (e.g., compliance with the Endangered Species Act, and Wilderness Act). This direction is in accordance with Forest Service Manuals 2640 and 2323.3 and the agreement between Forest Service, Bureau of Land Management, and the International Association of Fish and Wildlife Agencies entitled "Policies and Guidelines for Fish and Wildlife Management in National Forests and Bureau of Land Management Wilderness".
DD/MO

COMMENTS: It would be beneficial that direction be given for the protection and expansion of any genetically pure native fish species in wilderness regardless of opportunity class.
1273b

RESPONSE: Direction in the Revised Plan for wilderness management allows for this. In addition, the Revised Plan contains new goals, objectives, and guidelines to identify and better protect all native cutthroat trout habitats, regardless of whether fish are found within wilderness designated areas.
DD/MO

COMMENTS: Page III-20 Table III-4, Fish Bearing Streams: Change the text and table by adding a footnote to the table for clarification, because neither indicate the type of fish considered for this classification.
389

RESPONSE: The term "fish" refers to all fish, regardless of species. Not all streams are fish bearing. DD

COMMENTS: The DEIS Page IV-18, Wildlife Associated with Aquatic Ecosystems: The Forest suggest this resource element be included in this part of the document by including cutthroat trout habitat. This section makes no mention of impacts to any fish species, which seems inappropriate, given the ability of fish community structure and abundance to reflect watershed and riparian conditions. Include this as part of the document.
389

RESPONSE: The environmental consequences to fisheries habitat are analyzed under the preceding headings entitled Riparian and Water. DD

COMMENTS: Page III-6, 7 Aquatic Riparian Resources and Watershed: Listed goals are incomplete, recommends defining as general goal of maintaining natural conditions for aquatic life, or to fully support attainable beneficial uses for the non-cutthroat trout streams.
1362

RESPONSE: The Revised Plan contains eight new fisheries goals adopted from the Inland Native Fish Strategy. DD

RIPARIAN - FISHERIES

Fisheries and Stubble Height

(CROSS REFERENCE: Riparian, Stubble Height)

COMMENTS: Recommends a minimum of six inches stubble height for existing and potential cutthroat trout habitat and of streams that affect cutthroat trout habitat in a watershed.

766

RESPONSE: The stubble height requirements apply at the end of the grazing period. In most cases, a 6" stubble will remain at the end of the growing season, which is usually adequate to maintain and restore stream and riparian habitats and meet water quality standards. If site-specific analysis shows that the Plan standards will not maintain and restore stream and riparian habitats or will not meet water quality standards, then more restrictive grazing standards will be implemented. DD

COMMENTS: Problems with using stubble height as a monitoring tool are determining which plant species are being measured for stubble height and if these criterion allow for perpetuation of undesirable plant species (i.e. Kentucky blue grass).

1446

RESPONSE: The criteria for selection of key species used in monitoring of stubble height addresses this question in detail. Refer to the current version of the Targhee Rangeland Monitoring Protocol (1997). DD

COMMENTS: The DFPR should adopt the Beaverhead Riparian Guidelines rather than the Riparian Forage Utilization, DFPR III-21.

697

RESPONSE: The Targhee reviewed the Beaverhead Guidelines while preparing the Final Revised Plan and incorporated those aspects of the guidelines that are applicable to the Targhee's situation. Additional standards, such as streambank stability, will be developed within five years. DD

Stocking Issues

COMMENTS: Does not support the DFPR Designated Wilderness - Opportunity Class III, Page III-63 to III-65, that gives direction to stock non-native fish in Wilderness Areas.

1273b

RESPONSE: Permitting the stocking of native and non-native fish into only those waters previously stocked by State Fish and Game Departments is in keeping with Forest Service policy direction. The Forest Service has the responsibility to coordinate with State fish managers to ensure that fish stocking does not compromise Federal interests (e.g. compliance with the Endangered Species Act, and Wilderness Act). This direction is in accordance with Forest Service Manuals 2640 and 2323.3 and the agreement between FS, BLM, and the International Association of Fish and Wildlife Agencies entitled "Policies and Guidelines for Fish and Wildlife Management in National Forests and Bureau of Land Management Wilderness". DD/MO

RIPARIAN - FISHERIES

COMMENTS: Page III-59, Designated Wilderness - Opportunity Class I, Biological Elements, Fish and other Aquatic Resources: Recommends modifying this verbiage to accurately reflect states' rights to stock fish in waters contained in this jurisdiction.

389

RESPONSE: The Forest Service has the responsibility to coordinate with State fish managers to ensure that fish stocking does not compromise Federal interests (such as compliance with the Endangered Species Act and Wilderness Act). This direction is in accordance with Forest Service Manuals 2640 and 2323.3 and the agreement between Forest Service, Bureau of Land Management, and the International Association of Fish and Wildlife Agencies entitled "Policies and Guidelines for Fish and Wildlife Management in National Forests and Bureau of Land Management Wilderness". DD/AS/MO

COMMENTS: The standard for fish stocking should read "non-native" rather than non-exotic.

1273b

RESPONSE: Your comment is acknowledged. The guideline was changed to read "native and non-native..." DD/MO

COMMENTS: Recommends management direction that ensures no stocking of non-native fish that would threaten viability and genetic integrity of any native species.

136, 389, 643, 1273b

RESPONSE: Idaho Department of Fish and Game and Wyoming Game and Fish Department have authority to regulate fish stocking. The Forest Service has the responsibility to coordinate with State fish managers to ensure that fish stocking does not compromise Federal interests (such as compliance with the Endangered Species Act and Wilderness Act). This direction is in accordance with Forest Service Manuals 2640 and 2323.3 and the agreement between Forest Service, Bureau of Land Management, and the International Association of Fish and Wildlife Agencies entitled "Policies and Guidelines for Fish and Wildlife Management in National Forests and Bureau of Land Management Wilderness". DD/AS

RIPARIAN - HYDROLOGIC DISTURBANCE 30%

COMMENTS: What is the basis of 30% constraint? Cite references.

643, 695, 1273b, 1362, 1365

RESPONSE: Research by Cheng (1989) and King (1989) also found that when a watershed approached 25 percent to 30 percent clearcut, changes in peak flows were documented. This change in peak flows has the potential to alter stream channel stability and the amount of sediment being transported.

Cheng, J.D. 1989. "Streamflow Changes after Clearcut Logging of a Pine-Infested Watershed in Southern British Columbia, Canada"; Water Resource Research, V. 25, No. 3, pp. 449-456.

King, J.G. 1989. "Streamflow Response to Road Building and Harvesting: A Comparison with Equivalent Clearcut Area Procedure"; Research

RIPARIAN - HYDROLOGIC DISTURBANCE 30%

Paper INT-401. Ogden, Utah, Utah: USDA-FS, Intermountain Research Station, 13 pp. DM

COMMENTS: Discuss the relationship between water yield and timber harvest (clearcut equivalency) for each watershed. Some watersheds such as Pack Saddle Creek have nearly all of their headwaters subject to clearcutting. (CROSS REFERENCE: Timber, Site Specific)

643

RESPONSE: Total water yield on the Targhee is about 1.4 million acre-feet. Management activities such as timber harvests and methods have the potential to change the timing and amount of water delivered to stream channels which is discussed by subsection in the Final Environmental Impact Statement (FEIS), Chapter III. A discussion on cumulative effects and which watersheds would be effected by alternative is discussed in Chapter IV, FEIS. DS

Constraint Needs to be Better Defined - Recovery

COMMENTS: Define when a logged area is reclassified as no longer disturbed, i.e., how long after canopy is removed does it return to natural canopy? Include a definition of natural canopy.

Reduce water yield recovery to 10-15 years and re-define hydrologic disturbance to canopy with Camas Creek Aspen Project where recovery occurred in approximately 20 years or when sapling stage has been established.

413, 643, 697, 767, 1276, 1362, 1389

RESPONSE: The glossary section of the Revised Plan defines "Hydrologically Recovered Condition" as a vegetative life form where natural canopy coverage is achieved and subsequent streamflow quantities and character (timing and amount) reflect more natural conditions. Within a forested ecosystem this equates to the sapling/early pole life form. This life form is achieved at approximately 20 to 30 years of age, depending upon cover type and inherent site productivity potentials." DM

Constraint Needs to be Better Defined - Wildfire and Timber Harvest

COMMENTS: Is there a difference in the hydrologic effects between openings created by wildfire or timber harvest; does constraint apply only to timber harvest? Watershed cover should be changed to something like 45-50% or non-stock requirements should be changed.

228, 643, 693, 1389

RESPONSE: The Glossary section of the Revised Plan defines "Hydrologically Disturbed Condition" as a "change in natural canopy cover (vegetation removal) or a change in surface soil characteristics such as compaction that may alter natural streamflow quantities and character. Acres of vegetation within a watershed that are in a non-stocked, seedling, sapling or first entry category; acres in roads, acres from other types of mechanical treatments such as roto-beat acres within the sagebrush ecosystem; and burned acres are included in the calculation of hydrologically disturbed." Other types of disturbances (man- and nature-caused) are included in the constraint. Timber recovering time from burns depends on the type of vegetation burned, the

intensity of the burn and the inherent productivity of the site that was burned.

Research by Cheng (1989) and King (1989) also found that when a watershed approached 25 percent to 30 percent clearcut, changes in peak flows were documented. The 30% constraint is a guideline and can be modified based on site-specific conditions. Any change will be documented in a site-specific NEPA analysis. DM

Site-Specific

COMMENTS: Buffalo River and Warm River have approximately 30% of their headwaters in a hydrologically disturbed state and are likely to suffer adverse impacts under any of the alternatives and exhibit impacts which will be "unrecovered" by the end of the coming planning period. The continuation of widespread logging under the guise of "intensive management" or "restorative treatment" will exacerbate forest health problems.

643

RESPONSE: The Buffalo (#10) and Warm River (#12) Watersheds presently exceed the 30% hydrologically disturbed guideline. Any proposed activities that create additional disturbed acres will be analyzed on a site-specific basis, subject to the 30% limit. These watersheds have limited opportunity for activities that would create additional openings until recovery from past disturbances occurs.

Management activities that do not create openings could be conducted. Scheduled and unscheduled timber harvest could occur within these watersheds during this planning period but, would be analyzed on a site-specific basis. DM

Socio/Economic Effects of Constraint

COMMENTS: Display an alternative that illustrates the effects of this constraint on social and economic values.

393

RESPONSE: Consequences, including the 30% constraint, for all alternatives are discussed in Chapter IV of the Final Environmental Impact Statement. A separate alternative is unnecessary. DM

Supports Constraint as Defined in Plan

COMMENTS: Supports concept of 30% disturbance for better protection of watershed.

1276

RESPONSE: Your comment is acknowledged. DM

Constraint Needs to Better Defined - Roads

COMMENTS: Does 30% of the watershed have to be actual area of road, or is there some density of roads that measures 30%? The standard should include,

RIPARIAN - HYDROLOGIC DISTURBANCE 30%

"any road density greater than one mile per square mile should be considered disturbed."

697

RESPONSE: A number of factors are considered when determining the percent hydrologically disturbed (see glossary). The intent of this calculation is to determine how much of a watershed is disturbed using equivalent clearcut acres. The factors used to measure 30% disturbance are converted to acres and compared to the acres in the watershed. Road density is not an appropriate measurement because of the number of factors that are used to calculate the constraint. The measurement should be consistent or at the same scale (i.e., acres). DM

Constraint Needs to be Better Defined - Soils

COMMENTS: Since roads are compacted and are known to alter hydrology, how are they included in surface soils characteristics; what other kinds of soil disturbance are included?

No letter #

RESPONSE: The Glossary section of the Revised Plan defines "Hydrologically Disturbed Condition" as "Changes in natural canopy cover (vegetation removal) or a change in surface soil characteristics (e.g., compaction) that may alter natural streamflow quantities and character. Acres of vegetation within a watershed that are in a non-stocked, seedling, sapling or first entry category; acres in roads, acres from other types of mechanical treatments (e.g., roto-beat acres within the sagebrush ecosystem); and burned acres are included in the calculation of hydrologically disturbed." DM

Constraint Adversely Affects Lodgepole Component

COMMENTS: Add flexibility for vegetation management and timber harvest particularly in lodgepole types.

Constraint ignores lodgepole ecosystem which consists of very deep volcanic soils. Constraint places most of lodgepole component "off limits" to timber management, including salvage, for up to four decades.

If you have sustained yield removal of wood by logging, you will remove 1% of your 100-year old forest each year. The entire forest will be at 30% disturbance. This is not a reason to close the Forest. 30% constraint limits the ability to manage and ignores the responsibility to improve forest health, both inside and outside suitable base.

Constraint has been improperly interpreted as being 30% of the forested area in a drainage. If half of a drainage consists of non-forested land, then up to 60% of the forest in that drainage could be logged before entire drainage would reach 30% limit. This should allow more logging than the present plan permits.

FORPLAN model used "previously logged areas in a non-stocked, seedling or sapling condition" to determine watersheds where management activities are not allowed until over 30% of watershed reaches "mature" stage." It appears constraint is based on "worst-case analysis."

90, 275, 393, 1389

RESPONSE: The 30% hydrologically disturbed condition is a forestwide guideline. A guideline "represents a preferred or advisable course of action that is generally expected to be carried out. Deviation from compliance with a guideline does not require a Forest Plan amendment, but the rationale for such a deviation shall be documented in the project decision document." In Chapter V of the Revised Plan, implementation and validation monitoring of the 30% hydrologically disturbed condition is placed in Forest Priority Group 1. Watershed 10, 11, 12, and 13 (predominantly lodgepole pine) and Watershed 25 are targeted for implementation and validation monitoring. Monitoring will determine if bank instability is occurring within these watersheds and which ones are approaching, or over the 30% constraint, thereby determining the sufficiency of the 30% guideline.

The constraint is determined by looking at all acres within the analysis area (e.g., a watershed) and was incorporated into the re-analysis of the forestwide ASQ analysis.

This analysis is not considered a "worse-case scenario" but based on research conducted by Cheng (1989), and King (1989). Their studies found changes in peak flows were documented when a watershed approached 25 percent to 30 percent clearcut. Changes in peak flows have the potential to alter stream channel stability and the amount of sediment transported.

The Glossary section of the Revised Plan defines "Hydrologically Recovered Condition" as vegetative life form where natural canopy coverage is achieved and subsequent streamflow quantities and character (timing and amount) reflect more natural conditions. Within a forested ecosystem, this equates to the sapling/early pole life form. This life form is achieved at approximately 20 to 30 years of age, depending upon cover type and inherent site productivity potentials." Recovery is not dependent on reaching the "mature" stage. DM

Constraint is Too Restrictive

COMMENTS: Constraint is arbitrary and a flawed human guess without ecosystem or scientific basis or merit; Targhee's concern over more damaging flood peaks is not based on scientific fact and is contradicted by scientific studies (See literature cited). Protecting intermittent and ephemeral drainages should occur only in the muddy season. The rest of the year they should be open for use.

275

RESPONSE: The hydrologic disturbance limitation is a guideline. Research by Cheng (1989) and King (1989) found changes in peak flows when a watershed approached 25 percent to 30 percent clearcut. Change in peak flows have potential to alter stream channel stability and the amount of sediment transported.

In order to improve, maintain or restore the health and proper functioning conditions of Aquatic Influence Zones, ephemeral and intermittent streams are considered in the proper management of perennial streams (Refer to Prescription 2.8.3 Final Revised Plan). DM

RIPARIAN - HYDROLOGIC DISTURBANCE 30%

Constraint is Too Lenient

COMMENTS: Allowing 30% disturbance is inconsistent with goals regarding biodiversity, soils, aquatic, riparian, watershed, municipal watershed, vegetation, wildlife and Threatened and Endangered Species. Allowing 30% disturbance would adversely affect Bureau of Land Management efforts to improve and enhance natural resources on the land. 30% seems too high, given the size of the analysis unit (principal watershed and its subwatersheds).
643, 697, 1401, 1446

RESPONSE: The Glossary section of the Revised Plan defines "Hydrologically Disturbed Condition". An understanding of this definition is needed in order to place it in its proper context. This guideline is consistent with the goals expressed under other resources. As a guideline, the Forest may deviate provided the "deviation shall be documented in the project decision document" and is done to meet other resource objectives. The guidelines would be used at the subwatershed scale for project level analysis. A 30% disturbance will not adversely affect Bureau of Land Management efforts, nor the Targhee's efforts, to improve and enhance natural resources. DM

Constraint Should be a Standard, Not a Guideline

COMMENTS: Standard should be no more than 5% of any subwatershed that is disturbed. The overall percentage should be 20% rather than 30% to stay below the 25-35% canopy removal that has been shown to result in hydrological disturbance. Twenty percent should apply to subwatersheds so that one subwatershed cannot be severely disturbed when others are left undisturbed.

Should be a standard to incorporate greater certainty of protection. "Not more than 30% of any of the 39 principal watersheds..." there needs to be more explicit direction for this goal and it needs to be a standard, not a goal. This guideline should be rewritten as a standard which limits disturbance on the subwatershed level with a more precise definition of "disturbed" provided.

643, 697, 1273b, 1276, 1401

RESPONSE: The hydrologic disturbance limitation is a guideline. Research by Cheng (1989) and King (1989) also found that when a watershed approached 25 percent to 30 percent clearcut, changes in peak flows were documented. The 30% constraint is a guideline and can be modified based on site-specific analysis. Any deviation from this guideline will be documented in the site-specific NEPA analysis.

A guideline "represents a preferred or advisable course of action that is generally expected to be carried out. Deviation from compliance with a guideline does not require a Forest Plan amendment, but the rationale for such a deviation shall be documented in the project decision document." Future monitoring should help determine if this guideline is effective. Based on monitoring data, the Targhee may determine this guideline should be a standard. The Forest Plan would be amended at that time to reflect the change. DM

Implementation

COMMENTS: It should not take two decades to implement grazing standards which address riparian problems.

489

RESPONSE: The standards and guidelines take effect as soon as the Revised Plan is signed. RSM

COMMENTS: Past Plan standards for livestock grazing in riparian areas did not work (i.e., Teton Canyon) so the new Plan proposals won't work either.

444

The Forest Service is well known for optimistic estimates of their ability to protect and restore habitat. The plan should consider that there is already inadequate levels of riparian protection may not be met.

1365

Put into place accountable monitoring of riparian areas and budget so resource protection is achieved.

625a

RESPONSE: New standards and guidelines in the Revised Plan will better maintain the condition of riparian areas. It is unclear if old standards were inadequate or if grazing permit administration was too lax. New standards and guidelines and new rangeland monitoring protocol will maintain good conditions where they exist and improve less than desirable conditions. Standards and guidelines address impacts from recreational use, roads, and mining, as well as grazing. Monitoring items in the riparian and upland section of Chapter V include additional monitoring where concerns for wildlife, watershed or other resources are present. Monitoring for riparian area condition was changed to a Forest Priority Group 1 in the Revised Plan. Available Forest funding may affect the amount of monitoring that occurs in a given year. RSM/WG

COMMENTS: Grazing by livestock should have specific areas designated as a "control" so effects to riparian habitat and species can be interpreted.

438

RESPONSE: The Targhee incorporates the concept of grazing exclosures in the Revised Forest Plan to provide ungrazed areas for comparison with the rest of the pasture in which they are located. Under the Revised Plan, permanently marked monitoring sites are used to monitor trends in stream channels and riparian areas. Interpretation of the effects of grazing and other uses on riparian areas will determine where more stringent management is needed. RSM

COMMENTS: Identify rigorous and ongoing monitoring and implementation plans to prevent overgrazing and enforce compliance with established Standards and Guidelines.

643

RESPONSE: Existing direction for grazing administration on livestock allotments is designed to protect resources and ensure compliance with established standards and guidelines. Utilization studies and exclosures, used as "baseline" comparisons, are monitored to determine if use levels are

RIPARIAN - GENERAL

appropriate. Permittees move livestock when stubble height requirements dictate the need. The Revised Plan includes a cooperative monitoring strategy, including water quality monitoring, between the Targhee and livestock permittees. RSM

COMMENTS: Prove that studies and monitoring data that indicate a 30% utilization on willow will allow full restoration of natural habitat potential.

1369

RESPONSE: This information is from the Region 4 Desk Guide, Page III-33 and is documented in the Revised Plan. RM/WG

General

COMMENTS: Page III-18, Recreation/Objective OHV: Expand this objective to minimize the effects of OHV use on riparian, aquatic, critical and crucial seasonal wildlife habitat. Develop motorized recreation management standards and guidelines to exclude use within crucial seasonal wildlife habitat.

1446

RESPONSE: These concerns are addressed in the Standards and Guidelines for the Aquatic Influence Zone (2.8.3), the Dispersed Camping Management (4.3) and Winter Range (2.7) Prescriptions. Expanding the objectives is not necessary to achieve protection of these resources. AS

COMMENTS: The most visible damage in riparian areas is done by cattle, but since the most restrictive alternative (6) cuts livestock grazing by less than 25%, I would conclude that nobody considers it much of a problem.

1317

RESPONSE: Although grazing livestock can cause damage in riparian areas when cattle are allowed to congregate over long periods of time, other activities, such as roads or dispersed recreation, cause resource damage as well. More stringent standards and guidelines were included in the Revised Plan to better protect these important resource areas. Better monitoring protocol and permittee cooperation should reduce impacts without severe reductions in permitted numbers of livestock.

In Alternatives 4, 5, and 6, cattle grazing is reduced by 12% forestwide. Some sheep allotments, approximately 19%, will be eliminated in the Revised Plan. A Table in Chapter IV of the FEIS shows more specific information. WG

COMMENTS: Agree with the need to protect riparian areas.

1, 22, 24, 26, 30, 31, 43, 50, 53, 60, 73, 156, 157, 158, 162, 168, 174, 175, 176, 194, 195, 201, 219, 227, 244, 252, 271, 356, 357, 359, 360, 382, 610, 611, 631, 665, 690, 695, 697, 1204, 1392, 1459

RESPONSE: Your comments are acknowledged. The Revised Plan includes new standards and guidelines designed to protect these important resource areas. RSM/WG

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COMMENTS: Offer the highest degree of protection to headwater areas because they affect the entire ecosystem.

631

RESPONSE: Headwater areas are critical to the health of watersheds and ecosystems. Specific protection measures are determined through site-specific analysis. Standards and Guidelines for soil, water, vegetation and other resources are designed to ensure watershed stability. RSM

COMMENTS: The management of AIZ's, riparian areas and fish habitat should be a major objective of Targhee National Forest, but the Plan does not indicate that it is. Support GYC and AWL comments.

1364

RESPONSE: AIZs receive added emphasis in the Revised Plan. Standards and Guidelines are consistent with the Inland Native Fish Strategy (INFISH) and meet or exceed water quality standards set by the states of Idaho and Wyoming. RSM/DD

COMMENTS: Strengthen riparian protection measures by: prohibiting unregulated motorized access to streams, wetlands, riparian areas; regulate/control motorized access to these areas; and Pages III-98, 99, and 120, Roads and Trails: The first line should start, "No new roads, including temporary roads..." To be consistent with protection for the riparian and aquatic habitat, all of the guidelines in this section should be made standards.

F-B(2), F-G-2(2), 34, 41, 42, 45, 136, 157, 173, 179, 180, 181, 185, 187, 190, 203, 209, 212, 226, 252, 271, 273, 356, 357, 359, 360, 392, 490, 496, 632, 643, 650, 659, 687, 690, 766, 1245, 1270, 1314, 1319, 1325, 1331, 1369, 1392

RESPONSE: Prescription 2.8.3 includes guidelines that restrict motorized use in riparian areas. Cross-country motorized travel is not permitted except for recreational purposes, such as dispersed camping, picnicking, or fishing. Monitoring of dispersed recreation sites is scheduled to determine if soil quality standards are being met. All water bodies and wetlands are covered by Prescription 2.8.3. Refer to the definition of a "guideline" that clarifies the difference between a standard and guideline. RSM

COMMENTS: Protect intermittent and ephemeral drainages from impacts only in the muddy season.

275

RESPONSE: The Targhee protects these drainages year-round for a variety of reasons. Sediment entering these drainages during the dry season is flushed downstream during wet cycles. Soil compaction and reduction or loss of vegetation at any time of the year can affect the way these drainage systems work. RSM

Erosion

COMMENTS: Reconstruct the streambanks to increase trout populations.

1242

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RESPONSE: Streambanks will be rested from overuse to allow bank restoration. Tree revetments will be used to slow water velocities and hold sediment. Reconstruction of streambanks should improve the quality of trout habitat.
RSM

Stream Buffer Zone and/or AIZ

COMMENTS: The 100 foot buffer zone may not be necessary with selective logging and managed grazing.

F-K(4), 51

Buffer zone is good management; continue with that practice and be sure to enforce.

5, 11, 407, 1257

Increase the size of the buffer zone identified in 3M.

156, 1258

Use a buffer zone to prevent erosion.

627

Use buffer zones to exclude logging within 300 feet of water.

664

A buffer zone would protect toads as well as frogs.

1204

Provide the public with a simple, easily identified measure of riparian habitat, such as 100 feet. The current system is difficult to interpret.

1369

Definition in the plan is too ambiguous. A minimum of at least 200 feet should be stated. No mention of buffers for lakes and ponds. These should be identified. The plan indicates there was no timber harvest planned in riparian areas, however it does not include "salvage logging". This should be clarified to include salvage logging also.

58

3M buffers are minimally adequate for areas in Island Park but my need to shift them upward in site specific areas across the Forest.

643

Make boundary widths (Table III-96) wider and a standard. Site-specific analysis takes too long and would require an EIS or FP amendment.

697

Factors such as slope, stream channel stability and fish habitat should be considered when determining appropriate buffer zone width.

389

Vegetation buffer strip for selective harvest (wider buffer for steep slope or erosive soils) within 100 feet of any lotic (moving water, e.g., streams) or lentic (still water, e.g., lakes, ponds) shoreline.

389

Support 150-300 foot buffer zone if that width is sufficient to protect the entire AIZ, otherwise it must be larger.

1276

Watersheds in the Island Park and Madison Plateau subsections have been impacted by resource extraction. Suggest the boundary widths be extended to 300 feet unless site-specific scientific data indicates otherwise.

1446

Page IV-15, First Paragraph: Timber harvest is another impact to riparian areas that should be included as a reason for riparian acres not meeting the DVC.

1446

RESPONSE: Aquatic Influence Zone (AIZ) widths in the Revised Plan exceed the minimum stream protection zones in the Idaho Forest Practices Act. They were developed using PACFISH and INFISH guidelines and on-the-ground knowledge of each ecological subsection. Although the Targhee considered establishing a single width boundary forestwide, ecological and physical differences between subsections could not be addressed using this approach. In some subsections larger AIZs may be necessary, depending on site-specific factors such as soil, existing vegetation, fish habitat protection, condition of drainage systems and so on. Other AIZs may be in better condition and require smaller widths. Overall, AIZs are used to protect streambank and channel stability, water quality and fish habitat. RSM/DD

COMMENTS: Clarify why the AIZ minimum boundary widths for Subsections 3 and 4 are half of those for other subsections.

643

RESPONSE: The Island Park (#3) and Madison Plateau (#4) subsections have narrower boundary widths, because slopes are generally less steep than in other subsections and other geologic factors make the risks for slope erosion and sediment transport lower than other subsections. RSM

COMMENTS: Unfortunately, the Revised Plan promises little in improvement over the existing situation. The lack of an appropriate ecosystem view and application of ecosystem principles is nowhere more evident than in the artificial separation of forest (and other plant community types) dynamics from those of the aquatic/riparian systems. For example, larger trees and snags in the aquatic influence zone (AIZ) are viewed largely as something to be eliminated from the system rather than as a source of continual renewal of large woody debris for habitat for fish and other aquatic biota. Also, the effects of the various prescriptions on the AIZ are not given adequate consideration either separately (e.g., building culverts to accomplish a timber harvest) or collectively (for example, the effects of all the culverts and roads in a watershed or subsection). Finally, the utilization standards for the AIZ are not sufficient to protect fish habitat or other riparian values.

643

Address in-stream quality issues (e.g., instream flow, instream woody debris and other structures, rates, and distribution of sedimentation).

1204

RESPONSE: Aquatic and riparian system dynamics are separated from upland dynamics for ease of discussion. The Targhee recognizes the interconnection between different parts of the landscape, and that animals, nutrients, water, and other components of the environment cross boundaries.

Refer to Wildlife Standards and Guidelines, Description of the Aquatic Influence Zone, for information regarding large trees and snags in AIZs, Objective in Insect and Disease section where salvage is only permitted

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where needed to attain the goals of the management prescription providing other goals of this Management Prescription [2.8.3] are not adversely affected; Wildlife Guideline; and other changes in the Revised Plan such as maintaining and restoring riparian vegetation to provide an amount and distribution of large woody debris characteristic of natural aquatic and riparian ecosystems.

AIZs are adequately protected by standards and guidelines.

Utilization standards were strengthened for AIZs and will protect fish habitat and other riparian values. RSM

COMMENTS: All perennial streams should have the same protective buffer requirements.

389

RESPONSE: In the Revised Plan buffer widths vary by subsection to account for differences in slopes, erosivity of soils, and other physiographic differences. RSM

COMMENTS: Include specific direction to maintain positive outcome of natural ecosystem processes like fire and insect and disease in the AIZ so intent is clear and ground management conforms to ecosystem management philosophy.

282, 643

RESPONSE: The Goal and the Guideline in Prescription 2.8.3 and the new "Ecological Processes and Patterns" section in the forestwide standards and guidelines provide this information. RSM

COMMENTS: Include additional direction for management indicators and specific direction for maintaining biodiversity in the AIZ.

1194

RESPONSE: New language is added in the Revised Plan in Chapter III that provides additional direction for native cutthroat trout and for maintaining biodiversity in the AIZ. DD

COMMENTS: Expand boundary widths to accomplish goals of minimizing adverse effects, promoting health and function and allowing endemic levels of insects and disease in AIZ. Use INFISH or PACFISH guidelines as models for all subsections of the Targhee National Forest. Use language that would limit new stream crossings and remove old ones within those areas.

1361

RESPONSE: The boundary widths described in the Revised Plan were developed using PACFISH and INFISH guidelines and site-specific knowledge of each ecological subsection. New language from the INFISH strategy is added to the Revised Plan to emphasize AIZ protection. DD

COMMENTS: Forest must take greater initiative to guarantee that AIZ's are fully protected.

643

RIPARIAN - GENERAL

RESPONSE: The Revised Plan strengthens protection of these vital resources through standards and guidelines. Better monitoring protocol should provide data to determine if standards and guidelines are effective. As new protection methods are developed, the Targhee will analyze and adapt management if necessary. RSM

COMMENTS: The standard that no burning of mechanized treated wood residue occur within the bankfull channel should be expanded to apply to the entire AIZ.

643

RESPONSE: The guideline for minimal mechanized treatment of wood residue in AIZs should adequately protect streams. RSM

COMMENTS: The standard is too weak for allowing livestock watering facilities. Should read "none" will be allowed in AIZ.

643

DFPR III-99 and III-100 should read that proposed livestock improvements should not be permitted within riparian vegetation.

1276

RESPONSE: The standards in the Revised Plan adequately protect AIZs. RSM

COMMENTS: DFPR IV-1, woefully inadequate section, especially since two of the objectives in Chapter III are missing. Section should include specific tasks, rather than objectives, and should contain many more than those given here. Tasks should be provided for each subsection with level of detail matching that given for Designated Wilderness Prescriptions (Page IV-2). Lacking this detail, it is hard to believe Targhee National Forest is serious about protecting the AIZ.

282, 643

RESPONSE: The two objectives referred to had no timeframe for execution and were changed to goals in the Revised Plan. The objective that was included without a timeframe was deleted. This is discussed in the new section entitled "Ecological Processes and Patterns." The Targhee is unable to provide more detail in a programmatic Plan. Site-specific analysis will provide detailed information at a finer resolution. RSM

COMMENTS: Add a guideline to Prescription 2.8.3 encouraging the adoption of a cooperative livestock management strategy between Forest Service and Bureau of Land Management (BLM) where feasible when a stream crosses both ownerships of adjacent Forest Service and Bureau of Land Management land.

1446

RESPONSE: Where possible, the Targhee uses the Coordinated Resource Management (CRM) program to manage adjacent grazing allotments that are administered by the BLM and the Forest Service. The CRM approach helps resolve site-specific conflicts. A guideline is not necessary, since the process is in place as described in FSH 2209.21. The Revised Plan does not restate handbook policy or direction. The Forest currently uses the CRM

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approach, as demonstrated by the existing CRM effort in the Medicine Lodge portion of the BLM Resource Area and the Dubois Ranger District. WG

COMMENTS: Provide more information on how the Forest will restore/maintain AIZs in ways that produce desired resource values, products, protection, restoration, enhancement, interpretation and appreciation of these areas. The only standard given is stubble height which is not consistent with best science.

282, 643

RESPONSE: All the standards and guidelines in the Revised Plan that specifically relate to AIZs are designed to restore or maintain desired resource conditions. The monitoring section addresses the ways goal accomplishments are verified. Monitoring protocols for recreation and rangeland use are included to determine if goals and objectives are being met. WG

Specific Recommendations

COMMENTS: Page III-7 under Aquatic Resources: delete "where feasible". This shows bias toward forest uses and not conservation.

341

RESPONSE: The Targhee included "where feasible," because this particular guideline deals with existing uses. For example, in some cases it would not be feasible to attempt to restore vegetation if the site is not capable or does not have the potential to support a preferred vegetation type. Any new proposed uses would have to meet all Standards and Guidelines. RSM

COMMENTS: Do not delete the paragraphs on Pages III-35 and III-47. These provided clear direction on management prescriptions.

489

RESPONSE: The Revised Plan retains this material. RSM

COMMENTS: Clarify Objective 3 and discuss what will be done to meet this objective. It is unclear the way it stands now.

282

RESPONSE: The objective reads, "Manage wood residue (natural and human-made), including fuelwood, to maintain or restore ecological health and function." Standards and guidelines throughout the Revised Plan describe, in detail, amounts and sizes of wood that should be left after management activities to benefit soil productivity, wildlife, and fisheries, without compromising fire hazard limits. The objective reiterates, or summarizes, the importance of this wood for ecological health and function. RSM

COMMENTS: More details must be provided as to exactly what set of circumstances would lead the Forest to propose commercial salvage, fuelwood cutting, etc. in the AIZ.

643, 766

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RESPONSE: Site-specific analysis will provide detailed information about on-site conditions that would allow commercial salvage or fuelwood cutting in an AIZ. Potential impacts to other resources would be considered, and standards and guidelines that require protection of riparian-dependent resource values in AIZs would be met. RSM

COMMENTS: Objective #1 should be replaced with a firm commitment to remedy offending stream crossings.

643

RESPONSE: Refer to the Standards and Guidelines for Roads and Trails in Prescription 2.8.3. The Targhee considered changing the wording on this particular objective but decided to retain the original language. The objective commits the Targhee to identify where problems exist, setting priorities for resolving problem stream crossings, and scheduling them for restoration. RSM

COMMENTS: Range Objective #4 states a streambank stability standard will be established in 5 years. Targhee National Forest should do it sooner.

489, 643, 697, 766

RESPONSE: The objective states, "Within five years after the signing of the Record of Decision, establish a stream bank stability (trampling disturbance) standard correlated to stubble height at the hydric greenline (HGL)." The Targhee set a flexible timeframe, since realistically, it may take that long to gather necessary data and correlate it to stubble height at the hydric greenline. RSM

COMMENTS: Map and present to the public a detailed description of all seriously degraded riparian areas and watersheds.

1365

RESPONSE: Summary information on watershed and stream conditions, based on available inventory information, is provided in the FEIS. This is sufficient for the purposes of forest planning. RSM

COMMENTS: Reinstate discussion about riparian habitats into the preferred alternative.

389

RESPONSE: The FEIS adequately describes conditions of the resources by alternative on the Forest. RSM

DFPR/DEIS Comments

COMMENTS: Class I, II, III aquatic/riparian goals from the EA are not in DFPR. (The EA in question is the draft wilderness EA.)

1277

RESPONSE: The Targhee must meet Wyoming water quality standards for wilderness, so there is no need to reiterate those standards for class I waters. The goals are implicit in the Revised Plan. RSM

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COMMENTS: Aquatic/Riparian: Riparian and aquatic monitoring should receive as high a priority as hydrologic disturbances in Watersheds. Recommend a monitoring program to emulate a pulsed monitoring format for watershed and stream restoration.

1446

RESPONSE: Monitoring of Water Quality Limited streams is a Priority 1 item. Hydrologic disturbance is a Priority 2 Item. RSM

COMMENTS: Page II-19, Table II-1 Biological/Other Riparian and Water Indicators: The category "M1 cutthroat stream with a minimum of 6" stubble height at HG-L," shows the worse mileage. We can assume there is a mistake here. The preferred alternative likely cannot reach all of the stated riparian and water quality goals if it results in fewer stream miles with 6" stubble than the existing level of management.

1446

RESPONSE: There is no mistake. In order to fully understand the effects of implementing a particular alternative, specialists consider all of the effects shown for each alternative. Neither the existing level of management nor Alternative 3M (the Revised Plan) requires a 6" stubble height; the respective values of 97 and 83 simply represent the miles of cutthroat trout stream not grazed by livestock. On the other hand, the Revised Plan provides for a 4" stubble on all (2,863 miles) fish-bearing streams. The existing level of management provides for a 4" stubble on only 323 miles of fish-bearing stream. DD

COMMENTS: Page III-6, Last paragraph: Other "natural causes" such as high water runoff and floods would be more likely to cause changes in stream channel stability than avalanches in this area. This point should be expanded in the FEIS.

1446

RESPONSE: Your comment is acknowledged. High water runoff and floods are more likely to cause changes in stream channel stability. Streams in the Teton Range subsection (Teton Creek) are subjected to avalanches which frequently deposit large quantities of rock and trees in channels, causing them to readjust. Avalanches are an example of a naturally caused change to channel stability. No change is needed in the FEIS. RSM

COMMENTS: Page III-7, Standards and Guidelines - Municipal Watershed: Add standards and guidelines having livestock grazing, timber harvest, camping and all terrain vehicle restrictions to ensure adequate protection of municipal watersheds.

1446

RESPONSE: We dropped the standards and guidelines for municipal watersheds. The Targhee does not have municipal watersheds; instead the Forest has public water systems. Draft management direction for public water systems was issued recently by the Washington Office and the final direction will be in national or regional manuals or handbooks. The Revised Plan does not repeat manual and handbook direction. RSM

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COMMENTS: Page III-7: Goals/Objectives and forestwide standards and guidelines for wetland types are available but have not been fully developed in the Plan. These need to be included in the FEIS because of the Executive Orders that pertain to wetland protection.

1446

RESPONSE: Refer to Prescription 2.8.3 for more direction on wetlands. The Revised Plan complies with Executive Order 11990, which states, "Each agency shall provide leadership and shall take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency's responsibilities..." (Section 1). The EO is also cited in Appendix A of the Revised Plan. RSM

COMMENTS: Page III-21, Water: In both the DEIS and the Plan Revision, water is included as a biological element, when it is really a physical element. Correct or explain the reasons for the characterization.

1446

RESPONSE: Listing water as a biological element was a formatting, organizational decision to combine soil, fisheries, vegetation, and water where interconnectedness occurs. All water-related resources were "lumped" together in the biological section to accommodate fisheries and riparian vegetation issues. Technically, you are correct. RSM

COMMENTS: Page III-23, Lemhi/Medicine Lodge: The third paragraph indicates no standards for nutrients or any direction as to what forms of nitrogen and phosphorus are to be monitored. Suggest specific studies be referenced in the document to allow understanding why these criteria were used.

1446

RESPONSE: The literature cited below were used to determine which forms of nitrogen and phosphorus would be analyzed:

Bauer, S.B. and T.A. Burton, 1993. Monitoring protocols to evaluate water quality effects of grazing management on western rangeland streams. USEPA/910/R-93-017, Region 10, Seattle. 179 pp.

MacDonald, L.H., A.W. Smart, and R.C. Wissmar, 1991. Monitoring guidelines to evaluate effects of forestry activities on streams in the Pacific Northwest and Alaska. USEPA/910/9/9-91-001, Region 10, Seattle. 166 pp.

The U.S. Geological Survey in Boise, responsible for conducting much surface water quality monitoring, was consulted. The State has standards for ammonia, but available literature state that this form is best considered where a concentrated source of livestock waste exists (such as in feedlots). This is not the situation on the Targhee. There are no State standards for phosphorus. RSM

COMMENTS: Page III-26, Second paragraph from the bottom: Expand the discussion about influence zones to include; topography, geology, location, and season. The second sentence should be rewritten to read "The entire watershed and climate influence..." The third sentence should read "Lakes,

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reservoirs, ponds, perennial, and intermittent streams and wetlands provide unique..."

1446

RESPONSE: The direct effects of aquatic influence zones on aquatic systems are addressed in discussions about resources at the subsection scale. RSM

COMMENTS: Page III-29, Goals/Objectives/Aquatic/Riparian Ecosystems: Add the following streams to this objective: Pass Creek, Warm Springs Creek, Divide Creek, and West Fork Irving Creek. Unless riparian conditions are improved, the Targhee National Forest will not be able to meet any of its goals related to biodiversity, T&E species, wildlife, soils, aquatic, and riparian protection.

Page III-35, Goals/Objectives/Aquatic and Riparian Ecosystems: Add the following streams to this objective: East Fork Irving Creek, Dry Creek, Middle Creek, West Fork Indian Creek, Middle and East Fork of Dry Creek. Unless riparian conditions are improved, the Targhee National Forest will not be able to meet any of its goals related to biodiversity, threatened and endangered species, wildlife, soils, aquatic, and riparian protection.

Page III-51, Goals/Objectives/Aquatic and Riparian Ecosystems: Add Wolverine Creek to the list.

1446

RESPONSE: The streams listed above are those for which stream channel stability data exist and that indicate conditions are less than desirable.

The Targhee will continue to gather information on other Forest streams and address concerns as they become apparent. The lack of a list in the Revised Plan does not mean the Targhee will ignore the stream. Divide Creek is already listed. RSM

COMMENTS: Page III-95: Second paragraph, change "ecolody" to "ecology". Recommends certain geomorphic types be included in the boundary width that include but are not all inclusive: 100 year floodplain, areas with unstable soils, landslides, and landslide prone areas. Under goals #1 delete the last two words so the sentence ends after word "variation".

1446

RESPONSE: The typing error was corrected. The boundary width includes the 100-year floodplain, areas with unstable soils, landslides and landslide prone areas. Unstable areas are discussed in the forestwide soils standards and guidelines. The 100-year floodplain is typically of concern in areas, such as for campground design or placement, that might encroach on the floodplain. In any event, site-specific analysis addresses appropriate boundary widths based on site-specific factors. The Targhee included "where feasible," because in some cases it would not be feasible to attempt to restore vegetation if the site is not capable or does not have the potential to support a preferred vegetation type. RSM

COMMENTS: Page III-96, Boundary Widths of Water Types by Subsections: Fish

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bearing streams and non-fish bearing streams should have the same standards because of their importance for watershed cumulative effects analysis.

1446

RESPONSE: The Forest used scientific findings and recommendations from the PACFISH and INFISH Strategies and on-the-ground knowledge of each ecological subsection to design boundary widths. The Revised Plan applies larger boundary widths to fish-bearing stream reaches, because they warrant greater protection than perennial nonfish-bearing stream reaches. During cumulative watershed analysis, boundary widths would be determined by hydrologic characteristics rather than by the presence of fish. DD/RSM

COMMENTS: Page III-99, Paragraph 4: Additional standards on in-stream sediment generated by temporary stream crossings should be developed for the section.

1446

RESPONSE: No additional standards were added. The standards and guidelines will adequately protect streams for permanent and temporary stream crossings. RSM

Miscellaneous - General

COMMENTS: Riparian areas are covered with cabins so cannot assess what condition they are in. Public access to "banks" is gone.

1316

RESPONSE: Cabins in riparian areas occur in only a few areas and are not the norm on the Targhee. Currently, 203 permits for summer homes exist on the Targhee (Chapter III, FEIS). Where summer homes are near streams, most are not located streamside, but are set back from streambanks. Streambank access is available in these areas. This comment probably refers to summer home areas in Island Park, where some development has occurred along streams. Although the Palisades Ranger District has a number of summer homes, most are located around Palisades Reservoir. RSM

COMMENTS: The Draft and the EIS failed to define how channel stability ratings will be measured, who will do it and how ratings will be tracked forestwide.

1369

RESPONSE: Channel stability ratings and a description of their use are included in the new Rangeland Monitoring Protocol. The Targhee uses the Pfankuch method described in the Integrated Riparian Evaluation Guide to assess channel stability. This well-established method provides a good evaluation of channel conditions. Assessments will be completed by Forest hydrology and rangeland management specialists. The information will be compiled and stored in the Supervisor's Office. RSM

COMMENTS: An investment in the health of the riparian area would pay off in improved future productivity (for grazing).

1206

RIPARIAN - GENERAL

RESPONSE: Healthy riparian areas benefit many uses, specifically riparian-dependent plant and wildlife species. Riparian areas help buffer flood flows by absorbing water and slowing water velocities, and they hold water for later use in the riparian area and adjacent stream channel. Other benefits are not yet apparent. There is no question that healthy riparian areas are important. RSM

COMMENTS: The riparian portion of the Plan is well-focused, i.e., it manages the "big picture"; be sure to carry this focus through all other issues related to the needs of fish and wildlife species.

1446

RESPONSE: Your comment is acknowledged. RSM

COMMENTS: The Targhee planning documents present evidence of substantial decline in riparian and aquatic ecosystems. Yet, the planning documents fail to address these issues in any substantial manner.

643

RESPONSE: Planning documents present several discussions on riparian decline, such as the invasion of upland plant species into riparian areas, areas of overuse by livestock and people; and evidence of stable or improving conditions. Henry's Fork and most of the Buffalo River are in good to excellent condition; Moose Creek shows some negative effects from the North Fork Burn and management activities but is also showing good recovery. A Table in Chapter III shows aquatic habitat trends to be mostly stable or moving upward, with conditions mostly "moderate" or "pristine". Preliminary information from fish habitat surveys on more than 200 miles of streams conducted by the Henry's Fork Foundation in 1996 point to generally good to excellent conditions on the Targhee with degraded conditions on non-forest lands. Final results are pending and surveys are continuing.

The standards and guidelines, monitoring plans, and other direction found in the Rangeland Monitoring Protocol address riparian conditions on the Targhee. Adaptive management allows the Targhee to amend the Plan if monitoring shows existing direction is not effective. RSM/WG

COMMENTS: The Plan fails to sufficiently protect riparian areas and species dependent on those areas.

1365

RESPONSE: The Targhee designed Prescription 2.8.3, Standards and Guidelines, and the Rangeland Monitoring Protocol to protect riparian areas and riparian-dependent species. The measures prescribed are based on research findings and work conducted elsewhere. RSM

COMMENTS: The Forest Service is out of compliance with legal mandates. (36 CFR 219.27 (a) (10) (a) (11) and (e).

1367

RESPONSE: Existing laws, regulations, manual and handbook direction, and direction contained in the Revised Plan meet all legal mandates including the above Code of Federal Regulations. DP

COMMENTS: Clarify why the Targhee National Forest did not establish access density guidelines or standards for riparian corridors.

1369

RESPONSE: Riparian areas tend to be long, narrow features, generally too narrow to be properly defined at a forestwide scale. For that reason, road density guidance was not established for these areas. Instead, enhanced standards and guidelines were designed to protect these areas. Road location and management are more critical than road densities. RSM

COMMENTS: Explain why riparian areas have Desired Future Conditions (DFC) goals instead of standard and guides for watersheds, as other resource areas have.

1369

RESPONSE: Refer to the Aquatic section for Forestwide Standards and Guidelines and Prescription 2.8.3 for Standards and Guidelines for the Aquatic Influence Zone. All resources have goals, standards and guidelines, including watersheds. RSM

COMMENTS: The section on S&P: Biological Elements is "appalling"; it does not begin to address the biological elements of AIZ.

282

RESPONSE: Many of the biological elements referred to are addressed in the forestwide standards and guidelines, subpart Biological Elements. Language in Chapter III was changed to make this format clearer to the reader. DD

COMMENTS: Address how management concerns revised under the Aquatic and Riparian Ecosystems section will be handled over the next 10-15 years.

282

RESPONSE: New standards and guidelines will be implemented. Monitoring and inventory methods will be used to determine needs for change in management. RSM

COMMENTS: Unclear how the management of riparian zones has been affected by the Eastside Ecosystem Project (the Inland Fish Strategy).

228

RESPONSE: The Revised Plan contains new direction on management of riparian zones and fish habitat as discussed and described in the Inland Native Fish Strategy. DD

Range of Natural Variability

COMMENTS: It is not correct to assume each stream reach must adhere to the broader pattern (RNV) as is suggested in one of the goals of AIZ prescription.

282, 643

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RESPONSE: Goal #1 states, "...aquatic ecosystems are managed to promote their health and function within the range of variability, where feasible." In this context, aquatic ecosystems are much larger in scale than individual stream reaches. Goals and objectives for riparian areas that relate to Range of Natural Variability are incorporated into a new section called "Ecological Processes and Patterns, Properly Functioning Condition". DD/RSM

COMMENTS: Objective #2 seeks to establish the RNV for AIZs. Unclear how exactly this could be done and how information could be applied to management.

282, 643

RESPONSE: New language is added to the Revised Plan that describes the process the Targhee will use. Objective 2 was deleted from the Revised Plan. DD

Access

COMMENTS: Obliterate all roads in riparian, wetland and streams. Area should be a grizzly bear sanctuary.

276

RESPONSE: Aquatic Influence Zone Management Prescription maintains and improves grizzly bear habitat. The Revised Plan reduces open roads and open motorized trail densities in grizzly bear habitat. "Core areas" for grizzly bear, with no motorized access, were established in the Revised Plan. MO

COMMENTS: Snowmachines should be excluded from established riparian area buffer zones along the Henry's Fork and Buffalo Rivers to reduce impacts on wintering wildlife.

1276

RESPONSE: The Forest has limited information regarding wintering wildlife populations along the Henry's Fork and Buffalo Rivers. An objective was added to the Revised Plan to gather data about wintering bald eagle populations and winter habitat. Additionally, a guideline was added to minimize conflicts between recreation activities, developments and bald eagle winter habitat. As the Targhee learns more about wintering wildlife along the Henry's Fork and Buffalo Rivers, additional direction may be included and the Plan amended to address these concerns. MO

Vegetation

COMMENTS: All acres on the forest should meet DVC: The 2476 acres not meeting DVC in AIZ in Alternative 3M is too many.

61, 362, 690, 1269, 1365

RESPONSE: The acres and timeframe given for meeting Desired Vegetation Condition are reasonable, especially for the 10-15 year lifespan of the Revised Plan. Attaining DVC on the 2,476 acres may take longer if the Targhee lacks resources and budget to accomplish. The existing condition on some of

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those acres may require more intensive and expensive restoration, and therefore, recovery is anticipated to take more time. RSM

COMMENTS: See no rationale for allowing new roads in riparian areas, since this is prime wildlife habitat.

1369

RESPONSE: Any new roads proposed are evaluated on a site-specific basis, and, based on the Revised Plan's Standards and Guidelines, riparian values cannot be adversely affected. Any new roads would result if no feasible alternative route exists. Few, if any, new roads are predicted for these areas in the Revised Plan. RSM

COMMENTS: The DVC appears to be a good indicator of the riparian area health.

731

RESPONSE: Your comment is acknowledged. RSM

COMMENTS: Use of DVC alone as an indicator of riparian health is inadequate. Things like sediment load, turbidity and water temperature should also be used/monitored.

1365, 1367

RESPONSE: Refer to the definition of riparian areas in the Glossary of the FEIS. Riparian areas are adjacent to water, not in water bodies. Instream parameters, such as the ones referenced, are monitored and described in the Water Quality section. RSM

COMMENTS: Couple the green-line monitoring with the bank instability monitoring at little additional cost and do both as Priority 1.

489

RESPONSE: The Revised Plan was changed to incorporate this suggestion, and this item was given a Priority 1 monitoring rating. RSM

COMMENTS: Damage to or reductions in riparian vegetation, which can be caused by snowmobile use, leads to problems with the food chain through increased sediment load to streams. (CROSS REFERENCE: Snowmobiles)

697, 1276, 1365

RESPONSE: On-the-ground observation and monitoring indicate snowmobile use does not significantly impact vegetation. Snow acts as a cushion for underlying vegetation, and the damage referenced is not apparent on the Targhee. Snow typically acts as a buffer and no evidence of sedimentation problems have appeared as a result of this use. Most snowmobile impacts relate to conflicts with wildlife, other recreation uses and personal safety. The new practice of "skipping" a snowmobile across a stream may result in additional water quality concerns, but generally, this activity is addressed in county ordinances. RSM

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COMMENTS: Riparian vegetation needs to be kept healthy to be used for grazing livestock, but 3M does not allow enough flexibility in the standards and guidelines to design good, ecologically sound grazing schemes. (CROSS REFERENCE: Range)

432

RESPONSE: Healthy riparian areas benefit many uses. The Standards and Guidelines provide minimum stubble heights and maximum browse utilization needed to maintain healthy riparian vegetation. Monitoring protocols are used to determine if Standards and Guidelines are achieving desired conditions on the ground. If monitoring data indicates a "need for change" in management, the Plan will be amended to address the change.

Livestock grazing under the Revised Plan allows AUM adjustments after a site-specific analysis is completed on active allotments. In some cases, based on site-specific conditions, more stringent guidelines may be applied to achieve a desired condition. On other allotments, where existing conditions are at or exceed the desired condition, less stringent management may be applied. RSM/WG

COMMENTS: Clarify why there are not indicator species for willow habitat in riparian areas for both birds and mammals.

1369

Need to have standards for willow habitat in riparian areas because this is a major public issue; also please address the future management of willow habitat which should promote viability of bird species associated with it.

1365, 1369

RESPONSE: The Targhee did not develop management indicator species (birds, mammals, and so forth) for willow habitat. The Targhee will use the Aquatic Influence Zone Management Prescription as a "coarse filter" approach for maintaining all riparian habitats, including willow, in properly functioning conditions. The Targhee is currently cooperating in a research project on neotropical migratory birds in riparian areas in the Big Hole Mountains. The findings of this study will help the Targhee better manage riparian habitats, including willow habitat. Management activities that are proposed, planned, and implemented at the project level are subject to site-specific NEPA analysis. Special habitat and species needs are considered and addressed in the site-specific analysis of the project area. The Targhee intends to manage Forest ecosystems at properly functioning condition. Four criteria are evaluated in a Properly Functioning condition assessment: structure, composition, disturbance regimes, and patterns. Each of these criteria function within a range of natural variability. Refer to draft document entitled Properly Functioning Condition Process - Draft 1996. WG/MO

COMMENTS: DVC as an indicator for the riparian issue is far too nebulous to provide meaningful direction for forest management, i.e. it has no uniform method to measure anything.

643, 1277

RESPONSE: Desired Vegetation Condition can be measured through monitoring criteria. The Revised Plan glossary includes a modified definition of DVC

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that reads: "For both riparian areas and nonforested uplands is defined as the specific future condition of rangeland resources, aquatic habitat, and water quality that meet management objectives as identified in the Forest Plan, Allotment Management Plans, or other documents. Additional clarification can be found in the nonforested vegetation section of Chapter III of the FEIS." DVC is established in site-specific or landscape level analysis, based on site-specific factors. WG

COMMENTS: DEIS III-20: Table III-4 gives data for aquatic and riparian conditions by subsection. How is vegetative seral stage defined in this table? That is, on what species is it based? The definition of DVC is non-exact. What criteria were used to classify riparian condition relative to DVC? Were classification methods standardized? How much effort was invested in this classification and when were the data collected? Was any attempt made to verify, validate or calibrate field work to minimize or remove observer bias? We have been informed that these data were collected up to 20 years ago and hence their reliability are highly questionable. Describe the methodologies used to generate these statistics and any limitations in the data so that the reader can weigh the numbers.

389, 643

RESPONSE: District range data files were used to analyze environmental consequences in the FEIS. Range data files are updated annually to capture changed conditions. Range analysis surveys conducted 25 to 30 years ago serve as the baseline for determining change. Although this information is dated, data reliability is high and based on sound principles. All but nine allotments (1,813 acres) have completed range analysis surveys. In 1986, the Targhee converted condition class to ecological status and identified trends. This information was used in the 1991-1992 Analysis of the Management Situation (AMS) Report. Additionally, in 1992, new reporting direction from the Intermountain Region was implemented. "New Measures" used 1986 ecological status data and stratified the information into components used on the Targhee today.

Approximately 66% of the Targhee's grazing allotments have had grazing systems in place for many years (prior to 1980). The Targhee's present LMP grazing utilization standards have been in place since 1980 for all grazing allotments, and livestock use (AUMs) for both sheep and cattle have been reduced over time, where needed. Overall, rangeland resources for both uplands and riparian areas have improved over the last 25-30 years.

The ecological status of a site is measured against the Potential Natural Community (PNC) for the site. PNC is the biotic community that would become established on an ecological site if all successional sequences were completed without interference by humans under present environmental conditions. Natural disturbances such as drought, flood, wildfire, insects, and disease are inherent in its development. The PNC may include acclimatized or naturalized non-native species. Early seral ecological status is 0-39% of PNC; mid seral is 40%-59% of PNC; late seral is 60%-85% of PNC; and PNC is greater than 86%. Change in ecological status is tracked in the range data base and used on a site-specific basis to determine if riparian and upland acres are meeting, moving toward, or not meeting forest plan management objectives.

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Refer to Process Paper J - Logic Used to Estimate Effects of Livestock Grazing on Riparian and Upland Vegetation for information on how the environmental consequences were analyzed. WG

COMMENTS: The ecological status of riparian habitat may be more beneficial to the ecosystem by remaining in an early seral stage rather than moving to a mid/late-seral stage.

1446

RESPONSE: The Revised Plan provides direction for assessing and managing riparian areas in a properly functioning condition which includes evaluating the amount and distribution of seral stages, along with other criteria, appropriate for the various types of riparian ecosystems. DD

COMMENTS: DEIS III-19: Here we find another example wherein the Forest does not seem to recognize the full scope of the ecosystem management concept. Trees and other upland vegetation in the riparian zone (or the lack of willows) do not necessarily constitute an "ecological concern." Rather than assuming that these changes are negative, they should be viewed in the context of the causative agent(s) at a broader landscape-level. Have these changes resulted from livestock grazing, from natural succession, or other causes?

643

RESPONSE: The Targhee intends to manage Forest ecosystems at properly functioning condition. Four criteria are evaluated in a Properly Functioning condition assessment: structure, composition, disturbance regimes, and patterns. Each of these criteria function within a range of natural variability. Refer to draft document entitled Properly Functioning Condition Process - Draft 1996. DD/DM

COMMENTS: Be more specific when suggesting "you will maintain riparian vegetation in DVC." Wording is ambiguous, could apply Habitat Conservation Assessments and Management Recommendations developed by the USFWS for Idaho Species.

1249

RESPONSE: Desired Vegetation Condition is a reliable indicator that can be measured with various monitoring criteria. The DVC definition was modified in the glossary of the Revised Plan to read: "The specific future condition of rangeland resources, aquatic habitat, and water quality that meet management objectives as identified in the Forest Plan, Allotment Management Plans, or other documents. Additional clarification can be found in the nonforested vegetation section of Chapter III of the FEIS." WG/MO

Grazing

COMMENTS: Grazing in riparian areas must be greatly restricted and has already caused damage.

26, 204, 293, 325, 339, 340, 354, 356, 357, 359, 496, 650

RESPONSE: The Targhee is managed under the multiple-use, sustained-yield concept. Grazing has long been recognized as a legitimate use of National

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Forest System lands and is balanced with other multiple uses such as recreation, wildlife, timber, mining, and water, among others. The FEIS and Revised Plan predict a reduction in livestock use to meet numerous management objectives (ecosystem, wildlife or riparian). Actual adjustments (up or down) in AUMs will occur after site-specific analysis is completed on each active allotment. The Revised Plan incorporates more stringent riparian guidance that should result in improved riparian areas. The standards and guidelines for livestock management and riparian areas are found in the forestwide range standards and guidelines in Chapter III of the Revised Plan. WG

COMMENTS: Fence off riparian zones from cattle and install access ladders for fisherMen.

204

Cattle should be excluded from riparian areas.

F-K(4), 175, 212, 438, 609, 697, 1203, 1204, 1330, 1331, 1392

RESPONSE: The Revised Plan provides adequate direction for allowing grazing in an environmentally sound manner. Where fencing is used to protect riparian areas, public access can be provided. WG/DD

COMMENTS: Locate more stock tanks away from streams to help distribute animals away from water.

173, 265, 697, 1240

RESPONSE: The Targhee uses this approach when water developments are installed to distribute and disperse cattle and reduce the opportunity for cattle to congregate in small areas. Generally, water development and placement are discussed in a site-specific NEPA document or Allotment Management Plan rather than in the Forest Plan. WG

COMMENTS: Set up a dispersed salting regime to keep cattle out of riparian areas.

204

RESPONSE: The Revised Plan includes forestwide direction for livestock salting. Specific salting requirements are included in the individual annual operating plans for each allotment on the Forest. WG

COMMENTS: Use innovative methods to reduce intensity of animals in riparian areas and monitor. 3% reduction of AUMs (in 3M) may not be good enough.

625a

RESPONSE: The AIZ prescription provides standards and guidelines to maintain and improve riparian areas. Range specialists work with permittees in designing effective grazing patterns, water developments, and herding methods to reduce livestock impacts on riparian areas. The FEIS and Revised Plan predict a reduction in livestock use to meet numerous management objectives (ecosystem, wildlife or riparian). Actual adjustments (up or down) in AUMs will occur after site-specific analysis is completed on each active allotment. The Revised Plan incorporates more stringent riparian guidance that should result in improved riparian areas. The standards and guidelines

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for livestock management and riparian areas are found in the forestwide range standards and guidelines in Chapter III of the Revised Plan. WG

COMMENTS: Identify conflicts between livestock grazing and habitat conservation for all riparian, aquatic, and wetland habitats. Methods for resolution should be developed.

389

RESPONSE: The Aquatic Influence Zone Management Prescription is a "coarse filter" for maintaining all riparian, aquatic, and wetland habitats in properly functioning condition. The Revised Plan serves as an "umbrella" document for the environmental analysis of proposed projects at the site-specific level. The Revised Plan is not intended to provide or analyze specific "how to's" of project implementation. WG/MO

COMMENTS: Should implement trampling standard now based on available information from other forests already implementing.

643

RESPONSE: Forests share their different approaches for range and wildlife management. However, information from other forests is generally not indicative of conditions that exist on the Targhee. If correlations are determined to be reliable, additional management direction can be adopted at any time through a Forest Plan amendment. Monitoring for trampling was elevated to a Priority 1 in the Revised Plan. WG

COMMENTS: The frequency of monitoring description for riparian forage utilization should be amended to read "...wildlife, vegetation or other ecological concerns. Each..."

1365

RESPONSE: Your comment is acknowledged and was considered. The components of this monitoring standard remain unchanged. WG

COMMENTS: A guideline should be added to discourage hot season grazing of riparian areas.

1206

RESPONSE: AIZ standards and guidelines provide the necessary framework within which to address problems within individual riparian areas. The season of livestock use is one consideration in managing individual riparian areas. WG

COMMENTS: Develop more specific criteria to characterize what constitutes wildlife overutilization.

389

RESPONSE: Grazing utilization standards apply to plant utilization regardless of animal species (wildlife, livestock, or a combination). The standards and guidelines in Chapter III provide the maximum allowable use regardless of species. Livestock will be removed once the desired utilization level is achieved.

RIPARIAN - GENERAL

Monitoring items for riparian and upland forage in Chapter V reference wildlife concerns and where more monitoring will be done. WG

COMMENTS: DFPR III-20 Make the following a goal: restoration of riparian vegetation back to mesic forbs and grasses. It is unclear if this is the intent of Objective 1 on Page III-20.

1249

RESPONSE: Your comment was considered. The components of the forestwide standards and guidelines and the goals and objectives are adequate and remain unchanged. WG

COMMENTS: DFPR III-15 There are no forestwide standards or guidelines pertaining to amphibians. There is however one forestwide objective for spotted frog habitat. DVC is not defined and therefore this objective does not provide clear direction for maintaining habitat for spotted frogs or other amphibians. Suggest the following objectives be added: avoid use of pesticides/herbicides that may affect breeding sites and occupied aquatic habitat; discourage use of recreational and livestock use in seasonal meadows; prohibit livestock trailing through known amphibian breeding areas, particularly those few areas where the Western Toad exists; protect unknown amphibian breeding sites by prohibiting harvest activities, road construction or livestock concentrated use that will separate ponds, vernal pools or marshes from permanent streams. (CROSS REFERENCE: Wildlife, Amphibians)

643

RESPONSE: DVC is defined in the glossary of the Revised Plan and is analyzed in Chapters III and IV of the FEIS.

Your suggested objectives were not added because the Revised Plan provides adequate analysis and direction to protect amphibians, including the spotted frog. WG/MO

COMMENTS: Under Objective #1 it may be difficult to manage for mid to late seral riparian communities since they are continually undergoing change. The ecological status of riparian habitat may be more beneficial to the ecosystem by remaining in an early seral stage rather than moving to a mid or late seral stage. Add an objective to recruit and re-establish riparian-wetland communities back into these riparian zones.

1446

RESPONSE: The Revised Plan provides direction for assessing and managing riparian areas in properly functioning condition (PFC) and includes an evaluation of the distribution of seral stages, along with other criteria, appropriate for the various types of riparian ecosystems. DD

COMMENTS: Page III-21, Riparian Forage Utilization - B Riparian Vegetation Stubble Height: If the 4" stubble height is applied only to native and desirable non-native species without standards, you may perpetuate unhealthy unstable riparian zones. Recommends the 4" stubble height be used throughout the entire riparian zone.

1446

RIPARIAN - GENERAL

RESPONSE: The standards for riparian vegetation will improve riparian zones.

A 4-inch stubble height requirement at the hydric greenline and a separate 3-inch stubble height away from the hydric greenline will provide a greater level of protection to the hydric greenline. These areas are generally more sensitive to damage by livestock and often receive disproportionately more use than adjacent riparian areas. If the same stubble height requirement were applied to the entire riparian zone, then the stubble height could be exceeded at hydric greenline prior to being met on the adjacent area. This could lead to damage of streambanks prior to reaching an average 4-inch stubble height across the entire riparian area. DD

COMMENTS: Page IV-16, Water Indicators: In addition to stubble height as a monitoring method Forest Service should incorporate two other key factors in fisheries habitat and they are: percent of bank covered with a deep, binding root mass and percent of tree and shrub regeneration along the stream bank end.

1446

RESPONSE: Percent bank covered with deep binding root mass and percent of tree/shrub regeneration along the stream are two studies the Forest uses to monitor long term trend. These studies are called: Greenline Vegetation Composition - designed to identify the species and amounts of plants with or without deep binding root mass; and Woody Species Regeneration - designed to measure woody species regeneration along the greenline transect.

Monitoring items for riparian and upland forage in Chapter V reference where concerns (wildlife or watershed, for example) are present and where more monitoring will be done. This monitoring item is elevated to a Forest Priority Group 1. The techniques for these two studies are discussed in the Integrated Riparian Evaluation Guide, Intermountain Region, March 1992. WG

Timber

COMMENTS: There should be NO vegetation manipulation in riparian or whitebark pine areas at any time. These lands should also be taken out of the suitable timber base.

1273b

Targhee National Forest says in several of the revision documents that unscheduled timber harvest may be necessary within the AIZ; this is most disturbing.

Not aware of any credible scientific research indicated that timber removal has improved riparian values associated with riparian health.

766

Page 19 Clarify the stream buffer paragraph. Unclear what type of riparian or aquatic objectives will require timber harvest and how extensive it would be.

625a

RESPONSE: In Chapter III-99 Timber, the AIZ is removed from the suitable timber base. They are not part of the ASQ. Much of the whitebark areas are also removed from the suitable timber base through the various screens that

RIPARIAN - GENERAL

are used to determine the suitable base, such as steep slopes or low productivity potentials.

Silvicultural prescriptions are only used in the AIZ where they meet AIZ Management Prescription Goals (Chapter III) and are addressed through site-specific analysis. Silvicultural methods may be appropriately used in stands where overstories (such as conifers) might be inhibiting understory species that are important in providing channel stability (such as willows). At a minimum, the Revised Plan meets the guidelines in the Rules pertaining to Idaho Forest Practices Act (specifically those dealing with stream protection). DM

COMMENTS: Recommend the Targhee National Forest review The Conservation Strategy for Henry's Fork Basin Wetlands (Jankovsky-Jones 1996) and use to address wetland plant community management.

766

RESPONSE: The "Conservation Strategy" was reviewed. Category I and II wetlands not protected by other designations (such as RNA, Wilderness, Wild and Scenic River) were added to the 2.1.1 Management Prescription (Special Management Areas). This document identifies baseline or benchmark areas for comparisons with adjacent wetland health conditions. DM

COMMENTS: Clarify how overall forest health and the danger of intense wildfire was considered in management of riparian zones.

228

RESPONSE: The Revised Plan contains new direction on managing riparian and Forest ecosystems in a Properly Functioning Condition and on managing both natural and human-ignited fires. Refer to Ecological Processes and Patterns and Biological Elements in Chapter III - Part 1. DD

COMMENTS: Concerned that the Forest does not currently have sufficient data to characterize the RNV with any degree of confidence. Therefore, could also not understand how the RNV varied on smaller scales. (DFPR III-95, AIZ).

282, 643

RESPONSE: Refer to the Goals/Objectives and Standard/Guidelines pertaining to Properly Functioning Condition (PFC) in the Revised Plan. The Forest is adopting a Regional approach of using PFC assessments. DM

Wildlife

COMMENTS: The basis for determining proposed use levels, on willow and that level's ability to restore willow areas to optimum and historical conditions for wildlife is questionable.

1369

RESPONSE: After refining riparian and upland utilization levels, the Targhee determined that the standards and guidelines will achieve desired results. The standards and guidelines provide for a moderate rate of recovery of degraded riparian and aquatic ecosystems and a moderately high level of fisheries habitat quality. Reference the USDA Forest Service, October 1995,

RIPARIAN - GENERAL

Dixie National Forest, "Effects of livestock grazing at proper use on the Dixie National Forest." WG

COMMENTS: The co-occurrence of frogs and cattle does not constitute evidence that grazing has no effect on frogs or their ability to reproduce and persist in an area.

1277

RESPONSE: The relationship between cattle grazing and frogs is not definitively established. The discussion in the EIS and Revised Plan concerning spotted frogs and livestock grazing is accurate to the extent that available research exists. MO

COMMENTS: Need a timeline for beaver re-introduction in the implementation schedule for AIZ's.

282, 643

RESPONSE: The Revised Plan does not propose any beaver re-introductions. State Fish and Game agencies are responsible for the management of beaver populations. MO

COMMENTS: Re-analyze timber harvest on spotted frog habitat in Alternatives.

643

RESPONSE: No data in literature suggests spotted frogs are dependent upon a particular forested vegetation condition. Timber harvesting may change temperature and humidity conditions, but no specific temperature and humidity conditions required by spotted frogs are given. Spotted frogs are also found in desert areas where adequate water and riparian habitat conditions exist. MO

COMMENTS: Use some mammals (beaver, mink, otter) as good indicators in addition to the birds and amphibians currently proposed.

282, 643

RESPONSE: The Aquatic Influence Zone Management Prescription is a "coarse filter" to maintain aquatic and riparian habitats in properly functioning conditions. All threatened, endangered, and sensitive species are used as management indicator species. This provides adequate management direction for riparian habitats and wildlife. MO

COMMENTS: Several proposals already incorporated should benefit amphibians.

643

RESPONSE: Your comment is acknowledged. The AIZ Management Prescription is used as a coarse filter to maintain aquatic and riparian habitats in properly functioning conditions. This prescription will benefit amphibians. MO

COMMENTS: Include not only spotted frogs but also western toads (*Bufo boreas*).

1204

RIPARIAN - GENERAL

RESPONSE: The western toad, plus numerous other species, were suggested by the public for inclusion as management indicator species. The Targhee's management indicator species include all the threatened, endangered, and sensitive species on the Forest. These are species considered most sensitive to human activities. Habitat available for these species generally provides habitat for less sensitive species. As more information becomes available on western toads, management direction may need to be amended to address this concern. MO

COMMENTS: Page III-19, Riparian: Recommends a review of the document to ensure that management is applied to other issues related to the needs of fish and wildlife.

1446

RESPONSE: No additional draft review documents are scheduled for release. Changes between Draft and Final are based on public comments and new information and do not require another draft. MO

COMMENTS: The biological elements/wildlife standards and guidelines in the AIZ should have specific direction for maintaining biodiversity, riparian functions which maintain habitat, standards for specific species known to be rare or affected by past management practices and additional direction for management indicators.

643, 1401

RESPONSE: The Revised Plan contains specific standards and guidelines for all threatened and endangered species on the Targhee. The purpose of the AIZ is to provide protection and maintenance of Properly Functioning Conditions for the species dependent on the AIZ. More specific standards and guidelines other than those already incorporated in the Revised Plan are unnecessary. MO

COMMENTS: Consider that local changes in hydrology, ground cover, surface moisture, humidity, and temperature resulting from timber harvest may negatively affect spotted frogs and other amphibians.

643

RESPONSE: Rules in the State's Forest Practices Act state, "During and after forest practice operations, stream beds and streamside vegetation shall be protected to leave them in the most natural condition as possible to maintain water quality and aquatic habitat" (Rule 030.07). Also, 75 percent of the current shade must be left over Class I streams (those streams used by fish or for domestic water supplies) per Rule 030.07(e)11. No scheduled timber harvest may take place in Aquatic Influence Zones, and any timber removal must benefit riparian-dependent species, including amphibians. The potential effects are analyzed at the project level, and the activity is designed to avoid negative impacts to the local microclimate. RSM

COMMENTS: Riparian areas do not warrant more protection.

29, 38, 55, 258, 1239, 1240

RESPONSE: See the Aquatic and Riparian Ecosystems section of the FEIS (Chapter III) for a description of the importance of riparian areas (and

RIPARIAN - GENERAL

riparian vegetation), and areas where recreational use (such as OHV or dispersed camping) has caused resource concerns. Also see the description for Prescription 2.8.3 in the Final Revised Plan. RSM

RIPARIAN - STUBBLE HEIGHT

Does Not Support 4-inch Stubble Height - Grazing

COMMENT: Object to this or any standard because wildlife impacts are not accounted for and therefore could unfairly affect livestock grazing.

F-F(6), 267

RESPONSE: Both wild and domestic ungulates are taken into account during monitoring. The Forest Service has no control over wildlife numbers. In areas where wildlife use is excessive, domestic livestock grazing could be affected. DM

COMMENT: The stubble height should not be measured at the end of the grazing period, but at the end of the growing season. This would allow us to continue using various grazing schemes as management tools without being penalized.

432

RESPONSE: Riparian stubble height standards at both the hydric green line (HGL) and away from the HGL are measured at the end of the grazing period. These standards allow for deviations through site-specific analysis. Flexibility is allowed and depends upon the success of various grazing schemes (for example, at the Allotment Management Plan level). DM

Watershed Integrity

COMMENT: Four-inch hydric green line stubble height will not adequately protect integrity of the riparian zones.

308, 634, 643, 644

RESPONSE: Forestwide Standards (Chapter III) ensure that stubble heights, both on and away from the hydric green line, are maintained at the end of the grazing period. Re-growth of riparian vegetation, except possibly the last pasture grazed, should exceed the 4-inch requirement on the hydric green line and the 3-inch requirement away from the hydric green line. Flexibility is allowed and depends upon the success of various grazing schemes. DM

Supports a 4-Inch Stubble Height

COMMENT: Support 4-inch stubble height.

20, 35, 36, 51, 611, 1244, 1391

RESPONSE: Your comment is acknowledged. DM

Monitoring

RIPARIAN - STUBBLE HEIGHT

COMMENT: Concerned there is not anyone accountable if stubble height standards are exceeded.

624a, 1206

RESPONSE: Under the terms and conditions of the grazing permit, the permittee is accountable. The Forest is responsible for allotment administration and accountable for enforcing permit provisions. DM

COMMENT: The monitoring plan fails to ensure that riparian monitoring will either be adequately funded or dictate when livestock are moved.

432, 625a, 766, 1204

RESPONSE: Streambank Trampling and Riparian Forage Utilization monitoring items were changed to a Forest Priority 1 in the Revised Plan. Permittees will assist in monitoring range utilization and soil conditions on their allotments following an established protocol. Funding levels vary and may have an effect on the level or intensity of monitoring in any given year.

Monitoring Item "Riparian Forage Utilization," section "Tolerance, or Variability Indicating Action" (Chapter V) states, "when standard/guideline is more than 5% outside the range." This means that when the standard/guideline is attained or not exceeded by more than 5% of allowable, it is time to move livestock. Stubble height, browse utilization and streambank trampling are used to determine if livestock are being properly managed. DM

COMMENT: Even though the standard is proposed to be monitored at the end of the grazing season, that does not ensure that re-growth between end of grazing and end of growing season, thus concerned how the 4-inch stubble height will be monitored effectively.

317, 444, 766

RESPONSE: Although this statement may be true during periods of extreme drought, in normal years all but the last pasture in a grazing scheme would have ample time for re-growth. The last pasture grazed would leave a 4-inch stubble height which is adequate to allow for properly functioning conditions. (Clary/Webster, Kauffman, Platts etc.). DM

COMMENT: Monitoring of the hydric green line requires a waters edge; therefore no monitoring would occur in seeps, bogs, wet meadows, etc. These types of areas provide habitat values and contribute to biodiversity, for greater than their relative occurrence.

766

RESPONSE: Riparian forage utilization standards pertain to riparian areas away from the hydric greenline such as the type of areas described in this comment. DM

Stubble Height In Theory

COMMENT: Stubble height does not measure the rate of recovery of a riparian

RIPARIAN - STUBBLE HEIGHT

area after a disturbance and is therefore too objective (sic) to allow flexibility needed to manage different/changing range conditions.

432

RESPONSE: Stubble height does not measure the rate of recovery after a disturbance. Stubble height requirements are intended to retain sufficient quantity and quality of riparian vegetation biomass to maintain and restore riparian plant vigor, protect streambanks, trap sediments, maintain and restore habitat for aquatic insects and other wildlife, and restore a source of organic debris to the aquatic system. The Revised Plan (Chapter III) allows for flexibility in the stubble height standard at the hydric greenline to manage different/changing range conditions. Deviations from the stubble height standard are allowed through site-specific analysis. DD

COMMENT: Definition in the Plan too loose; 4-inch stubble height, while good, seems like it should apply to the whole riparian zone, not just the hydric greenline.

314

RESPONSE: A 4-inch stubble height requirement at the hydric green line and a separate 3-inch stubble height away from the hydric greenline provides a greater level of protection at the hydric greenline. The hydric greenline is more sensitive to damage by livestock than the adjacent area and often receives disproportionately more use than adjacent riparian areas. If the same stubble height requirement was applied to the entire riparian zone, then stubble height could be exceeded at the hydric greenline prior to being met on the adjacent area. This could allow damage to streambanks to occur before an average 4-inch stubble height was attained across the entire riparian area. DD

COMMENT: Scientific accountability for stubble height is necessary if grazing is to continue on public lands.

636

RESPONSE: The use of riparian stubble height criteria in managing livestock grazing within riparian areas is well documented in scientific literature. In combination with riparian stubble height requirements, the Revised Plan incorporates a livestock utilization limit on woody riparian plants, a high priority for monitoring of results, and a provision to adjust the standards as necessary to meet objectives for riparian areas. Some references used in development of these stubble height criteria include:

Clary, Warren P.; Webster, Bert F. 1989. Managing grazing of riparian areas in the Intermountain Region. Gen. Tech. Rep. INT-263. Ogden, UT: U.S. Department of Agriculture, Forest Service, Intermountain Research Station. 11 p.

Clary, Warren P.; Kinney, John W. 1994. A photographic utilization guide for Key Riparian Graminoids. Gen. Tech. Rep. INT-308. Ogden, UT: U.S. Department of Agriculture, Forest Service, Intermountain Research Station. 13 p.

RIPARIAN - STUBBLE HEIGHT

Kauffman, J. Boone; Kruger, W.C. 1984. Livestock impacts on riparian ecosystems and streamside management implications—a review. *Journal of Range Management*. 37(5): 430-438.

Platts, William S.; Raleigh, Robert F. 1984. Impacts of grazing on wetlands and riparian habitat. In: *Developing Strategies for Rangeland Management*. Boulder, CO: Westview Press: 1105-1117.

Platts, William S.; Nelson, Roger Loren. 1985. Streamside and upland vegetation use by cattle. In: *Rangelands* 7 (1): 5-7.

Clary, W.P., Christopher I. Thornton, and Steven R. Abt. 1996 Riparian stubble height and recovery of degraded streambanks. In: *Rangelands* 18(4): 137-140. DD

COMMENT: Stubble height and utilization in riparian areas are excessive according to scientific literature.

389

RESPONSE: The appropriate stubble height and utilization standard used is determined by the objectives set for the Forest. The Targhee evaluates three sets of objectives: 1) provide for a slow rate of recovery of degraded riparian and aquatic systems together with a moderate level of fisheries habitat quality as described in Alternative 1; 2) provide for a moderate rate of recovery of degraded riparian and aquatic systems together with a moderately high level of fisheries habitat quality as designed in Alternatives 2, 3, and 3M; and 3) provide for a rapid rate of recovery of degraded riparian and aquatic systems together with a high level of fisheries habitat quality as designed in Alternatives 4, 5, and 6.

Scientific literature supports the prediction that the Revised Plan achieves the set of objectives described above. The scientific literature used to design the alternatives includes those listed in the response immediately preceding this. DD

COMMENT: Studies show sediment entrapment and retention (of overland flow) is better where vegetation is shorter than the 6" stubble height proposed in the standards and guidelines, unless ground cover is <50%.

432

Ongoing research findings by the University of Wyoming indicates a possible counterpoint to the scientific support of higher stubble heights. Results of the cited study (Grant. "A settlement of sediment" in *Beef Today*, May 1996), show streambank vegetation clipped continuously to 1-inch stubble height had similar impacts as taller heights on: sediment deposition (traps just as much sediment when streams overflow); plant productivity (production just as good as 6" stubble height); and, plant health (biomass height did not change with stubble heights).

F-F(6)

RESPONSE: First, research conducted by Abt, Clary and Thornton (1994) entitled "Sediment Deposition and Entrapment in Vegetated Streambeds" shows that the shorter stubble heights were as efficient in producing sediment deposition as taller stubble heights. The difference was that the taller stubble heights

RIPARIAN - STUBBLE HEIGHT

(blade lengths) increased retention potentials (for example, bank building). Second, continuous clipping to a 1-inch stubble height ignores the effects large ungulates have on streambanks being grazed to that same 1-inch stubble height (for example, compaction and its effect on riparian functioning). One of the reasons for using a 4-inch stubble height standard is to protect banks and woody browse, based on findings from Clary and Webster (1989), Kovalchik and Elmore (1992), and Platts (1981). DM

COMMENT: Measuring stubble height at the HGL is inadequate and should use Beaverhead Riparian Guidelines.

697

RESPONSE: According to the Beaverhead Riparian Guidelines for measuring stubble height and woody browse, "This is measured in two places: 1) along the water/soil interface known as the "green line" and 2) away from the stream channel in the "key area" where especially palatable species exist." The Targhee uses a similar process and similar parameters for monitoring purposes (for example, stubble height, percent utilization, browse utilization and bank trampling). DM

COMMENT: Research shows that both bank stability and regeneration of woody species are protected when stubble heights are enforced.

1206

RESPONSE: Your comment is acknowledged. The Revised Plan is specific on its stubble height recommendations and the time it is measured. Trampling and browse utilization are also collected to make sure that stubble height recommendations are achieving desirable objectives. DM

Supports a 6-inch Stubble Height

COMMENTS: Since riparian areas influence much of their watersheds, support a 6-inch hydric green line stubble height to return riparian areas to proper functioning condition most quickly and better protect habitat for native cutthroat trout.

314, 389, 643, 690, 695, 719, 766, 1204, 1206, 1276, 1401

Stubble heights should be 4-6 inches within streamside riparian areas, not just the green line; 3-4 inch stubble heights are not adequate.

FS-5, FS-7, FS-9

The proposed protection of cutthroat trout in Alt. 4, 379 miles protected with 6-inch HGL stubble height should be incorporated into 3M.

308, 643, 695, 1206,

A 6-inch stubble height should apply to entire AIZ.

FS-5, 643, 695, 766, 1194, 1401

Recommend that all stubble heights should be 5" and 6" for satisfactory and unsatisfactory condition (riparian vegetation) respectively, unless the FS can provide scientific documentation to support the levels.

389

An additional standard of 6", remaining at the end of the grazing period, should be added for areas determined to be non-functioning or functioning at risk.

1206

RIPARIAN -STUBBLE HEIGHT

Riparian stubble height standard should be more conservative because of the lack of reliable data used by the FS.

643

RESPONSE: Stubble height requirements at both the hydric greenline (HGL) and away from the HGL are measured at the end of the grazing period. Measurements at the end of the grazing period allow for re-growth to occur on all pastures (have stubble heights in excess of 4-inches), except for the last pasture where a 4-inch stubble height remains. These standards allow for flexibility based on site-specific analysis.

Recommendations

COMMENT: A stubble height of 2-3 inches is sufficient for this higher altitude area. There isn't scientific data stating streambanks hold any better or grass recovers any faster at 4-inches than 2-3 inches.

1378

The provision allowing the Forest to use a 6-inch stubble height is strongly opposed; should only be used in extreme situations, other measures for rate of recovery should be used first.

319, 1244, 1378

RESPONSE: Stubble height requirements were developed based on comprehensive scientific findings. Some references used in development of these stubble height criteria include:

Clary, Warren P.; Webster, Bert F. 1989. Managing grazing of riparian areas in the Intermountain Region. Gen. Tech. Rep. INT-263. Ogden, UT: U.S. Department of Agriculture, Forest Service, Intermountain Research Station. 11 p.

Clary, Warren P.; Kinney, John W. 1994. A photographic utilization guide for Key Riparian Graminoids. Gen. Tech. Rep. INT-308. Ogden, UT: U.S. Department of Agriculture, Forest Service, Intermountain Research Station. 13 p.

Kauffman, J. Boone; Kruger, W.C. 1984. Livestock impacts on riparian ecosystems and streamside management implications-a review. Journal of Range Management. 37(5): 430-438.

Platts, William S.; Raleigh, Robert F. 1984. Impacts of grazing on wetlands and riparian habitat. In: Developing Strategies for Rangeland Management. Boulder, CO: Westview Press: 1105-1117.

Platts, William S.; Nelson, Roger Loren. 1985. Streamside and upland vegetation use by cattle. In: Rangelands 7 (1): 5-7.

The parameters that the Targhee is proposing to utilize are similar to what other forests and land management agencies are using. DM

COMMENT: Degraded riparian areas may require complete rest to initiate recovery process.

389

RIPARIAN - STUBBLE HEIGHT

RESPONSE: Your comment is acknowledged. The Revised Plan allows for deviation, where needed, based on site-specific analysis. DM

COMMENT: Other indicators such as plant density, plant composition and litter should be used with standards assigned to each criterion, not just stubble height as the plan proposes.

643, 766

RESPONSE: Plant frequency, plant composition and litter are measured on benchmark sites, which are permanent indicator sites. The Targhee Rangeland Monitoring Protocol outlines the establishment of benchmark sites for long-term trend studies and the parameters that would be analyzed. DM

COMMENT: Essential to determine/develop a streambank stability standard correlated to stubble height at the hydric green line. Should include the Beaverhead standard or something instead of waiting five years to develop.

1206

RESPONSE: Baseline data is insufficient on the Targhee to develop a streambank stability standard. In the interim, stubble height standards will be used to protect streambanks. This monitoring item was elevated to a Forest Priority Group 1.

The Beaverhead standards are specific to various mountain ranges on the Beaverhead National Forest and their physical features (site-specific). DM

RIPARIAN - WATER QUALITY

Sediment

COMMENTS: DEIS and DREV have limited information on sediment and turbidity despite the fact that sediment is the biggest pollutant on the Targhee.

1367

RESPONSE: Currently, the Forest has limited information to assess the impact of sediment and turbidity on aquatic systems. The Targhee uses two types of water quality standards established by Idaho and Wyoming state laws: specific criteria (turbidity, water temperature) and general criteria for maintaining unimpaired beneficial uses.

With respect to specific sediment criteria, extensive data collection is required during storms and spring run-off, since turbidity varies with discharge and is not always related to suspended sediment quantities. Previous, dated Forest turbidity records indicate levels are below limits set by the States. The Targhee conducts surveys to determine if beneficial uses are adversely impacted by management activities. Fisheries surveys, including Wolman pebble counts and macro invertebrate data, have not shown sediment to be a significant problem on the Targhee. RSM

COMMENTS: The Plan identifies sediment as the biggest pollutant but efforts to obliterate roads that are the primary source of this sediment is insufficiently identified and committed to.

1365

RIPARIAN - WATER QUALITY

RESPONSE: Objective #1 in Prescription 2.8.3 includes direction to inventory, evaluate, and schedule for restoration those roads, trails, and stream crossings that do not meet prescription goals. Implementation and monitoring of Best Management Practices required by the States also address this concern as does objective #1 under Aquatic Standards and Guidelines for the watershed improvement needs inventory. RSM

Roads

COMMENTS: Road density limits or road obliteration requirements should be proposed relative to watershed conditions and aquatic systems; key watersheds where road densities might pose specific concerns to aquatic ecosystems and water quality should be identified.

1368

RESPONSE: Available information indicates road density is less critical than road location. No clear evidence is available that supports the assumption that a specific road density in a watershed leads to adverse water quality impacts. Substantial information validates that roads within a given distance of a stream, based on such factors as slope steepness, slope stability and existing vegetation, can lead to adverse water quality impacts. The Revised Plan focuses on roads within the Aquatic Influence Zone that have the greatest potential for delivering sediment to water bodies. AIZ widths vary by subsection and allow the Targhee to examine different geomorphic areas on the Forest during site-specific analysis.

Standards and Guidelines, Best Management Practices, Idaho Forest Practices Act, and site-specific recommendations provide adequate protection to watershed and aquatic systems without adding additional road obliteration requirements. RSM

COMMENTS: Prioritize watersheds for restoration and protection, limits for additional road construction.

1368

RESPONSE: Priorities for restoration are determined through the watershed improvement needs inventory. Those watersheds posing the greatest threat to resource values are restored first. Restoration work is monitored to insure effectiveness and to determine if on-going maintenance is required. Refer to Objective #1 in the Aquatic Standards and Guidelines.

Protection needs are determined on a case-by-case basis, depending on a project's objectives. As part of the site-specific NEPA process, watershed resources and alternatives are evaluated, and Best Management Practices and mitigation measures are developed to address site-specific needs. RSM

Recreation

COMMENTS: OHV use, which can damage or reduce riparian vegetation, will lead to soil erosion increase which can negatively impact aquatic communities.

1365

RESPONSE: OHV use may cause damage to riparian areas, mainly through soil compaction, puddling, and rutting. High silt/clay soils are especially

RIPARIAN - WATER QUALITY

sensitive during wet cycles. OHV impacts are prevalent in specific locations on the Targhee, rather than uniformly distributed.

The Revised Plan improves management of OHV use, specifically on steep upland slopes and in riparian areas. In riparian areas, camping near streams is limited to designated dispersed sites (Prescription 4.3). The Targhee will monitor camping and OHV impacts to riparian soils and vegetation. Based on monitoring data, the Targhee will periodically validate whether objectives in Prescription 2.8.3 are being met and adapt management accordingly. RSM

COMMENTS: OHV use can cause soil erosion and sedimentation which leads to increases in turbidity; and refueling/spills can lead to chemical contamination of water.

1365

RESPONSE: Most OHV impacts in riparian areas result in soil compaction, puddling, and rutting which can lead to erosion. The primary concern is the loss of stabilizing vegetation in areas where OHV use has impaired soil quality. Vegetation helps the soil absorb water and acts as a buffer against surface run-off. Lack of adequate stream-side vegetation is a primary cause of erosion. Utilization and minimum ground cover standards are included in the revised Plan.

A new guideline was added in Prescription 2.8.3 that addresses possible risks to water quality from fuel storage and vehicle refueling. RSM

COMMENTS: The Plan needs to fully address the issues of water quality degradation resulting from recreational and other uses on the Targhee. Specifically, include thorough, strict, clear provisions to insure impacts to water quality do not occur.

1365

RESPONSE: The Revised Plan's goals and objectives, standards and guidelines serve as an umbrella for site-specific project work. Standards and guidelines provide the direction and limitations for all project-related activities. Water quality is best analyzed at the site-specific level based on site-specific factors. In some projects, stricter standards than those found in the Revised Plan may be used, if site-specific conditions warrant. Regardless of the nature of the project, State water quality standards must be met. This is generally achieved through site-specific mitigation. RSM

General

COMMENTS: No discussion of ground water concerns, specifically to the Madison limestone as a significant aquifer.

389

RESPONSE: No evidence exists that management activities proposed under any alternative would impact aquifers. Water quantity depends on natural precipitation patterns and the amount of water being withdrawn from an aquifer for consumptive uses. Impacts to aquifer water quality are expected to be insignificant, in that burying or injecting hazardous waste on National Forest land is prohibited. Where petroleum products or other hazardous materials are

RIPARIAN - WATER QUALITY

stored, safe storage facilities are required to prevent contamination of soil and water resources. RSM

COMMENTS: Base management decisions of sustainable activities on protecting watersheds and water quality.

376

RESPONSE: All planning activities on the Forest require site-specific assessment of impacts to resources, including water quality. All projects must satisfy a variety of rules and regulations contained in State water quality standards during and after project implementation. RSM

COMMENTS: Support reducing pressures of grazing bovines and motorized vehicles to restore waterways and keep them healthy.

406

RESPONSE: Standards and guidelines in the Revised Plan are designed to reduce impacts to streams. Also refer to specific standards and guidelines regarding grazing and motorized use. Implementation and monitoring will identify if Revised Plan direction is not meeting resource needs. Under adaptive management, remediation will be taken. RSM

COMMENTS: Targhee should continue to identify areas in need of restoration and use native species wherever possible. Continue to solicit help from Henry's Fork Foundation.

1276

RESPONSE: Watershed Improvement Need Inventories are currently being conducted across the Forest to identify and prioritize restoration needs. A decision to use native species would be made at the project level and would usually be preferred. Refer to Vegetation section of the Standards and Guidelines. The Forest will continue to work with the Henry's Fork Foundation. RSM/DM

COMMENTS: Major emphasis should be placed on restoration in order to heal past errors along streams and within whole watersheds.

620

RESPONSE: Watershed Improvement Need Inventories, as outlined in the Objective under Aquatic Resources, are currently being conducted across the Forest to identify and prioritize restoration needs. The Revised Plan emphasizes a preventive approach through appropriate Standards and Guidelines. RSM

COMMENTS: Designating lands as wilderness protects water quality.

136

RESPONSE: A variety of methods and tools are available to protect water quality other than designating lands as wilderness. All proposed management activities must adhere to Standards and Guidelines in the Forest Plan and meet State and Federal water quality regulations. RSM

RIPARIAN - WATER QUALITY

COMMENTS: Many activities can reduce stream flow and water clarity which threaten the riparian ecosystem. Activities include diversions for irrigation or channelization, gravel washing operations, grading of dirt roads that cross streams and upland grazing. Past activities on the Targhee may have impacted the western boreal toad, spotted frog, and predatory birds.

1365

Oppose logging, roading, mining, grazing due to impacts to soil and water resource.

276

RESPONSE: Although the activities noted have potential to reduce streamflow, water quality, or both, the Revised Plan contains many standards and guidelines that address these concerns. In addition, site-specific mitigation measures, on a project-by-project basis, are developed as needed through the NEPA process to insure stream channel and water quality protection along with State Best Management Practices. RSM

COMMENTS: Detailed watershed modeling should accompany the EIS.

1364

RESPONSE: The Revised Plan provides general management direction and sets minimum acceptable levels (Standards and Guidelines) to be used in project implementation. Detailed watershed modeling is more appropriate at the watershed or project level and is not necessary to assess the impacts of the various programmatic alternatives under consideration. Instead, "indicators" provide a valid indication of potential impacts under the various alternatives. RSM

COMMENTS: Revision appears to be consistent with United States Bureau of Reclamation in supplying water and maintaining water quality.

314

RESPONSE: Your comment is acknowledged. RSM

COMMENTS: Concern over effects on private land and water quality if Forest Service cuts back on range.

314

RESPONSE: The Targhee adjusts grazing permits from time to time to ensure resources are not degraded. Proposed reductions in permitted livestock use on the Targhee are not predicted to affect water quality or land condition on private land. Impacts to land and water on private lands, as a result of grazing on those lands, is outside the jurisdiction of the Forest Service. RSM

COMMENTS: Targhee could learn from Lemhi Model Watershed Project with FS and BLM, regarding riparian habitat gains.

314

RESPONSE: The Targhee relies on information or findings from a variety of other sources. The Revised Plan incorporates direction and monitoring protocols for riparian areas from projects like the Lemhi Model Watershed

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Project. Future monitoring will determine the success of these protocols, and management will be adjusted as necessary. RSM

COMMENTS: Disagree that there will be no change in water yield by alternative.

413

RESPONSE: The number of acres disturbed in a given watershed and the type of disturbance expected, predict no change in water yield by alternative. Similar and more refined analysis occurs at the site-specific level as part of a proposed project's NEPA analysis before a project is implemented. RSM

COMMENTS: Forest must address and disclose predicted impacts and discuss how activities will affect other related resources, i.e., Fish, Threatened and Endangered, sensitive species.

643, 766

RESPONSE: The FEIS discloses the direct, indirect, cumulative, and irreversible/irretrievable effects anticipated for each alternative under consideration. Effects on each resource are also disclosed in Chapter IV of the FEIS. Site-specific projects will receive site-specific analysis in the NEPA process. RSM

COMMENTS: Our mountain streams are not as polluted as you would have us believe.

316

RESPONSE: Although this may be the case in many areas, the Targhee lacks sufficient monitoring data to insure this is, in fact, true. For that reason, the Revised Plan increases monitoring activities. RSM

COMMENTS: Sediment and turbidity levels should also be indicators in addition to desired vegetation condition, especially where harvest and roads are present.

1367

RESPONSE: Monitoring sediment delivery to streams requires more time and resources (personnel and budget) to evaluate than vegetation condition. For that reason, sediment monitoring targets Water Quality Limited streams first, and then other areas where activities have taken place and Best Management Practices have been applied. In locations where sediment monitoring is not feasible, vegetation condition is used as a proxy indicator. This is the best method available to evaluate sediment delivery at this time. RSM

COMMENTS: Additional aquatic studies, including the relationship between roads and sediment, should be completed before the FEIS. (Reference made to Megahan and Kidd study)

1367

RESPONSE: The relationship between roads and sediment delivery to streams continues to be researched by Megahan and others. All research findings are similar in that roads are sources of sediment to streams, and various measures

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are needed to reduce the amount of sediment delivered. The Targhee used the Megahan studies, among others, to develop standards and guidelines for water quality and aquatic systems and in planning roads at the project level. As researchers publish new findings or offer new management suggestions based on their findings, the Targhee will incorporate them during project implementation activities. RSM

COMMENTS: Preparation and operation of ski slopes can lead to extensive sedimentation.

1365

RESPONSE: Regardless of the nature of a proposed project, whether a timber sale or ski hill operation, soil disturbance is mitigated through application of Best Management Practices or other appropriate measures to minimize soil erosion and reduce sediment delivery to water bodies. Refer to the FEIS - Grand Targhee Ski Area - as an example. RSM

COMMENTS: Snow making can consume considerable volumes of water and produce severe distortions in hydrologic cycles.

1365

RESPONSE: Snowmaking does use water; however the two ski areas on the Targhee do not have on-Forest permits for withdrawing water for snowmaking. Grand Targhee Ski Area does not make snow. While Kelly Canyon makes snow for parts of the lower slopes, they do not apply snow to slopes located on the Forest. Water for Kelly Canyon snowmaking comes from a private water source. It is unlikely that severe distortions in the hydrologic cycle result from this activity, since it occurs in a small area. RSM

Specific Citations in DREV

COMMENTS: Page III-7 section only addresses streams that are presently impacted and where water quality improvements are desired. Modify to indicate water quality would be maintained or improved to meet State standards.

389

RESPONSE: Goal #3 was changed to read: "Water quality is maintained or improved to meet water quality standards for the appropriate state (Idaho or Wyoming)." RSM

COMMENTS: Page III-7 DREV: Guidelines 1 and 2 should be standards, under Municipal Watersheds; Page III-7 Emergency in Guideline (G) 1 should have more specific provisions; and page III-7 Avoid in Guideline 2 should be replaced with Prohibit.

1365

RESPONSE: We dropped the standards and guidelines for municipal watersheds. The Targhee does not have municipal watersheds; instead the Forest has public water systems. Draft management direction for public water systems was issued recently by the Washington Office and the final direction will be in national or regional manuals or handbooks. The Revised Plan does not repeat manual and handbook direction. RSM

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COMMENTS: A few well placed rolling dips and light scarification will be effective in rehabilitation of disturbed areas. Targhee has done lots of this and don't support continued reference needing to fix old timber roads.

687

RESPONSE: Your comment is acknowledged. The Targhee will continue to employ these methods as determined by site-specific analysis. RSM/DM

COMMENTS: Strengthen BMP's for roads that are left open, and obliteration should be considered as primary option for road closures.

1276

RESPONSE: Idaho State Best Management Practices for roads, and standards and guidelines in the Revised Plan, specifically under prescription 2.8.3 for roads and trails, provide protection to other resources from the impacts of roads. If other needs are identified for specific roads, including obliteration, they are handled on a case-by-case basis. RSM

COMMENTS: Plan should develop standards for roads in riparian areas, management of the Targhee has neglected to protect riparian areas. Riparian road densities exceed 15 mi/sq. mile and Plan doesn't propose adequate remedy for this.

1367

RESPONSE: Refer to Prescription 2.8.3 for standards and guidelines for roads in the aquatic influence zone. Note that under the Objectives in this prescription, the Targhee will evaluate roads for resource concerns, identify where problems exist, and prescribe solutions.

Road density in riparian areas is difficult to calculate. Riparian areas are linear features and are limited in lateral extent. Quantitatively, it is difficult to define these areas in GIS on a forestwide scale. While road densities in riparian areas may be calculated from information in the FEIS, the numbers should be viewed cautiously. RSM

COMMENTS: With 5,680 stream crossings on the Targhee, risk of large scale erosion events is extremely likely. Plan fails to adequately address the serious threat to aquatic systems posed by the existing stream crossings.

1367

RESPONSE: Stream crossing data in the DEIS were incorrect. After additional analysis and recalculation, the Targhee has 4,530 stream crossings. Corrections also were made to the information about stream crossings in each of the alternatives in the FEIS. RSM

COMMENTS: Road decommissioning requirements are inadequate to protect aquatic ecosystems.

1368

RESPONSE: Goals and objectives in the section for aquatic, riparian resources, and watersheds establish priorities using the watershed improvement needs inventory. Watersheds that have 30% or more hydrologic disturbances were given the highest priority for assessment and restoration. See

RIPARIAN - WATER QUALITY

Prescription 2.8.3 for direction on the inventory of roads, trails, and stream crossings for rehabilitation needs. Future priorities will be based on monitoring results. For example, water quality limited streams that are not meeting water quality standards for sediment would be a high priority for watershed assessment and restoration. Road density limits for watershed protection are not well-documented. Roads having the greatest direct impacts on streams are targeted for assessment. DM/RSM

COMMENTS: Support effort to reduce summer cross-country OHV travel since it can be a major sediment contributor.

161, 1276

RESPONSE: Your comment is acknowledged. RSM

COMMENTS: Page III-7: Aquatic Guideline 2 should be a standard.

1365

RESPONSE: Required minimum flows, fish passage, and fish screens on new special use permits are standards in the Revised Plan. On existing permits, values are protected through guidelines, allowing the Targhee to evaluate needs on existing projects on a case-by-case basis. RSM

COMMENTS: Forestwide standards and guidelines - Ecological and Biodiversity left out discussion of the aquatic environment.

1177

RESPONSE: The aquatic environment is discussed under the standards and guidelines of Prescription 2.8.3. New information was added to this section describing how the Targhee will use "properly functioning condition" of plant communities, streams, and watersheds to more effectively manage for desired conditions. RSM/DD

COMMENTS: Modify statement to "State and/or Forest specified instream flows" on III-7 since Wyoming allows the State to acquire instream flows.

389

RESPONSE: The statement is modified in the the Final Revised Plan. RSM

COMMENTS: Page III-35 Goals: Disagree with efforts being placed on West Dry Creek because only unnatural condition exists below sheep station diversion. Water seldom flows below diversion after 7-15. Should put efforts elsewhere.

432

RESPONSE: This focuses on West Dry Creek at the western edge of the Island Park Ranger District near Antelope Valley. The Targhee is interested in the part of West Dry Creek upstream of this diversion. Approximately 10 miles of stream in this drainage is on the Forest and may provide habitat for fish and other aquatic organisms. RSM

COMMENTS: Time frame for completing watershed improvement needs inventory is too long.

643

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RESPONSE: The timeframe for completing watershed improvement needs is realistic, given budget and personnel constraints. RSM

COMMENTS: Page III-76: Add additional BMPs to the Minerals/Geology section of the Eligible Wild River prescription: "No pollutants, such as topsoil, silt, sand, gravel, solid wastes, slash, debris or chemicals, should be stored or deposited within the active floodplain, in areas immediately adjacent to riparian areas or in natural drainages, e.g., draws, land surface depressions or other areas where overland flow could concentrate materials and carry pollutants directly into surface waters."

389

RESPONSE: A standard was added to address this concern. RSM

COMMENTS: DREV III-95: Objective 1 should be a standard, and modified to read "will be scheduled for restoration or obliteration."

1365

RESPONSE: Although the Revised Plan retains this as an Objective, the wording was modified as suggested. RSM

COMMENTS: Goals III-95 unclear what "where feasible" means. Please define.

1177

RESPONSE: "Where feasible" assumes some systems are functioning outside the range of variation. For example, some streams in the Tetons that experience frequent disturbances from avalanches are considered unstable. Although they may be functioning hydrologically, they may not meet the general parameters established for streams on the Targhee. Another example is Irving Creek. The headwaters are in good condition. As a result of a rain-on-snow event in 1995, the channel downcut approximately five feet, and tributary drainages moved huge amounts of sediment. This stream will likely function outside the range of variation until it adjusts to the new conditions or until a similar event takes place. RSM

COMMENTS: DREV III-97: All three guidelines should be standards under Fire and Fuels. Replace avoid with prohibit.

1365

RESPONSE: Refer to the definition of a "guideline". Guidelines are actions that are expected to be carried out. Rationale for deviating from the guideline is documented in the site-specific NEPA project decision. Because fires may threaten human life, property, or Forest resources, flexibility is needed for suppression efforts while allowing for the protection of riparian resources. RSM

COMMENTS: Page III-97 Minerals: Final guideline should be a standard, and modified to "consistent to the fullest extent possible."

1365

RESPONSE: Refer to definition of a "guideline." Guidelines are actions that are expected to be carried out. Rationale for deviating from the guideline is

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documented in the site-specific NEPA project decision. Plans of operation are consistent with Standards and Guidelines. New wording in the guideline includes the language suggested in the comment. RSM

COMMENTS: Page III-98: All three guidelines should be standards. The second standard should be modified (see letter); Page III-99 Roads and Trails. First guideline should be a standard. First sentence of second guideline should be a standard. Last two guidelines should be standards; and, Page III-99 Recreation First guideline should be a standard.

1365

RESPONSE: Refer to the definition of a "guideline." Guidelines are actions that are expected to be carried out. Rationale for deviating from the guideline is documented in the site-specific NEPA project decision. The soil guideline is a Regional guideline for soil quality.

The second guideline is modified as suggested to read "Improve; seasonally close; close and relocate and stabilize; or obliterate roads and trails that have been identified as posing a high risk for causing unnaturally high levels of sediment input into fish spawning areas or are known to be doing so. Site-specific analysis on a project-by-project basis will determine the action(s) to be taken, based on travel management, terrain, the need for the road or trail, the potential environmental impacts, and resource priorities." RSM

COMMENTS: Make sure the state basin plan is incorporated. Targhee needs to work closely with Ellen Berggren, Idaho State Department of Water Resources, to integrate the Henry's Fork Basin Plan into the Revision.

314

RESPONSE: The Targhee coordinates with State agencies in water planning efforts, particularly in the development of the State basin plan for the South Fork Snake River Basin. Efforts have included sharing information resources and periodic meetings between agency personnel. The Targhee will also be a cooperator in updating the Henry's Fork Basin plan.

The South Fork Basin Plan addresses an area that crosses jurisdictional boundaries and is greater in scope than the Targhee's Revised Plan. The Targhee will consider recommendations from these efforts and adapt management if necessary. EF

COMMENTS: Targhee isn't in compliance with 36 CFR 219.27, and Forest needs a clear plan for meeting requirements (specifically mentions sec. (a) 1, 4, and 6).

Meet the Forest Service planning regulations concerning minimum specific management requirements in accomplishing the goals and objectives in Forest Plans.

Significant widespread damage to streambanks and riparian areas is occurring as a direct result of negligent management practices, especially roading. There are 15.3 miles per square mile of roads in riparian areas on the Forest. Dedicate more attention to riparian areas, show "a drastic reduction of road densities" in these areas.

1367

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RESPONSE: Management of riparian areas is governed primarily by the goals, objectives, standards and guidelines in Prescription 2.8.3, for the Aquatic Influence Zone (AIZ). This prescription recognizes the importance of these areas for biodiversity and provides direction for protection and restoration. One of the goals speaks to minimizing adverse effects to aquatic and riparian dependent species from past, existing and proposed management activities. One objective inventories and evaluates the condition of all existing roads, trails, culverts, fords and stream crossings within these lands, and schedules restoration activities in all areas that do not meet the goals of the prescription.

The Revised Plan complies with these and other regulation requirements and meets the protection and restoration needs of riparian areas on the Targhee. EF

COMMENTS: Need close monitoring of water quality to allow better control and conservation of the ecosystem.

11

RESPONSE: Your comment is acknowledged. Throughout the Revised Plan, these ideas are incorporated, specifically in the monitoring and evaluation program. EF

Water Quality Limited Streams (WQLs)

COMMENTS: Include a disclaimer that monitoring to determine compliance with state standards will change as science and standards change.

1177, 1362

RESPONSE: A statement was added that changes to water quality standards and assessment procedures are likely to occur during the life of the Revised Plan. EF

COMMENTS: For WQL streams to be delisted, they must be monitored to determine if beneficial uses are fully supported. DEQ is approaching these requirements by comparing macroinvertebrate and fish (and potentially algal) communities in streams to reference conditions as the primary measures. Secondly, if data for parameters which have numerical standards are available, the data would be compared against these standards to determine whether these standards are met. (i.e. chemical or physical integrity).

1177, 1362

RESPONSE: The indicators in the monitoring plan verify whether stream reaches on the Forest meet the definition of a Water Quality Limited Stream. Other parameters, as determined by Idaho DEQ and/or EPA, may also be monitored. Given the State's emphasis on biological communities, monitoring includes information on fisheries. The Targhee is an active cooperator with the Division of Environmental Quality (DEQ) in continuously refining monitoring protocols to provide accurate information to assess the water resource. EF

COMMENTS: Idaho's beneficial use reconnaissance program (BURP) protocols need to be included in the monitoring.

1177, 1362

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RESPONSE: BURP protocols were added to the Revised Plan. BURP protocols are a reconnaissance assessment method, and not monitoring in the normal sense of making repeated visits to a site to get trend and condition data over time. Instead, BURP is a "snapshot" of conditions at one site at one instant in time. BURP is a point from which to initiate further, in-depth monitoring.
RM

COMMENTS: WQL segments should be prioritized for monitoring.
1273b

RESPONSE: Priorities for monitoring WQL segments are set statewide by DEQ. On the Targhee, priorities are determined by resource specialists responsible for assessing WQL segments on the Targhee. Initial monitoring showed that no segments appear to have significantly greater concerns than any other. Monitoring of WQL streams segments was moved to a priority 1 in the Revised Plan. RSM

COMMENTS: The Forest is out of compliance with several laws and regulations concerning Water Quality Limited Streams (WQLS) if Alternative 3M were implemented. A provision from the NFMA regulation states:

"Forest planning shall provide for...Compliance with requirements of the Clean Water Act, the Safe Drinking Water Act, and all substantive and procedural requirements of Federal, State, and local governmental bodies with respect to the provision of public water systems and the disposal of waste water;...

Streams on the WQLS list are in violation on account of sediment, and the Forest cannot permit additional loadings of sediment into these waters. Disclose the impacts of future activities on WQLSs, in the EIS. For those WQLSs where water quality standards have not been attained, the Forest may not permit any further degradation through activities until total maximum daily loads (TMDLs) have been developed.

643, 644, 766, 1177, 1194, 1273b, 1362, 1364, 1401

RESPONSE: The Targhee is required to comply with all environmental regulations related to water quality. Best Management Practices implemented on the Forest generally exceed the minimum requirements set by state agencies. Management activities are adjusted or mitigated to avoid impacts to WQL streams. Pending court litigation and evolving interpretations of law may require the Targhee to amend the Forest Plan in the future.

The following streams on the Targhee were identified in 1994 as being WQL streams:

Stream name	Reach boundaries	Pollutant	Priority
Antelope Creek	Hdwater to S.Fk. Snake River	sediment	low
McCoy Creek	Palisades Res to Iowa Cr.	none listed	low
Tex Creek	Hdwater to Willow Creek	sediment	low
Brockman Creek	Hdwater to Grays Lk. Outlet	sediment, nutrients	low
Corral Creek	Hdwater to Brockman Creek	sediment, thermal	low
Sawmill Creek	Hdwater to Brockman Creek	sediment, thermal	low
Edie Creek	Hdwater to Med. Lodge	sed, nuts, hab alt	low
Irving Creek	Hdwater to Med. Lodge	sed, nuts, hab alt	low

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Warm Creek	Hdwater to Med. Lodge	nutrients, thermal	low
Warm Springs Cr.	Entire	sediment, nutrients	low
Fritz Creek	Hdwater to Med. Lodge	nutrients, thermal	low
Henry's Fork	Buffalo R. to Riverside	sediment	low
Teton River	Hdwater to Trail Creek	habitat alteration	low
Packsaddle Creek	Hdwater to Teton River	sediment, flow alt	low
Horseshoe Creek	Hdwater to Teton River	flow alteration	low

The South Fork Snake River, from Palisades to Heise, is also a listed WQL stream and flows adjacent to Forest lands.

While other streams in the vicinity of the Targhee have been listed, the designated reaches are downstream of the Forest boundary. These streams include Camas Creek, Beaver Creek, and Medicine Lodge Creek. Several listed streams that flow from the Teton Mountains have headwaters on the Forest and are located in Wyoming while on the Forest. These headwaters are in the Jedediah Smith Wilderness and include Teton Creek, Leigh Creek, Darby Creek, Fox Creek. The fact that these streams are listed for reaches downstream of National Forest System lands suggests that the problems identified for the streams originate on non-forest lands.

The Clean Water Act delegates authority for establishment of WQL priorities to the States. In the "Decision Document for Idaho sec. 303(d) List" dated October 7, 1994, The Environmental Protection Agency affirms that it is reasonable to allow the state to determine the relative importance of streams for establishment of TMDL's, because "implementation and enforcement of nonpoint source controls is exclusively within the province of the state," specifically nonpoint sources from activities such as Forest management.

Senate Bill 1284 requires that water quality must fully support existing beneficial uses where there is no numeric water quality standard, or must meet the standard where one is established. The requirement applies to all water bodies, listed and not listed. "Low" priority bodies (all streams on the Targhee are in this category) are those where limited data suggest that beneficial uses are not fully supported, but risks to humans and aquatic life are minimal. For streams in this category, corrective action is taken for "such changes in permitted discharges from point sources on the water body or to the best management practices for nonpoint sources within the watershed deemed necessary to prohibit further impairment of the designated or existing beneficial uses." In this regard, these streams are not subject to the development of TMDL's; they are subject to monitoring of best management practices to ensure their effectiveness and to monitoring designated beneficial uses to ensure they are supported. The bill does not imply all management activities must cease in these watersheds. The Targhee is required to meet water quality standards and insure that best management practices protect beneficial uses. If monitoring identifies water bodies that are not meeting water quality standards, the source for water quality impairment is found and corrected.

The Targhee is validating WQL streams to determine water quality concerns and cooperates with the Division of Environmental Quality to develop suitable monitoring and assessment methods, including the state-approved Beneficial Use Reconnaissance Program protocols. Monitoring efforts and information are shared with other state and federal agencies, including DEQ and EPA. Identified water bodies have limited data. Some speculation exists as to whether they even need to be listed. Warm Creek is a case in point. It is listed because of thermal concerns, but has a warm spring as its source that

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provides a higher than acceptable temperature. Changing management activities to correct this naturally occurring condition is not feasible.

The Targhee uses stringent management requirements in WQL watersheds. Baseline monitoring is occurring in at least one WQL watershed where new management activities are planned in an effort to assess existing fish populations and fish habitat conditions. Impacts to WQL streams are analyzed at on a site-specific level where best management practices can be designed to address site-specific concerns and issues. RSM/EF

DREV and Monitoring Chapter

COMMENTS: More monitoring is necessary in riparian areas due to the severely degraded condition they are in due to resource developments.

643

RESPONSE: The Revised Plan's prescriptions, goals, objectives, standards and guidelines, as well as the monitoring program, effectively address the health of riparian areas. Prescription 2.8.3 for the aquatic influence zone (AIZ) includes a goal for enhancing the health and function of these areas. Objectives include inventory and evaluation of all existing roads, trails, culverts, fords and stream crossings within three years of the Revised Plan's implementation date, with subsequent scheduling of rehabilitation activities in those areas not meeting prescription goals. Four monitoring items address riparian areas and are generally high priority monitoring. EF

COMMENTS: Need definition of Priority 3 in monitoring plan, and whether the ranking for 3 falls at the top or bottom of the range. Please clarify.

1177, 1362

RESPONSE: Monitoring of WQL streams is given a Priority 1 rating in the Revised Plan. As described on Page V-2, "Monitoring and the Budget," priorities for annual monitoring are based on annual budgets and program direction and on the priority of the item, in descending order from Forest Priority Group 1 to Forest Priority Group 3. Priority 3 items are funded last; however, normal operating procedures, such as implementing BMPs, are always required on site-specific projects. Monitoring of BMPs on a forestwide basis is somewhat restricted. If BMPs have not been applied in some cases or if they were ineffective, the Targhee would reevaluate the priority of the BMP monitoring item. RSM/EF

COMMENTS: V-10 DREV Unclear what * * means.

282

V-10 suggests Forest doesn't intend to meet its legal and ethical responsibilities with regards to water quality; compliance plan with Executive Order 12088 is lacking and note on V-10 indicates Forest wishes to be excused from this obligation.

643

RESPONSE: The statement was intended to show the seriousness of the WQL issue and the task of developing TMDL's for remaining listed streams if monitoring is neglected. The asterisk was used to draw the reader's attention to the

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Targhee's obligation to monitoring and the long-term costs of not meeting monitoring obligations.

The Forest is complying with the Executive Order 12088 in preventing, controlling and abating pollution as a result of management activities. The Targhee cooperates with other agencies and consults regularly concerning techniques to prevent water quality deterioration. RSM

General

COMMENTS: State of Idaho and Targhee need to reinvigorate their land exchange program, including addressing lands outside the National Forest System.

314

RESPONSE: The Targhee has an active land exchange program designed to consolidate National Forest System lands for more effective management. The Forest has no jurisdiction over private lands; these are outside the scope of the Revised Plan. The Targhee and the Department of State Lands continue to look for mutually beneficial and advantageous land exchanges that meet shared goals. RSM/AM/DD

COMMENTS: V9 and 10 DREV Citations. WQL streams and BMP's are not included as goals in AIZ Prescription.

282, 643

RESPONSE: A goal to delist WQL streams is found in forestwide standards and guidelines in the Aquatic section. Application and monitoring of Best Management Practices is required under state law for most activities. Appendix A in the Revised Plan displays a list of documents that contain BMPs. RSM

DREV and Monitoring Chapter

COMMENTS: Monitoring plan must be active to respond to Federal Clean Water Act.

643

RESPONSE: Targhee management activities must meet the requirements of the Clean Water Act, regardless of additional direction found in the Forest Plan. The Monitoring Plan, Chapter V, shows the minimum amount of monitoring required to meet legal obligations. The monitoring program is not all inclusive. Additional monitoring required by other state or federal agencies is not repeated in the monitoring program. RSM

COMMENTS: The Revised Plan fails to provide a comprehensive plan for watershed analysis, restoration, monitoring, and adaptive management; to inventory, monitor and develop site-specific plans for riparian management; and to tailor timber management to watershed needs as identified through these processes. Furthermore, the Revised Plan does not include details of the actions the Forest intends to take relative to Water Quality Limited Stream Segments.

643

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RESPONSE: The Revised Plan provides broad programmatic direction and Standards and Guidelines which must be met during project level implementation. Comprehensive watershed analysis direction is currently being developed by the Intermountain Region. As this information becomes available, the Revised Plan may be amended to incorporate new information or direction.

The Targhee is cooperating with the State of Idaho to detail actions to be taken on WQL streams. Monitoring in the Revised Plan was developed to delist WQL streams on the Targhee. Rangeland Monitoring Protocol, incorporated by reference into the monitoring plan, provides various measures of riparian health that are used to determine if standards and guidelines are effective.

Watershed restoration is accomplished through the Watershed Improvement Needs inventory. Refer to Chapter V in the Revised Plan for a discussion of the monitoring strategy. Riparian area inventory and monitoring is incorporated in the monitoring plan by reference to rangeland and recreation monitoring protocols. Site-specific analysis will be completed to determine appropriate riparian management. Timber management activities are determined on a site-specific basis and will be responsive to all Standards and Guidelines in the Revised Plan. RSM

DEIS Specific Citations

COMMENTS: DEIS says channel stability ranges from fair to good. This is so vague, it is meaningless. Suggest including if conditions are related to grazing; identify problem areas; will revision improve these; state how conclusions were developed; and cite references.

1177, 1362

RESPONSE: The Water section of the FEIS provides a discussion of this information. Channel stability ratings and types and locations of impacts are also summarized. Standards, Guidelines and monitoring are designed to improve resource conditions, particularly in problem areas. RSM

COMMENTS: Summary Page 5 "a healthy riparian area indicates..." is not valid. Raw sewage released into a stream is an example of the statement's lack of validity.

282, 643

RESPONSE: Your comment is acknowledged. The statement was corrected in the Revised Plan. The quality of instream components cannot always be judged from the quality of riparian areas. Monitoring activities and inventories will address instream characteristics of water quality and fish habitat as well as assessing the condition of riparian areas. RSM

COMMENTS: Page III-23: Appears to be a typo in temperatures.

1362

RESPONSE: Your comment is acknowledged. A correction was made. RSM

COMMENTS: Statement regarding "conclusions can't be drawn from Idaho DEQ sampling of streams in 1994" is unclear (Page III-26 - DEIS, Caribou Subsection).

1177, 1362

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RESPONSE: DEQ sampled listed streams in 1994 using the BURP process. At this time, DEQ has not analyzed the data, nor are they able to state whether beneficial uses are being supported in the streams at this time. RSM

COMMENTS: DEIS III-27: Inaccurate citation "48 miles from Medicine Lodge - Beaver/Camas hydrologic sinks to Thousand Springs area". Distance is much further.

1177

RESPONSE: Your comment is acknowledged. A correction now reads "approximately 150 miles..." RSM

COMMENTS: DEIS IV-17, fifth full paragraph, "Researchers have shown...". Cite source of data describing the effects of vegetation manipulation on stream flow.

1177

RESPONSE: Please refer to the following literature:

Cheng, J.D., 1989. Streamflow changes after clear-cut logging of a pine beetle-infested watershed in southern British Columbia, Canada, Water Resources Research, v.25, no. 3. Page 449-456.

King, J.G., 1989. Streamflow responses to road building and harvesting: a comparison with the Equivalent Clearcut Area procedure, Res. Pap. INT-401, Ogden, UT, U.S. Department of Agriculture, Forest Service, Intermountain Research Station. Page 13.

Gottfried, G.J., 1991. Moderate timber harvesting increases water yields from an Arizona mixed conifer watershed, Water Resources Bulletin, AWRA, v. 27, no. 3. Page 537-547.

Alexander, R.R. and R.K. Watkins, 1977. The Fraser Experimental Forest, Colorado, USDA Forest Service, General Technical Report RM-40. Page 32. RSM

COMMENTS: Unclear what time we are working towards for a DFC which is more stable and productive watersheds.

314

RESPONSE: The Targhee is using a range of historic variation to evaluate the degree of change that has occurred in the past. It is not our intention to replicate a Forest appearance as it may have existed at a given point in time. Rather, the range of historic variation is used to determine a range of vegetation conditions that promotes forest sustainability to insure that all components of the ecosystem remain intact. DM

COMMENTS: DEIS states mass wasting is a principal concern in four out of seven subsections but adequate measures aren't taken to prevent this.

1367

RESPONSE: Identified mass wasting are listed as ecological concerns, in that they are due to natural conditions, such as fine textured subsoils which have a moderate to high slumping potential. They are not a result of management activities. Inherent site conditions are considered during management

RIPARIAN - WATER QUALITY

activities. Although natural instability cannot be prevented, management activities should not make it worse. RSM

COMMENTS: Targhee National Forest may be in violation of Section 401 of the Clean Water Act (CWA) by granting grazing permits in various drainages suffering from moderate to severe water degradation problems. Our interpretation of the CWA requires Forest Service to receive certification from the states prior to issuing grazing permits.

401 of the CWA does apply to water pollution from activities such as grazing and the interpretation of discharge cannot be limited to point-source discharge alone. Consequently, we request that this issue and concern be addressed in the Final EIS.

1365

RESPONSE: Intermountain Region direction requires the Targhee to continue "to issue term grazing permits under existing Agency regulations and policies, until further notice." The ONDA vs. Thomas case in Oregon and the Idaho Conservation League vs. Caswell case in Idaho are currently pending. No final judgment has been issued in either case. Based on decisions in these cases, the Targhee may be required to address activities that result in non-point pollution discharges. RSM

SAGEBRUSH

Sagebrush as Biodiversity Indicator

COMMENTS: Cover of big sagebrush is not an adequate indicator of biodiversity on rangelands. Adopt a more direct and scientifically supported measurement of species diversity; perhaps use native herbaceous perennials coupled with information on presence/abundance of exotic species.

432, 489, 643

RESPONSE: Cover is one of several indicators that can be monitored. For trend comparisons in herbaceous plant communities, basal cover is generally considered the most stable. There are several monitoring techniques and vegetation attributes, including cover, that the Targhee uses to monitor rangelands. Refer to the following publication for additional details: Sampling Vegetation Attributes, Interagency Technical Reference, 1996. WG

COMMENTS: Cite references to justify your claim that biodiversity decreases as sagebrush increases and specifically state the nature of the problems you are trying to address.

1369

RESPONSE: Some of the problems being addressed include: 1) increased risk of fires of higher severity/intensity than historically occurred; 2) loss of species diversity; 3) loss of understory grasses due to sagebrush competition; 4) improve watershed conditions; and 5) alter patch sizes of same age sagebrush.

References include but are not limited to: Winward, A.H., 1991 Management in the Sagebrush Steppe. Special Report 880, June 1991, Agricultural Experiment Station and Winward, A.H., 1992. From presentation at: Prescribed Fire for Resource Management Workshop, February 18-19, 1992. WG

COMMENTS: Sagebrush habitat should have management indicator species.

1369

RESPONSE: The Targhee did not develop management indicator species for sagebrush habitat. Forestwide standards and guidelines were developed for big sagebrush/grassland habitats as a "coarse filter" approach for maintaining these habitats in properly functioning condition. Management activities that are proposed, planned, and implemented at the project level are subject to site-specific NEPA analysis. Special habitat and species needs are considered and addressed in the site-specific analysis of the project area. The Targhee intends to manage Forest ecosystems at properly functioning condition. Four criteria are evaluated in a Properly Functioning Condition assessment: structure, composition, disturbance regimes, and patterns. Each of these criteria function within a range of natural variability. Refer to draft document entitled Properly Functioning Condition Process - Draft 1996. Process Paper D provides an overview on specific species associated with sagebrush/grassland habitats. WG/MO

Improve Vegetation Analysis

COMMENTS: Identify the existing seral distribution of sage/grass before applying prescribed burns to 11,000 to 21,000 acres of mature sagebrush.
1368

RESPONSE: Using existing information from the districts, an estimated 11,000 to 21,000 acres of sagebrush could be burned. These acres range from mid to late seral condition. Site specific analysis includes seral distribution, canopy cover, understory species composition, estimated effects and response of burning and is completed prior to implementation of any project. WG

COMMENTS: Complete a more comprehensive analysis of the factors that have contributed to encroachment on grasslands by Douglas-fir to an increase in the relative cover of big sagebrush on rangelands in this area. Include the role of livestock grazing and its effect on competition from forbs and grasses that have contributed to encroachment.
489

RESPONSE: The Revised Plan serves as an "umbrella" document for the environmental analysis of proposed projects at the Forest level. The Revised Plan is not intended to provide or analyze specific "how to's" of project implementation. Because of this, a more comprehensive analysis of the factors contributing to encroachment of Douglas-fir onto rangelands is not needed at the Forest Plan Revision level. The role livestock grazing has played in the encroachment of Douglas-fir onto rangelands was somewhat expanded between Draft and Final in Chapter III of the FEIS. WG

COMMENTS: Discuss the relationship of mature age class forestation on shrubland/rangeland and its effect on declining populations of sage grouse.
695, 766, 1202, 1368

RESPONSE: Forestwide standards and guidelines for big sagebrush/grassland habitats provide for all species which use this habitat, including sage grouse. Process Paper D provides an overview on specific species associated with these habitats. Future project level activities will consider sage grouse habitat needs on a site-specific basis. Loss of the properly functioning sagebrush ecosystems because of forest encroachment onto rangelands was not identified as an issue on the Targhee. The publication from the Idaho Fish and Game--Idaho Sage Grouse Management 1996-2000, (Draft), June 1996, identifies numerous issues that contribute to the decline of sage grouse in Idaho. Forestation on shrubland/rangeland was not identified as an issue in this document. WG

COMMENTS: Consider a natural mix of sagebrush into a class of 75 percent from 5 to 20 percent canopy cover, rather than 5 to 30 percent. If sagebrush is allowed to get too heavy, excessive fuel loads increase the chance of damage to native grasses and natural seed banks in the soil.
432

RESPONSE: Concerns such as damage to native grasses on a project level would dictate the amount and timing of acreage that would be treated, if any. The

SAGEBRUSH

desired canopy coverage percentages are based on research done by Dr. Alma Winward and Region 4's ecosystem PFC research. WG

COMMENTS: State what level of sagebrush is required to meet the desired vegetative condition.

1369

RESPONSE: This is best addressed at the landscape or project scale of analysis because the desired vegetative conditions for the diverse landscapes across the forest will vary. WG

Sagebrush Control Using Fire

COMMENTS: Discuss how grasslands and shrub steppe ecosystems have been altered by fire suppression, grazing and introduction of non-native species. Alteration has been profound, and tied to domestic livestock grazing.

1364

RESPONSE: Chapter III of the FEIS contains a discussion of these issues. WG

Questions Sagebrush Control Needs

COMMENTS: There is not adequate evaluation of the proposed sagebrush control efforts on wildlife, therefore, eliminate all plans to exercise sagebrush control. Sagebrush removal does not improve habitat, and it harms more wildlife than it helps. It also removes soil building capacity and creates the potential for soil erosion (cites a J. Petersen reference).

384, 643, 1369

RESPONSE: There are no site-specific sagebrush "control" projects identified in the Revised Plan. Using existing information from the districts, an estimated 11,000 to 21,000 acres of sagebrush could be available for burning. Site specific analysis at either the landscape or project level, and including seral distribution, canopy cover, understory species composition, effects on wildlife and watershed conditions, would be completed prior to implementation of any project. WG

COMMENTS: No current research indicates burning sagebrush represents vegetative improvement; this is being used to disguise that the Targhee is burning sagebrush to increase livestock forage.

305, 1369

RESPONSE: As identified in Chapter IV of the FEIS, an increase in AUMs is not anticipated from burning sagebrush. References include but are not limited to: Winward, A.H., 1991 Management in the Sagebrush Steppe. Special Report 880, June 1991, Agricultural Experiment Station and Winward, A.H., 1992. From presentation at: Prescribed Fire for Resource Management Workshop, February 18-19, 1992. WG

COMMENTS: Clarify what research shows sagebrush burn cycles on the Targhee averaged 12-40 years.

1369

SAGEBRUSH

RESPONSE: References include but are not limited to: Winward, A.H., 1991 Management in the Sagebrush Steppe. Special Report 880, June 1991, Agricultural Experiment Station and Winward, A.H., 1992. From presentation at: Prescribed Fire for Resource Management Workshop, February 18-19, 1992. WG

SHOSHONE-BANNOCK TRIBE

The Shoshone-Bannock tribal members submitted the following comments regarding tribal concerns and the Revised Plan.

1455

Tribal Treaty Rights

COMMENTS: Consider alternatives which maintain established treaty rights for tribal members to harvest firewood, posts and poles for personal use.

Discuss and recognize Tribal Treaty rights to harvest firewood and wood products, or provide justification for not doing so. It is important to continue this right with minimal interference (i.e., fee permit harvesting).

Treaty rights cover more than just hunting and fishing. Show evidence that tribal rights for gathering personal use forest products have not been extinguished.

Consider tribal need to use wood gathering in support of other rights, activities, (e.g., corral poles used for promoting agrarian livelihood, firewood/poles utilized when hunting or conducting ceremonies).

RESPONSE: This Final Revised Plan does not infringe on the treaty rights of any tribal member. The ease with which tribal members can use the Forest for different purposes varies by alternatives that are discussed in the FEIS.

On occasion, the tribes have asserted treaty rights for harvesting various timber products from the Forest. According to our Office of General Counsel, no right to harvest timber on the Targhee has been recognized in any court. The Swim v. Bergland case, cited in the Tribal letter, concerns portions of the Caribou that were ceded lands, and on which a right to harvest timber was specifically reserved in the Agreement of 1898. That agreement does not reserve a right to harvest timber from the Targhee. The State v. Tinno case, cited in the Tribal letter, is related to fishing rights, and does not address other Forest products such as post and poles. The Tribe can submit legal briefs in support of their position to the Office of General Counsel (OGC) in Ogden, Utah. If OGC determines that providing free forest products is appropriate at a later date, then the Forest Supervisor will do so. Absent of any new legal information, the Forest cannot recognize this claim because there is no adequate basis for the claimed right in the treaties or case law. JBR

Access

COMMENTS: Assess the direct, indirect and cumulative effects of existing and proposed road closures on tribal rights activities; describe in detail the nature and extent of previous closures.

RESPONSE: The information presented in the FEIS is sufficient to gain a good understanding of road closures in each alternative. No limits are placed on tribal access beyond limits for the general public. Reasonable access is provided to the Forest for hunting and fishing activities as outlined in the Fort Bridger Treaty. JR/DP

COMMENTS: Revise the access management strategy to provide reasonable access to Antelope Flats Rd. #771 and Keg Springs Rd. #042 prior to and following general rifle season.

SHOSHONE-BANNOCK TRIBE

RESPONSE: Road #771 is a popular, short, cut-off road between North and South Antelope Roads (both of which remain open under the Revised Plan). Road #771 is closed to meet wildlife needs. The other open roads still provide adequate access to the area. Keg Springs Road is open under the Revised Plan. DP

COMMENTS: The Revised Plan's seasonal closure of roads beginning prior to archery season should address the tribal request to leave roads open from August 1st to the opening of the general rifle season, because this is a critical time for tribal resource use. Consider leaving roads open during this time to determine the effects on tribal rights activities from cumulative road closures.

RESPONSE: The Forest considered this request. Some prescriptions permit more open roads prior to big game hunts, others do not. The Targhee recognizes the need to improve wildlife conditions while providing adequate motorized access. Regarding roads seasonally restricted, the Targhee changed the restriction date to October 1, just prior to the big game rifle season. This directly responds to the tribe's concern regarding restrictions which would begin in August or September. Other roads are restricted year-round in the Final Revised Plan and will not be available for motorized access during the August/September period. JR/DP

Monitoring

COMMENTS: Monitor cultural resource sites on grazing allotments consistent with National Programmatic Agreement.

RESPONSE: A forestwide standard was added to address Tribal coordination and the procedure adopted addresses this concern. DP

COMMENTS: Include provisions to establish a consultation procedure and intergovernment agreement with the tribes to guide future cooperative efforts. Include this process as mitigation proposal for effects on tribal activities; include in the schedule of activity.

RESPONSE: A forestwide standard was added to address Tribal coordination, which, along with procedures established in Forest Service Manuals and Handbooks, addresses any mitigation needs. Because it is a standard and always in effect on the Forest, including it in a schedule of activities is unnecessary. DP

Management Cooperation

COMMENTS: Recognize tribes as co-managers along with other agencies including Idaho Department of Fish and Game as established by CFRs 1502.16(c); 40 CFRs 1506,2(d).

RESPONSE: All CFRs remain in effect. In the interest of brevity, the Forest does not duplicate their language. The Targhee will continue to cooperate on matters of mutual interest. JR/DP

SHOSHONE-BANNOCK TRIBE

COMMENTS: Conduct a socio-economic analysis which describes the reservation as a discreet economic unit. Refer to the Challis Resource Area BLM Analysis currently in process.

RESPONSE: The Targhee obtained a copy of this analysis and expanded the information to the extent it was appropriate and available. DP

Planning

COMMENTS: Commit to developing a minimum baseline level analysis to be incorporated into each NEPA document prepared under the plan in the future to address Tribal concerns at the site-specific project level; discuss this commitment in a mitigation proposal; propose a schedule to work toward developing this procedure.

RESPONSE: Existing direction for site-specific NEPA documents is sufficient to address Tribal concerns. The level of analysis for each project should be commensurate with the significance of the effects and the issues involved.

The Targhee agrees that tribal consultation is appropriate on proposed actions for site-specific projects. Site-specific analysis will address issues and concerns identified by the tribes. JR

COMMENTS: Recognize Tribal Rights are a protected interest and not a privilege afforded the tribe by the Forest Service.

RESPONSE: This is specifically addressed in Chapter III of the FEIS. DP

SNOWMOBILES

Plan Analysis and Development

COMMENTS: Address snowmobiling use more adequately in the EIS; all alternatives should address problems caused by snowmobiles in winter. Use considerable amount of available scientific data showing snowmobile impacts in developing standards and guidelines. Establish snowmobile season based on snowfall and temperature patterns to minimize negative impacts.

Amount of snowmobile access in all alternatives is acceptable; proposed snowmobile access is a good compromise; favor the increased snowmobile use as stated in 3M; support the increase in number of groomed trails. Allow additional trails to be constructed under a categorical exclusion.

18, 22, 28, 30, 31, 35, 37, 39, 40, 44, 49, 50, 52, 53, 55, 182, 212, 266, 293, 310, 325, 618, 643, 1202, 1205, 1244, 1263, 1276, 1351, 1360, 1365, 1367b

RESPONSE: Additional text is added to the FEIS describing snowmobile use and trends, consequences, and pending guidelines for management from the Greater Yellowstone Winter Visitor Use Management study which is underway. These guidelines separate some user activities to resolve conflicts. A restriction on cross-country snowmachine travel on additional areas of winter range prescription was added to the Revised Plan. These areas include all winter range inventoried with the Game and Fish Departments.

The EIS shows the planned groomed or marked trails shown in the Transportation Plan. Grooming is done by the counties and will depend upon their funding options. Planned trails were analyzed as part of the pending Greater Yellowstone Winter Visitor Use Management (GYWVUM) Assessment. AS

COMMENTS: Modify Alternative 6 for winter recreation management and snowmobile use. Only Alternative 6 calls for a reduction in groomed snowmobile trails. Needs more analysis, discussion.

643, 1367b

RESPONSE: Alternative 6 was not modified because more snowmachine use would not meet the goals and objectives or design of this alternative. AS

COMMENTS: Page I-4, last paragraph seems prejudicial because the Forest is not meeting 1985 Plan goals for snowmobiles, timber harvest, among other things, but these are not discussed.

413

RESPONSE: There were no goals for snowmobile activity in the 1985 Plan. In fact snowmobiles were hardly mentioned. The Revised Plan addresses snowmobile activity. AS

User Conflicts

COMMENTS: Address in the EIS the impacts of increased use on marked or groomed trails and impacts on users. Address conflicts between users (for instance, cross-country skiers and snowmobiles); use land allocations to reduce conflicts between different winter recreation users. Do not allow snowmobiles on existing trails that are used by cross-country skiers.

SNOWMOBILES

Restrictions and closures for snowmobile use will lead to improper behavior/use in smaller areas; do not force snowmobilers to ride in more confined areas as it will lead to more accidents. Designate snowmobile-free areas along plowed roads so skiers and snowshoers won't have to hear/smell snowmobiles. Reduce snowmobile use and improve winter recreation.

354, 608, 679, 697, 1202, 1263, 1276, 1335, 1342, 1351, 1367, 1387, 1395

RESPONSE: The Revised Plan contains a forestwide winter recreation standard that prohibits snowmachines and dogsleds from using designated cross-country ski areas. The Final Revised Plan also contains a new objective directing the establishment of a few non-motorized activity areas by the year 2000, in accordance with guidelines forthcoming from the pending Greater Yellowstone Winter Visitor Use Assessment. AS

Safety

COMMENTS: Establish and enforce speed limits; snowmachine guides should have safety training before using Forest trails. Coordinate with Idaho Department of Parks and Recreation to establish a linear capacity for two-way snowmobile trails. Coordinate with Idaho Parks and Recreation and local law enforcement to develop standards and guidelines for safety, speed limits, and private property protection. Require snowmobile users to have a permit and be a certain age. Prohibit use of snowmobiles after dark.

13, 65, 325, 629, 697, 1276, 1365

RESPONSE: Safety training is an operational requirement of the outfitter's special use permits. No requirement is needed in the Revised Plan. Speed limits are an administrative decision separate from the Revised Plan. Speed limits are being considered and may be established in the future. A minimum age requirement is a State or County legislative action. Coordination with other agencies is ongoing and is not necessary to add to a Forest Plan. The Forest does not have a nighttime restriction since snowmachines are designed for such use and such a decision is administrative and would not be included in a Forest Plan. AS

Monitoring, Enforcement, Funding

COMMENTS: Institute citizen monitoring programs to enforce and educate people about the regulations. Provide funding to conduct a Forestwide assessment on the impacts of snowmobiling on flora and fauna; commit funding and personnel for implementing snowmobile management strategies. Develop a comprehensive review of environmental and user impacts of snowmobile use over the past ten years, using best science; develop baseline data, and continue to refer to science in management decisions. Monitor the number of snowmobile trespasses; annually report monitoring of snowmobile use and make enforcement adjustments to correct abuses; monitor big game winter habitat, bear management units, and Jedediah Smith Wilderness for encroachment by snowmobiles. Fund enforcement in winter range to protect moose; monitor snowmobile use as it increases because most big game are dispersed in winter; explain where big game winter range snowmobile use will be permitted; protect/maintain all winter range snowmachine access. Do not assume areas not included in

SNOWMOBILES

restrictions are too difficult for today's high performance machines; prohibit snowmachines from hydroplaning on river. Enforce non-motorized wilderness restrictions to snowmobiles.

FS-10, 161, 167, 179, 191, 215, 293, 307, 311, 319, 625a, 644, 659, 697, 1245, 1277, 1312, 1313, 1314, 1330, 1360, 1365, 1393

RESPONSE: The Forest Plan includes considerable direction to protect and monitor impacts of snowmobile activity on wildlife. Monitoring and evaluation for the last 10-20 years indicates that snowmobiling results in minimal impacts to flora or fauna or other resources. The Targhee will continue enforcing restrictions such as the prohibition of snowmachine use in wilderness. Citizen-reported monitoring information is always welcome. No effort has been made to organize a specific citizen's monitoring group. A monitoring and evaluation action item is established to monitor BMUs and other restricted areas for snowmobile encroachment. AS

COMMENTS: Revise Jedediah Smith monitoring plan to include monitoring over winter survival of yearlings and to include the park.

699

RESPONSE: The Jedediah Smith Wilderness is closed to snowmobiles. Wyoming Fish and Game monitors winter survival of wildlife and includes the Park. AS

COMMENTS: Need additional funding sources if grooming of additional trails will happen.

629, 734

RESPONSE: The Targhee makes it clear in the EIS and Revised Plan that additional trail development is subject to County or other funding. AS

Cooperative Management

COMMENTS: Use information from the "Report on Formal Comments on Current and Potential Adverse Impacts of Winter Recreation Use in Yellowstone National Park." Develop an overall winter recreation management plan based on the Master Development Plan model used by alpine ski areas to minimize conflicts. Coordinate snowmobile use with surrounding public lands managers; include snowmobile users in planning process. (CROSS REFERENCE: Recreation)

413, 618, 1263, 1342, 1345, 1367b

RESPONSE: Additional text is added to the FEIS to describe snowmobile use and trends, consequences, and pending guidelines for management which may result from the pending Greater Yellowstone Winter Visitor Use Management study. The Targhee will continue to coordinate snowmobile use with surrounding public land managers. Through public meetings and mailings, users assist in determining the issues, desired future conditions, prescriptions and alternatives. AS

Impacts

COMMENTS: Impacts from snowmobiles that must be noted, evaluated, monitored, and mitigated, using best available science and citations, include:

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contamination of soils from refueling, accidental spills, and on-trail maintenance; exhaust impacts on trout ability to swim upstream; water quality and hydrologic processes; sedimentation and turbidity; lead contamination; impacts to aufwuchs communities; impacts on below surface vegetation, browse plants, plant phenology, delay in snowmelt and vigor characteristics; spread of noxious weeds and exotics; changes in plant density and species composition, diminished yields of forage grass and other plants, and changes in wildlife foraging patterns; changes in duration and timing of moisture release to plants; concentration of run-off at road edge causing increased erosion; blockage of run-off causing muddy roads and trails; snow compaction leading to reduced soil temperature, retarded microbial activity, changes in soil micro-structure and seed germination; destruction of vegetative cover; impacts on sub-nivean species; wildlife stress responses; elk and big horn sheep home range carrying capacity reduction; noise impacts on wildlife such as nest abandonment and juvenile predation and mortality; loss of ptarmigan; grizzly bear den abandonment; and impacts on sensitive areas such as old growth, threatened and endangered species habitat, semi-natural meadows and grasslands, alpine areas, and degraded range land; and aesthetic impacts. (Numerous studies on snowmobile impacts cited.)

1365

RESPONSE: Many of these concerns are better addressed at project scale. Potential soil impacts, although generally negligible, are also dependent on site factors such as snow depth, coarse fragments, texture, structure, presence or absence of down woody material, habitat type, slope, and/or aspect. Impacts of soil contamination are difficult to analyze and probably of small area extent. Monitoring and evaluation for the last 10-20 years indicates that snowmachining results in minimal impacts to flora or fauna, with no need for noise or emissions restrictions at the present time. This is better analyzed at project level if it becomes a problem. AS

Mitigate Impacts

COMMENTS: Prohibit snowmobiles in areas where impacts are likely to be significant; use less ecologically sensitive areas for snowmobiles; create a buffer zone around important habitat and around all Class I (Clean Air Act) areas; develop a zoning scheme for motorized and non-motorized corridors, within ecological and biological constraints, to allow continuous travel in the Greater Yellowstone Ecosystem. Design trails so protective cover between snowmobiles and wildlife is maximized; do not allow snowmobiles to stop in areas that may exacerbate wildlife stress responses. Impose restrictions on party size and length of stay; prohibit travel on steep slopes ($>25^{\circ}$); greater than $>40^{\circ}$. Develop a policy dealing with exhaust emissions; establish emission and noise standards. Develop positive incentives to reduce snowmobile impacts, e.g., reduced fees to users whose snowmobiles meet emission and noise standards. Impose seasonal restrictions on bag limits and prohibit the transport of weapons on snowmobiles if snowmobile-facilitated hunting mortality warrants. Develop an interpretation/education program to explain restrictions. Evaluate in terms of damage each user group (snowmobiles, ORVs etc) does, then control access accordingly.

61, 175, 266, 351, 410, 618, 655, 1273b, 1365

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RESPONSE: Many of these mitigations are addressed by the winter range prescriptions, standards and guidelines in the Revised Plan. The pending Greater Yellowstone Winter Visitor Use Management Guidelines will also address the zoning concept, emissions, and similar concerns. Using less ecologically sensitive areas for snowmachines is accomplished through the application of prescriptions, standards and guidelines, and monitoring direction. The Forest has no evidence to support a need to create buffer zones and has not created any. The Winegar Hole and Jedediah Smith Wilderness provide a buffer to the Grand Teton and Yellowstone National Park airsheds. Due to extremely low levels of concentration of users on the Forest, emission and noise restrictions appear unwarranted. An interpretation/education program will continue each year, with emphasis during the date when the Travel Plan is approved for implementation and when maps are ready for distribution. There is no indication of need for restrictions on party size and length of stay at this time. Site-specific decisions can be implemented in the future as needed. AS

Does Not Cause Erosion

COMMENTS: Snowmobiles do not cause erosion because of snowpack; the local farming community is helped by winter vehicles because the resulting snowpack reduces erosion and slows spring runoff.

307, 311

RESPONSE: Your comments were noted and considered. AS

Economic Impacts

COMMENTS: Snowmobiling provides economic support to local communities and prohibiting snowmobiles in certain places or at certain times will negatively affect local economies.

4, 72, 168, 220, 289, 395, 405, 413

RESPONSE: The restrictions contained in the Revised Plan have minor, limited potential for economic effects. The vast majority of snowmobile use potential is unrestricted, and many miles of additional trails are potentially available for marking and grooming. AS

Oppose Closures/Restrictions/Change Dates

COMMENTS: Oppose some or all snowmobile restrictions:

F-C(13), F-F(6), F-I(4), F-M(5), F-N(7), F-O(4), 4, 7, 8, 9, 10, 12, 13, 15, 17, 18, 26, 29, 32, 33, 34, 37, 38, 42, 46, 52, 53, 54, 55, 56, 59, 66, 67, 69, 70, 71, 72, 89, 97, 98, 156, 160, 169, 181, 182, 188, 198, 216, 220, 227, 234, 235, 258, 265, 267, 272, 277, 280, 285, 286, 287, 289, 290, 300, 303, 310, 319, 323, 342, 351, 363, 367, 380, 381, 385, 386, 388, 412, 413, 429, 430, 431, 437, 473, 470, 473, 474, 476, 481, 495, 506, 515, 524, 529, 608, 626, 627a, 629, 635, 645, 668, 669, 692, 695, 713, 715, 717, 718, 728, 729, 733, 734, 738, 767, 1176, 1182, 1202, 1239, 1248, 1256, 1259, 1267, 1268, 1314, 1316, 1319, 1320, 1333, 1355, 1358, 1359, 1366, 1378, 1389, 1392, 1456

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Oppose closures in Bear Management Units because: not necessary because bears are hibernating; find better ways to protect bears leaving den; don't put grizzly bears in forest; insufficient science to support restrictions; in higher elevations because bears migrate to lower elevations; allow controlled use in BMUs; the OROMTRD used in BMUs not supported by scientific evidence.

F-M(5), F-N(7), 8, 9, 59, 66, 69, 70, 71, 89, 169, 188, 216, 220, 235, 277, 285, 289, 629, 692, 717, 1202, 1316, 1358, 1389

Wolves do more damage to wildlife than snowmobilers.

17

Insufficient evidence wildlife, deer, elk are bothered.

7, 67

Oppose restrictions to protect Bald Eagles because they nest near human activity, as at Kennedy Space Center.

734

Allow more access outside big game winter ranges.

645

Oppose snowmobile restrictions in big game winter range because snow has melted by this time and it is a useless restriction.

272, 767, 1202

Restrictions prevent using excellent snow conditions found off-trail.

413

Restrictions are unenforceable.

1316, 1320

Oppose date restrictions:

F-C(13), F-I(4), F-M(5), F-N(7), 7, 8, 9, 10, 12, 15, 18, 53, 56, 59, 66, 67, 69, 70, 71, 72, 89, 97, 160, 169, 188, 216, 220, 234, 235, 265, 267, 272, 277, 285, 287, 289, 290, 303, 323, 363, 367, 380, 388, 413, 437, 476, 481, 495, 506, 515, 524, 529, 608, 626, 629, 692, 695, 713, 717, 718, 729, 767, 1176, 1202, 1267, 1268, 1316, 1333, 1355, 1389, 1402

Oppose date restrictions because: unenforceable; unreasonable; dates are arbitrary, do not consider snow conditions; there is not enough snow before December 15 to go off trail anyway; if there is not enough snow, people don't ride anyway; April/May are great snowmobiling times; there is no record of snowmachine conflict with grizzly bears; only if bears begin using area; bears aren't around until May, and if they ever are they go to lower elevations; there is no research of effects on bears; snowmobiles don't chase bears; bears hibernate depending on temperature and snow depth, not dates; enjoy snowmobiling from November to May; far away from game wintering areas; bears are in hibernation; is past hunting season; no bears in upper elevations; no scientific basis for dates, most bears are dened by November 8.; select Alternative 2.

F-M(5), F-N(7), 7, 8, 9, 10, 12, 18, 53, 56, 59, 66, 67, 69, 70, 71, 89, 97, 160, 166, 169, 188, 216, 220, 234, 235, 258, 277, 289, 303, 342, 363, 380, 413, 515, 629, 635, 692, 713, 717, 718, 734, 767, 1202, 1267, 1268, 1316, 1333, 1355, 1389

RESPONSE: All of the elk and deer winter range areas on the Forest are closed to cross-country snowmachine use throughout the entire period. This is done to protect the wintering animals and help them conserve their energy.

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For the Fall season, outside of elk and deer winter range, the Revised Plan allows cross-country snowmachine travel beginning Thanksgiving Day on all Districts except Palisades. On the Palisades District, cross-country snowmachine travel will be allowed beginning Dec. 15. Since the mean date for grizzly bear denning in the Greater Yellowstone Area is Nov. 9, these cross-country snowmachine dates allow grizzly bears adequate time to inhabit potential dens. These cross-country snowmachine dates also prohibit big game hunters from using snowmachines to pursue big game animals for most of the general and controlled hunting seasons. On the north end of the Forest, there are a few late season controlled hunts after Thanksgiving Day, therefore some hunters may pursue big game animals on snowmachines for these late season controlled hunts.

For the spring season, outside of elk and deer winter range areas, cross-country snowmachine travel is allowed until June 1. Within the grizzly bear recovery zone, site-specific area closures are allowed to resolve any conflicts between snowmachine use and grizzly bears which have come out of their dens. MO

COMMENTS: April 1 is far too early to open winter range because spring is time of greatest stress; date should depend on conditions and be established through consultation with state game biologists.

643

Restrict cross-country snowmobile use after April 15 to protect bears emerging from their dens.

1351

Restrict snowmobiles to early winter months (January - March) because of stress to grizzly bears.

61, 212, 305, 1322

Restrict snowmobiles in BMUs between December 15 and April 1.
731, 1276

Support snowmobile closures between December 15 and April 1.
610, 1276

Allow snowmobiles only on existing trails, outside proposed wilderness, between December 15 and April 1.

395, 437, 731

Restrict snowmobiles in grizzly habitat for full winter season, not just December 15 to April 1.

171

Restrict snowmobiles in areas already degraded by overcutting.

167

Shorten the season two weeks on either end of the date rather than the month proposed.

1402

Establish a snowmobile season based on snowfall and temperature patterns, both general and site-specific.

1365

If dates needed, open from November 15 to June 1.

53, 629

Extend snowmobiling season to end of April.

166

SNOWMOBILES

Set December 15 opening date for snowmobiling in grizzly habitat.

695

Do not restrict snowmobiles in early winter and late spring because bears will not be in areas of sufficient snow, and where not sufficient snow, snowmobiles will not be, so point is moot.

718

Unclear if snowmobile cross-country travel into BMUs from December 15 - April 1 will fit with recent reports of non-denning grizzly bears in other areas.

690

Oppose closures, select Alternative 2.

F-M(5), F-N(7), 56, 66, 67, 89, 97, 188, 216, 234, 235, 303, 342, 635

Oppose closures/restrictions in: Lionhead, Island Park, Big Holes, Palisades, Italian Peaks, Diamond Peaks, Centennials, Two Top, Fish Creek, Sheep Mountain, Chick Creek, Bechler Meadows, Pony and Canyon Creek area, Keg Springs, Snow Creek, Fall River Ridge, South Plateau, Black Bear Canyon, Centennial Valley, and/or corridor from Byrne's Siding to backcountry beyond Kelly Canyon.

F-C(13), F-I(4), F-L(3), F-M(5), F-N(7), F-O(4), F-P(2), 2, 8, 9, 13, 15, 66, 67, 72, 89, 97, 98, 160, 169, 188, 198, 216, 229, 234, 235, 300, 303, 323, 342, 380, 381, 385, 386, 412, 413, 429, 437, 461, 463, 466, 469, 473, 474, 476, 495, 515, 517, 524, 529, 608, 660, 728, 1202, 1253

Doubtful if snowmobiles that frequent area from the Centennials north to Cliff Lake-Wade Lake Bench area disturb bears in hibernation.

169

Remove date restrictions on snowmobile use in Prescriptions 2.4, 2.5, 3.2c, 3.2d, 3.2g, 5.4c.

767

Oppose restrictions on cross-country snowmobiling.

F-C(13), F-I(4), F-O(4), 181, 220, 267, 280, 290, 310, 323, 367, 381, 385, 386, 412, 430, 473, 474, 476, 481, 495, 506, 608, 626, 669, 715, 738, 1202, 1256, 1314, 1316, 1366, 1378, 1392

RESPONSE: The summer travel plan takes effect yearly in the spring as local conditions become suitable to support wheeled vehicle traffic on roads without damage. Snowmachines may use roads and trails shown on the summer travel plan as open to motorized use. Cross-country snowmachine travel is allowed only where the summer travel plan allows cross-country motorized travel after June 1.

The winter travel plan takes effect yearly on Thanksgiving Day. Snowmachine travel is allowed consistent with the winter travel plan map. Cross-country snowmachine travel is permitted from Thanksgiving Day through June 1 except on the Palisades Ranger District which permits usage from December 15 through June 1. Cross-country snowmachine travel is allowed in prescription area 5.1.4(c) (Big Bend Ridge) from January 1 until April 30.

Cross-country motorized use is not allowed on elk and deer winter areas at any time of the year. Nonmotorized cross-country use (walking, horses, etc.) is allowed from April 15 to Thanksgiving Day on all Districts except Palisades. On Palisades District, non-motorized cross-country use is allowed from April 15 to December 15. MO

SNOWMOBILES

COMMENTS: Clarify season to allow spring snowmobiling in Kelly Canyon after ski hill closes.

60, 1202

RESPONSE: The Forest added a new Prescription 5.1.4(d) which allows snowmobiling on the Kelly Canyon road only when the resort is closed for the season. No cross-country snowmachine use in the area is allowed. AS

Support Closures/Restrictions

COMMENTS: Support some or all restrictions on snowmobile use: they damage vegetation and soils; compact snow; damage sub-nivean environment; disturb wildlife; have offensive noise, sight, smell; they pollute; to protect wildlife; allow only in certain areas or at certain times; allow only on existing roads and trails; restrict from Bear Management Units; do not allow in wilderness study areas; restrict in areas degraded by overcutting.

F-B(4), F-G1(475), F-H(8), F-J(3), FS-10, 1, 3, 21, 31, 60, 61, 73, 120, 143, 150, 157, 158, 161, 162, 165, 167, 168, 170, 171, 173, 174, 175, 178, 179, 180, 185, 187, 189, 190, 192, 195, 201, 203, 206, 209, 212, 213, 226, 227, 244, 252, 263, 273, 274, 276, 278, 285, 293, 305, 317, 325, 328, 341, 351, 353, 354, 356, 359, 360, 373, 376, 389, 395, 396, 400, 438, 441, 442, 443, 444, 448, 490, 516, 519, 527, 610, 611, 615, 617, 622, 625a, 627b, 631, 632, 640, 643, 645, 651, 653, 655, 662, 664, 669, 690, 695, 697, 725, 731, 739, 766, 1183, 1245, 1247, 1270, 1273b, 1276, 1277, 1313, 1314, 1322, 1327, 1330, 1331, 1351, 1360, 1361, 1365, 1367b, 1381, 1387, 1388, 1393, 1395, 1399, 1458

RESPONSE: Refer to the Winter Recreation Standards and Guidelines in the Revised Forest Plan (Chapter III-Part I) and the Access tables for the various prescription areas (Revised Forest Plan Chapter III-Part 3). AS

COMMENTS: Prohibit snowmobile travel on steep slopes (more than 25 degrees) to minimize avalanche risk and erosion risk.

1365

RESPONSE: Avalanche hazard depends on snow and weather conditions. Exposure and risk are up to the operator. The Targhee is unaware of any erosion impacts occurring on steep slopes from snowmachine use. AS

To Benefit Wildlife

COMMENTS: Protect wildlife in areas used by snowmobiles; minimize snowmobile impacts during period of peak wildlife mortality. There is too much winter access; allow only in higher elevations to protect wildlife at lower elevations; restrict to low impact areas. Close more areas, especially in elk and deer winter range; restrict in all areas identified by Idaho Fish and Game as winter range. Explain rationale of allowing cross-country snowmobile use on 66% of crucial winter range when neither scientific literature or largest snowmobile advocacy group supports it. Allowing snowmachine travel in area allotted to other prescriptions in winter range may allow deer and elk to be harassed during period of greatest stress. Lower prescription on motorized use in elk and deer winter range because <2 mi./sq. mi. is too high. No

SNOWMOBILES

increase in snowmobile access because it interferes with wildlife winter survival and creates historic precept even if area proves to be important habitat; keep snowmobiles out of elk and moose habitat because the two don't mix; add a standard to prohibit human presence in critical big game winter range from Dec 1 to April 30; require seasonal or year-round closures for all motorized vehicles in important elk habitat, sensitive habitat, areas of "Concern", areas of Threatened and Endangered Species, areas of vegetation, old growth, alpine areas and on degraded range land. Make all deer and elk winter range off limits to snowmobiles. Prohibit game retrieval by using snowmobiles.

F-B(4), F-G-1(475), F-G-1-P, FS-10, 5, 31, 120, 143, 150, 161, 162, 168, 170, 171, 174, 175, 178, 179, 185, 189, 203, 206, 212, 213, 227, 274, 285, 293, 305, 319, 359, 376, 389, 610, 617, 625a, 643, 645, 669, 690, 695, 697, 731, 766, 1183, 1245, 1247, 1273b, 1277, 1322, 1361, 1365, 1381, 1458

RESPONSE: All of the elk and deer winter range areas on the Forest are closed to cross-country snowmachine use throughout the entire period. This is done to protect the wintering animals and help them conserve their energy.

For the Fall season, outside of elk and deer winter range, the Revised Plan allows cross-country snowmachine travel beginning Thanksgiving Day on all Districts except Palisades. On the Palisades District, cross-country snowmachine travel will be allowed beginning Dec. 15. Since the mean date for grizzly bear denning in the Greater Yellowstone Area is Nov. 9, these cross-country snowmachine dates allow grizzly bears adequate time to inhabit potential dens. These cross-country snowmachine dates also prohibit big game hunters from using snowmachines to pursue big game animals for most of the general and controlled hunting seasons. On the north end of the Forest, there are a few late season controlled hunts after Thanksgiving Day, therefore some hunters may pursue big game animals on snowmachines for these late season controlled hunts.

For the spring season, outside of elk and deer winter range areas, cross-country snowmachine travel is allowed until June 1. Within the grizzly bear recovery zone, site-specific area closures are allowed to resolve any conflicts between snowmachine use and grizzly bears which have come out of their dens. MO

COMMENTS: Of greatest concern is the allowance of cross-country snowmachines travel within winter ranges allocated to other prescriptions. This is the case for winter range that falls within Management Prescription 5.3.1(a-b) Timber management, MP 5.3.5 Grizzly Bear Habitat; MP 5.4(a, b, c) Deer and Elk summer range; MP 6.1(b) Range Management; MP 3.2(a-g) Semi-Primitive Motorized and MP 5.1.4(a-c) Timber Management, where both winter and summer cross-country motorized travel is allowed. Under these other Management Prescriptions there is every reason to believe that deer and elk will be harassed intentionally or not during the period of greatest stress.

643

If the Forest believes that the areas used as deer and elk winter range but not covered by MP 2.7(a-c) are not accessible to snowmachines, then there is no reason for not placing all of those areas into MP 2.7(a-c).

No letter #

SNOWMOBILES

RESPONSE: The Revised Plan has forestwide standard under winter recreation which restricts snowmachine use to designated routes in all inventoried winter range. AS

COMMENTS: Design trails so that protective cover between snowmobilers and wildlife is maximized.

1365

RESPONSE: The trail layout of existing and planned snowmachine trails and restriction of cross-country travel in winter range areas addresses this concern. AS

Bear Habitat

COMMENTS: Restrict snowmobiles in bear habitat: because it would be a mistake to cater to a limited number of users at the expense of bear habitat; support ban of snowmobiles in bear management units; Fremont County Commission agrees to no cross-country snowmobiling in BMUs. Restrict snowmobiles in Island Park and Fish Creek Areas because the important issue is the grizzly bear and its habitat; protect bears emerging from dens; restrict snowmobiling to early winter months because of stress to grizzly.

61, 167, 168, 173, 212, 263, 305, 314, 395, 610, 731, 1276, 1322, 1351

RESPONSE: The Targhee established a restriction of cross-country snowmachine travel prior to Thanksgiving day (except for the Palisades District which is Dec. 15) in order to benefit bear and elk management as well as other resources. AS

Cross-Country

COMMENTS: Support closures/restrictions on cross-country snowmobiling; permit snowmobiles only on existing roads and trails, make no new ones; use existing trails/roads planned with other agencies and private land owners; so cross-country skiers don't have to see, smell, or hear them. Restrict cross-country snowmobiling because of impacts on vegetation and wildlife; they are polluting; ensure they have enough trails so they don't have to access the entire forest; allow snowmobiles only on existing trails, outside proposed wilderness between December 15 and April 1.

1, 9, 61, 143, 158, 293, 305, 325, 354, 359, 373, 395, 437, 442, 610, 631, 655, 690, 731, 734, 1202, 1276, 1331, 1360, 1365, 1387, 1395

Oppose restrictions on cross-country snowmobiling.

F-C(13), F-I(4), F-O(4), 181, 220, 267, 280, 290, 310, 323, 367, 381, 385, 386, 412, 430, 473, 474, 476, 481, 495, 506, 608, 626, 669, 715, 738, 1202, 1256, 1314, 1316, 1366, 1378, 1392

Forest should adopt a forestwide standard prohibiting all cross-country use except for snowmobiles.

695

In Management Prescription 2.2.1(b) allow cross-country snowmachine travel between December 15 - April 1; in 2.2.1 do not allow cross-country snowmobile travel before December 15 or after April 1.

643

SNOWMOBILES

RESPONSE: All of the elk and deer winter range areas on the Forest are closed to cross-country snowmachine use throughout the entire period. This is done to protect the wintering animals and help them conserve their energy.

For the Fall season, outside of elk and deer winter range, the Revised Plan allows cross-country snowmachine travel beginning Thanksgiving Day on all Districts except Palisades. On the Palisades District, cross-country snowmachine travel will be allowed beginning Dec. 15. Since the mean date for grizzly bear denning in the Greater Yellowstone Area is Nov. 9, these cross-country snowmachine dates allow grizzly bears adequate time to inhabit potential dens. These cross-country snowmachine dates also prohibit big game hunters from using snowmachines to pursue big game animals for most of the general and controlled hunting seasons. On the north end of the Forest, there are a few late season controlled hunts after Thanksgiving Day, therefore some hunters may pursue big game animals on snowmachines for these late season controlled hunts.

For the spring season, outside of elk and deer winter range areas, cross-country snowmachine travel is allowed until June 1. Within the grizzly bear recovery zone, site-specific area closures are allowed to resolve any conflicts between snowmachine use and grizzly bears which have come out of their dens. MO

Wilderness, Wilderness Study Areas, Roadless Areas

COMMENTS: Do not allow snowmobiles in wilderness, wilderness study areas, and/or roadless areas: it detracts from wilderness quality and sets historic precedent; to protect wildlife; except in higher mountains; is incompatible with the wilderness ethic

F-B(4), F-G-1(475), F-J(3), 3, 60, 73, 150, 157, 162, 165, 168, 170, 174, 175, 179, 180, 185, 187, 189, 190, 192, 195, 201, 203, 206, 209, 212, 213, 226, 244, 273, 274, 278, 280, 289, 351, 360, 376, 396, 400, 438, 441, 444, 448, 490, 516, 615, 622, 627b, 632, 640, 651, 652, 653, 659, 664, 690, 692, 695, 725, 738, 739, 1183, 1245, 1270, 1276, 1277, 1314, 1327, 1330, 1360, 1365, 1388, 1393, 1458

Do not allow snowmobiles in wilderness study areas because: use sets historic precedent and makes wilderness designation difficult or impossible. Wilderness is incompatible with motorized use; because they disrupt wildlife and damage habitat. Limit to established routes with clear condition that such use will cease if area is added to wilderness preservation system. There is enough National Forest for them; must preserve some areas as smokeless and quiet, and allow solitude.

F-B(4), F-G1(475), F-H(8), F-J(3), 73, 157, 162, 165, 168, 170, 174, 175, 179, 180, 201, 209, 226, 252, 273, 278, 280, 351, 622, 632, 662, 1270, 1276, 1313, 1387, 1388, 1395

Abolish snowmobiles and severely restrict ORV use in order to protect the wilderness values of the roadless areas in the Centennials, Palisades Roadless Area, and Big Holes.

725

RESPONSE: Snowmachines are not allowed in wilderness. Snowmachines are generally allowed in roadless and recommended wilderness areas. The Wyoming Wilderness Act allows snowmobiles in Wilderness Study Areas. Snowmachine use does not degrade wilderness potential and historical use can be managed. AS

SNOWMOBILES

COMMENTS: Oppose closures/restrictions in wilderness, wilderness study areas, and roadless areas: because not a threat except where big game range is a concern; our company tests snowmobiles there; should not be banned but regulated; snowmobiling doesn't hurt vegetation under the snow; the real threat is logging and mining; because too restrictive.

26, 29, 272, 280, 286, 367, 476, 627a, 669, 738, 1202

RESPONSE: Snowmachines are not currently banned from the Palisades Wilderness Study Area. They are allowed by the Wyoming Wilderness Act. Other comments are noted and considered. Snowmobiling in designated wilderness areas is illegal as determined by Congress. AS

COMMENTS: Address how the 1,516,000 acres left open to snowmobiling compares in annual snowfall, terrain quality, and regional accessibility to the roadless area land because our company traditionally field tests its products in roadless area land.

627a

RESPONSE: About one-half this area is roadless. Roadless areas typically have better snow, because they are in the higher elevation terrain; however, roadless terrain is also steeper, thus limiting some access. All the area tends to be about equal in terms of snowmachine opportunity. AS

COMMENTS: Support unrestricted snowmobiling in Semi-Primitive Non-Motorized (Dark Green Rx).

1202

RESPONSE: Thank you for your support. AS

COMMENTS: Recommend a new prescription that manages areas as wilderness in summer and allows snowmachines access in areas where big game winter range is not a concern (Big Holes, Centennials).

669

RESPONSE: This would not be compatible with the Wilderness Act. AS

Riparian

COMMENTS: Exclude snowmobiles from all established riparian buffer zones along the Henry's Fork & Buffalo Rivers except where trails cross.

1276

RESPONSE: There is no need for restrictions here because they cross, and do not run along beside the riparian areas. AS

COMMENTS: Prohibit snowmobiling from 50-100 yards from Henry's Fork River from Big Springs to Forest boundary above Three Rivers, except at bridge crossings, to protect waterfowl and moose.

697

RESPONSE: Such a general restriction on so many miles of river is not workable and does not need to be addressed by this Plan. Site-specific

SNOWMOBILES

closure restrictions are implemented as needed to address areas of resource impact. AS

COMMENTS: Prohibit snowmobile access to streams, wetlands, and riparian areas.

273, 1365

RESPONSE: The Revised Plan prohibits cross-country motorized access in two wetland areas: the Alpine wetland area and the west end of Island Park Reservoir. These two wetland areas are important waterfowl use areas.

We have not identified the need to prohibit snowmachine access to all streams, all wetlands and all riparian areas. If there are specific areas which need protecting, like the two mentioned above, we will do the site-specific analysis necessary to provide the protection. MO

COMMENTS: Close corridor along Henry's Fork to snowmachines under Aquatic Influence Zones Prescription 2.8.3.

697

RESPONSE: Your comment was noted and considered but not implemented. Such a restriction is not necessary as little use occurs in these areas. AS

Dubois Ranger District D-1

Clark County - Non Support of Closures

COMMENTS: Oppose groomed trails in Clark County (Kilgore) because there need to be some areas left open to cross-country snowmobiling.

1366

RESPONSE: No groomed trails are proposed. The proposed routes in Camas and Cottonwood Creeks shown in the Draft Winter Transportation Map were deleted. Most of Clark County is open to cross-country snowmobiling. AS

Italian Peaks

COMMENTS: Supports unrestricted snowmobiling in Palisades and Italian Peaks.

300, 1202

RESPONSE: These areas are unrestricted except for a winter range corridor along the south. AS

COMMENTS: Does not support ORV use/roads to snowmachines in Italian Peaks.

161, 200, 396, 643, 695

RESPONSE: Your comments were noted and considered. AS

Diamond Peaks

COMMENTS: Supports unrestricted snowmachine use in Diamond Peaks.

300

SNOWMOBILES

RESPONSE: No restrictions exist except in winter range corridor on the lower eastern edge. AS

Island Park Ranger District D-2

Lionhead

COMMENTS: Supports restrictions to snowmobiling in Lionhead.
341

RESPONSE: Snowmachines are allowed in this recommended wilderness and potential wilderness values of area will be maintained. AS

COMMENTS: Opposed restrictions to snowmobiling in Lionhead and Sheep Mountain.
F-I(4), 529

RESPONSE: Your comments are noted and considered. AS

Chick Creek

COMMENTS: Against closures in Chick Creek.
469

RESPONSE: The December 1 date was changed to Thanksgiving Day to allow earlier cross-country use. JH

Bechler Meadows

COMMENTS: Against closures in Bechler Meadows.
469

RESPONSE: Part of Bechler Meadows is in Yellowstone National Park. The December 1 date was changed to Thanksgiving Day to allow earlier cross-country use. JH

Centennials

COMMENTS: Would like to see snowmobile use in the Centennials.
169, 437, 515, 660

RESPONSE: Snowmobiling will continue in the Centennials. AS

COMMENTS: Reduce snowmobile travel in the Centennials because of heavy impacts to area.
697

RESPONSE: The Forest is unaware of any heavy impacts to the area and has no plans to restrict the area. AS

SNOWMOBILES

Black Mountain

COMMENTS: Against closures in Island Park (Black Mountain).
2, 469, 517

RESPONSE: Comments noted and considered. AS

Two Top

COMMENTS: Against closures in Two Top.
469

RESPONSE: Visitors can cross-country snowmobile throughout this area after Thanksgiving Day and until June 1. These date changes were made to include the first heavy-use weekend, and the end of the snowmachine season in the high country. AS

Yellowstone/Targhee Boundary

COMMENTS: Delete the trails adjacent to Yellowstone National Park on Map 12, winter motorized access, Alternative 3M because a buffer is needed to reduce snowmobile trespass in the Park.
1351

RESPONSE: The Snow Creek Butte Loop shown in the DEIS as a future marked snowmachine route is deleted from the FEIS and Revised Plan. This change reduces the potential for impact to Yellowstone National Park. The 15.2 miles deleted is less than 5% of the proposed additional designated snowmachine trails and thus no change in the analysis is needed. AS

General

COMMENTS: The Plan unreasonably restricts snowmobiling in the Island Park, Two Top, Lionhead, Centennial and Keg Springs areas.

F-N(7), F-M (5), 8, 9, 13, 15, 66, 67, 89, 97, 160, 188, 216, 229,
234, 235, 300, 303, 342, 466, 515, 728

Because the area is far away from any game wintering area.

F-M (5)

RESPONSE: The Revised Plan has no restrictions for cross-country snowmobiling after Thanksgiving Day on all Districts except Palisades (which will be Dec. 15). A spring closure date of June 1 will be in effect forestwide. This allows cross-country travel during the first heavy-use weekend and the majority of the high-country season. JH

COMMENTS: Restrict snowmobiles in Island Park and Fish Creek areas because the important issue is the grizzly bear and its habitat.

395

RESPONSE: Cross-country snowmobiling is restricted until after Thanksgiving Day through June 1, to allow for bear hibernation and emergence from the den.
AS

SNOWMOBILES

Ashton Ranger District D-3

Fish Creek

COMMENTS: The Plan unreasonably restricts snowmobiling in the Fish Creek, and Snow Creek area.

F-M(5), F-N (7), 8, 9, 13, 15, 66, 67, 72, 89, 97, 160, 188, 216, 234, 235, 303, 728, 1253

RESPONSE: Cross-country snowmobiling is unrestricted after Thanksgiving Day and prior to June 1. JH

Fall River Ridge

COMMENTS: Open Fall River Ridge for snowmachining.

461, 463

RESPONSE: It is open after Thanksgiving Day and until June 1 to cross-country snowmachining, except within the cross-country ski trail area. JH

COMMENTS: Uses the Fall River Ridge and the area north of there to snowmobile in the winter and early spring.

F-P(2)

RESPONSE: Your comment was noted. AS

Palisades District D-4

Big Elk/Palisades Creek

COMMENTS: Oppose opening drainages in Big Elk and Palisades Creek to snowmachines as stated in 3M.

695, 766

RESPONSE: The lower part of these drainages are within identified big game winter range and as such will be closed to snowmachine use. No designated route is planned for these areas. BP

Fall Creek

COMMENTS: Implement the groomed trail route through the Fall Creek Winter Game prescription to connect to Skyline Drive.

1202

RESPONSE: An alternative route is identified in the Final Revised Plan which is outside the winter range. The route is along the June Creek Road and will be groomed for snowmachines. BP

General

COMMENTS: Make all elk and deer winter range off-limits to snow machines (regardless of whether you think it's accessible) - especially south end

SNOWMOBILES

Beaverhead range benches and slopes of south fork of Snake, east Kelly Canyon, and west of Burns Creek near north end of Grandview.

643

RESPONSE: Winter range areas are identified and mapped in conjunction with the Idaho and Wyoming Fish and Game Departments. These areas are restricted to cross-country travel. Designated routes allow access to areas behind the winter range. BP

COMMENTS: Restrict snowmachines use in Palisades area and the high Palisades. Make the Palisades a wilderness area because too many animals are already disturbed by the many snowmobiles.

68, 356, 695, 725

RESPONSE: During the review of this area, no reasons were identified to restrict snowmachine use. One exception is in the lower Palisades area where wintering goats could be affected. After review, this was mitigated by restricting access on the lower part of the trail. The terrain of the lower Palisades also limits or stops use in this area. The upper Palisades area was changed from current restrictions to match the Bridger-Teton side which allows snowmachining. Snowmachine use will continue until wilderness legislation is passed. The use would then be determined by Congress. Generally designated wilderness areas do not allow snowmachines or any type of mechanized/motorized uses. BP

COMMENTS: Support unrestricted snowmobiling in Palisades and Italian Peaks.
300, 1202

RESPONSE: These areas are unrestricted except for a winter range corridor along the south. AS

COMMENTS: Do not limit off-trail use in South Plateau, Black Bear Canyon, Centennial Valley and the southern part of the Targhee.

380

RESPONSE: Your comment was noted and considered. AS

Kelly Canyon/Hawley Gulch

COMMENTS: Close road #218 to junction of #217 (2 miles) to snowmachines.
F-L(3), 616, 617, 628b, 701, 736, 738, 1347

RESPONSE: Road #218 is opened as a designated route through the closure area from the Kelly Canyon Ski Hill to the open area following closure of the ski hill. This was not stated in the Draft Plan Revision and is added for clarification to the Revised Plan. BP

SNOWMOBILES

COMMENTS: Close snowmachine use in Area J as shown on 1994 Travel Plan Map.

F-L(3), 617, 701, 1347

Supports closure in Kelly Canyon - Hawley Gulch area.

F-D(51), F-L(3), F-M(5), 616, 617, 628b, 637, 670, 701, 732, 736, 738, 1245, 1293, 1347, 1451

RESPONSE: An error in mapping the 3M Alternative showed this area being open to snowmachines. Under the Revised Plan, the current restriction will continue. The designated route along Buckskin Morgan road will continue. Prescription 5.1.4 (d) is added to the Final Revised Plan to address this closure. AS

COMMENTS: Alternatives 2, 3, 3M, and 4 eliminate previous cross-country skier trails between Hawley Gulch and the divide by opening up to snowmachine use. Do not open to snowmachines.

F-L(3), F-M(5), 637, 738, 1245

RESPONSE: The Forest added a new Prescription 5.1.4 (d) which allows snowmobiling on the Kelly Canyon road only when the resort is closed for the season. The Buckskin-Morgan designated route will continue. The rest of the area is closed to cross-country snowmachine travel. AS

COMMENTS: Parking area at junction of #218 and #217 should be eliminated.

F-D(51), F-L(3), 616, 628b, 670, 701, 732

RESPONSE: The Forest added a new Prescription 5.1.4 (d) which allows snowmobiling on the Kelly Canyon road only when the resort is closed for the season. AS

COMMENTS: Leave the snowmobile corridor from Byrne's Siding to the backcountry beyond Kelly Canyon because this set up (established in 1993) has been satisfactory for both cross-country skiers and snowmobilers.

F-L(3)

RESPONSE: No change is made to this recently established corridor.

AS

COMMENTS: Prohibit snowmobiles from Kelly Canyon because they are too noisy, pollute, riders are inconsiderate of others, and they destroy the beauty of the winter scene.

1178, 1403, 1404, 1453

RESPONSE: The Forest added a new Prescription 5.1.4 (d) which allows snowmobiling on the Kelly Canyon road only when the resort is closed for the season. AS

SNOWMOBILES

COMMENTS: Establish the snowmobile destination rest area at the head of Hawley Gulch not at the proposed location at the intersection of Forest roads on the Table Rock divide above Kelly Canyon in order to keep snowmobiles out of the area heavily used by skiers and moose and elk.

1245

RESPONSE: The Forest left the proposed parking location as shown in the DEIS. Project specific analysis and NEPA documentation are necessary prior to construction of the facility. The Hawley Gulch location is considered an alternative at this time. AS

COMMENTS: Clarify season to allow spring snowmobile use in Kelly Canyon after ski hill closes.

60, 1202

RESPONSE: The Forest added a new Prescription 5.1.4 (d) which allows snowmobiling on the Kelly Canyon road only when the resort is closed for the season. AS

COMMENTS: Establish snowmobile traffic north and east of Hawley Gulch area heavily used by skiers.

1245

RESPONSE: The Revised Plan will continue to manage this area for skiing rather than snowmachines. The current travel management will be continued. AS

COMMENTS: Restrict snowmobilers from Kelly Canyon after the resort closes down in the late winter.

658

RESPONSE: The Revised Plan allows snowmachine use on the road after the ski season in the same way that the area has been managed historically. AS

COMMENTS: Close area between Kelly Mountain and Buckskin Morgan in the winter to snowmobiles to protect the big game.

637

RESPONSE: The Forest added a new Prescription 5.1.4 (d) which allows snowmobiling on the Kelly Canyon road only when the resort and the Buckskin Morgan route is closed for the season. The remainder of the area is closed to cross-country snowmachine travel. AS

Teton Ranger District D-5

General

COMMENTS: Support Closures of: Oliver Peak, Stateline & Miskell Canyons, SW facing slope of Mosquito Creek drainage to Mosquito Creek, and Plummer Canyon.

1395

SNOWMOBILES

RESPONSE: Oliver Peak, Stateline and Mikesell Canyons are located within prescription 3.2(g). There are no designated snowmobile trails in this area however cross-country snowmobiling is allowed. The area receives a variety of winter uses including skiing, helicopter skiing and snowmobiling. Prescription 3.2(g) allows for a variety of recreation opportunities including motorized and non-motorized uses. There are no plans for designated snowmobile routes in the area. Mosquito Creek is located on the Bridger-Teton National Forest.

Plummer Canyon is located on the Teton Basin Ranger District and is shown as a small isolated block of 3.2(g) in the Draft Forest Plan Revision and is nestled between the Wilderness and a Winter Range Prescription 2.7(a). Both motorized and nonmotorized cross-country winter use is allowed in the 3.2(g) area and closed in the 2.7(a) area. MB

COMMENTS: Limit snowmobile use in critical winter range in the Teton Basin to open roads.

171

RESPONSE: We concur: Prescription 2.7 accomplishes this. Some other, smaller areas of critical winter range located in other prescriptions were identified since the Draft. These areas will limit motorized and nonmotorized cross-country winter travel to designated routes but will not be classified in the winter range prescription. MB

COMMENTS: Close areas to snowmobiles on the northeast side of ID 33, east of the ID/WY State line, including the Plummer Canyon area because snowmobiling is incompatible with skiing.

1395

RESPONSE: See discussion on Plummer Canyon above. The 2.7(a) portion of the Plummer Canyon area will limit motorized and nonmotorized winter access to designated routes to reduce disturbance of wintering wildlife. The 3.2(g) portion is wide-open to all winter uses.

The Forest has not specifically closed areas to snowmachines because of conflicts with skiing. Separation of users is being considered in the ongoing interagency planning effort by the pending Greater Yellowstone Winter Visitor Use Management Committee. The Revised Plan also directs the Forest to plan for some non-motorized recreation use areas. MB

Big Holes

COMMENTS: Would like to see snowmobile use in the Big Holes (winter use only).

660

RESPONSE: The draft Forest Plan allows for this use. The only restrictions for winter use are the cross-country restrictions in the 2.7 Winter Range Prescription and several small areas identified as winter range outside of the 2.7 Prescription (refer to winter range map). MB

SNOWMOBILES

COMMENTS: The Plan unreasonably restricts snowmobiling in the Big Holes.
F-M(5), F-N(7), 8, 9, 13, 15, 66, 67, 72, 89, 97, 160, 188, 216, 234,
235, 303, 728

RESPONSE: The only restriction is for cross-country winter travel through the critical winter range areas. The Revised Plan has no additional restrictions for snowmachine use on the Palisades District. MB/BP

COMMENTS: Prohibit cross-country snowmachine use in big game hunt areas during open season (conflicts in Palisades and Big holes Subsection).
766, 1195, 1202

RESPONSE: The summer travel plan takes effect yearly in the spring as local conditions become suitable to support wheeled vehicle traffic on roads without damage. Snowmachines may use roads and trails shown on the summer travel plan as open to motorized use. Cross-country snowmachine travel is allowed only where the summer travel plan allows cross-country motorized travel after June 1.

The winter travel plan takes effect yearly on Thanksgiving Day. Snowmachine travel is allowed consistent with the winter travel plan map. Cross-country snowmachine travel is permitted from Thanksgiving Day through June 1 except on the Palisades Ranger District which permits usage from December 15 through June 1. Cross-country snowmachine travel is allowed in prescription area 5.1.4(c) (Big Bend Ridge) from January 1 until April 30.

Cross-country motorized use is not allowed on elk and deer winter areas at any time of the year. Nonmotorized cross-country use (walking, horses, etc.) is allowed from April 15 to Thanksgiving Day on all Districts except Palisades. On Palisades District, non-motorized cross-country use is allowed from April 15 to December 15. MO

Supports Closures - Jedediah Smith

COMMENTS: Protect Static Peak and Fox Creek divide (within the Jedediah Smith Wilderness area) from snowmobile use. Enforce snowmobile closures in the Jedediah Smith Wilderness. Prosecute trespassers.
191, 644, 659, 664, 1313, 1330, 1331

RESPONSE: The Forest concurs. Snowmobiles use is illegal and inappropriate in the Wilderness and Grand Teton National Park (GTNP) (Static Peak). This illegal activity is currently enforced and will continue to be enforced as funding and personnel allow. A formal cooperative agreement with GTNP allows us to enforce each other's regulations. MB

Pony and Canyon Creek

COMMENTS: Oppose closures in Pony and Canyon Creek areas.
342

RESPONSE: Your comment is noted and considered. AS

SOILS

Physical Elements

COMMENTS: Chapter IV does not provide discussion of the value of leaving dead and dying trees in place to replenish the nutrient cycling of soil. Soil nutrition is basically glossed over.

727

RESPONSE: Forestwide Standards and Guidelines for Soil Quality (Chapter III of the Revised Plan) speak to woody residue requirements. A Table lists the dominant forested habitat types and the woody residue requirements needed to sustain long-term site productivity. Requirements are based on research findings by Russ Graham, research silviculturist. A monitoring item for "dead and down material for meeting soil and wildlife requirements on Forest," (Chapter V of the Revised Plan) is a Forest Priority Group 1 and will provide information on long-term site productivity. Refer to Chapter III of the FEIS which identifies subsections where past management might have affected long-term site productivity through the removal of woody residue. DM

COMMENTS: Snow compaction leads to reductions in soil temperature (re: snowmachines). Snow-compacted, induced soil temperature decreases retard microbial activity which can lead to severe reductions in soil fauna. These temperatures also negatively affect the soil surface micro-structure that can greatly reduce the seed germination suitability of a site. (CROSS REFERENCE: Snowmobiles)

1365

RESPONSE: Your comment is acknowledged. The effects of snow compaction are more appropriately examined at the site-specific level, because they depend on site factors such as snow depth, coarse fragments, texture, structure, presence or absence of down woody material, habitat type, aspect, slope and so on. DM

Erosion Concern-Fire

COMMENTS: Erosion in the watersheds was caused by the Yellowstone fires in 1988. Watersheds were not heavily salvaged or clearcut due to steep slopes, watershed concerns, and low timber value. However, nature's salvage, an intense fire, resulted in water repellent soils and erosion. One could easily argue that fuel reduction through pro-active management in these watersheds would have minimized erosion from the Yellowstone fires.

393

Fuels management would decrease the risk of wildfire to soils.

1273b

RESPONSE: Fire and erosion hazards will be evaluated at the site-specific or landscape level. Refer to the FEIS, the Fire - Scale, Fire Risk and the Soils and Geology sections. DM

SOILS

General Comments

COMMENTS: Frissell Condition Class is not an adequate method to measure soil displacement on campsites. Would suggest a permanent calibrated stake method.

1312

RESPONSE: The use of the Frissell Condition Class system is used only for dispersed campsites within wilderness, proposed wilderness and roadless areas. For these areas, a correlation can be made between the Frissell Condition Class and Soil Quality Standards. On the remainder of the Forest the forestwide standard or guideline that "no more than a total of 15% of an activity area being in a detrimentally disturbed soil condition" (see glossary) will be used for monitoring purposes. Soil displacement occurs when either two inches or one-half of the humus enriched top soil (A horizon), or both, are lost from an area of one square meter or larger. DM

COMMENTS: The use of leaded gasoline in snowmobiles can lead to soil contamination. Refueling, accidental spills and on-trail maintenance of snowmobiles can lead to chemical contamination of soil.

1365

RESPONSE: Your comment is acknowledged. Effects of these impacts tend to be site-specific and affect relatively small areas making forestwide analysis difficult. DM

COMMENTS: Statement in DEIS IV-61 is wrong; it simply attempts to paint OHV use as excessively impacting to soil resource.

1202

RESPONSE: The FEIS states in Chapter IV, "Road construction, timber harvest, grazing, dispersed recreation and motorized recreation OHV's have the highest likelihood of producing irreversible damage to the soil resource." The FEIS emphasizes that unmanaged dispersed recreation and OHV use will be a major challenge based on increased demand. A increased number of existing OHV trails are not adequately designed and maintained for use and are contributing to resource damage. The Revised Plan includes an objective to, "Provide a network of OHV trails while minimizing the effects of OHV on soils." DM

COMMENTS: DEIS IV-10, last paragraph - This section uses Alternative 5 as basis for comparing soil disturbance to other alternatives. This is at odds with NEPA.

413

RESPONSE: NEPA requires that effects be analyzed and disclosed to the public. There is nothing within the NEPA regulations that directs comparisons specifically to the No-Action Alternative. NEPA regulations (1502.4 & 1502.16) states, "it should present the environmental impacts of the proposal and the alternatives in comparative form." DM

SOILS

COMMENTS: Soil scarification was a common practice associated with silviculture under 1985 Plan, a standard should be included prohibiting this in the new plan. (CROSS REFERENCE: Timber, Silviculture)

643

RESPONSE: The type and amount of post harvest treatments are best assessed and analyzed at a site-specific level. Some scarification may be appropriate to meet a project's objectives. DM

DFPR

COMMENTS: Page III-66 and III-70, all four soil and water guidelines should be standards.

1365

RESPONSE: Guidelines provide appropriate direction; however, since the soil and water guidelines are relatively new they will be evaluated for effectiveness. Refer to the definition of guideline in the glossary. DM

COMMENTS: Page III-66, last guideline should also include provisions requiring that any such work not cause negative environmental impacts, that the repaired or reconstructed structures not cause negative environmental impacts, and that any structure that does cause such impacts be removed.

1365

RESPONSE: The first guideline under Soil and Water, Chapter III addresses this concern. DM

COMMENTS: Page V-8, 30% may not be a real number and may have to be re-defined, because it is hard to tell if disturbance is natural or man caused. (CROSS REFERENCE: Riparian, Hydrologic Function)

432

RESPONSE: Refer to the definition of hydrologic disturbance in the glossary section of the Revised Plan. Both man-caused and natural disturbances, such as fire, are considered in this definition. DM

COMMENTS: Page V-8, many activities cause soil disturbance greater than 15 percent. That number is too restrictive and will limit the flexibility to manage the resource with different options or tools. (CROSS REFERENCE: Riparian, Hydrologic Function)

432

RESPONSE: The 15% threshold is a Regional Guideline to identify practices that consistently exceed the 15% threshold. Evaluation of these practices will be made to improve techniques or find alternate solutions. DM

COMMENTS: Page V-9, 65 percent ground cover is very high in some natural rangelands; most sedimentation problems do not come from uplands.

432

SOILS

RESPONSE: The "Indicator" section also states: "an equivalent percentage if the site cannot naturally attain the minimum percentage mentioned above." If a site cannot attain the 65% ground cover naturally, then a different percentage requirement would be identified based on what it can naturally attain. DM

COMMENTS: Page IV-11, the soil disturbance threshold and soil quality standards and guidelines must be enforced vigorously.

1365

RESPONSE: Agreed. This is the intent of various monitoring items on soil quality in Chapter V of the Revised Plan. Both implementation and effectiveness monitoring are proposed. DM

COMMENTS: Soil disturbance monitoring must also include an evaluation of the adequacy of the 15 percent standard itself. The fine organic material monitoring must include evaluation of the adequacy of 50 percent standard.

1365

RESPONSE: Annual implementation monitoring evaluates the adequacy of standards and guidelines applied on-the-ground and effectiveness monitoring evaluates whether standards and guidelines achieved expected results. Possible modifications may be recommended based on these findings. DM

COMMENTS: The soils section failed to address soil compaction as a loss of long term soil productivity and no direction is given for this. Also, there is no direction given for road development, oil and gas development, or exploration occupancy on mass instability slopes.

1273b

RESPONSE: Soil compaction is addressed in Regional Soil Quality Standards and Guidelines (FSH 2509.18). Regional direction is not repeated in the Revised Plan. Oil and gas development is being addressed through a separate Environmental Impact Statement. Slope stability for mineral activities is addressed in Chapter III of the Revised Plan. DM

COMMENTS: Guidelines or standards for physical damage to soil by OHV and logging are lacking.

697

RESPONSE: Forestwide standards and guidelines and Regional Soil Quality Standards and Guidelines (FSH 2509.18) apply to all management activities and are applied throughout activity areas (See definition for activity area in the glossary section of the Revised Plan). DM

COMMENTS: Motorized users need to know what soil erosion factors restrict OHV use on slopes of 25-40 percent; otherwise they can't decide if that is a reasonable constraint. Also, it would be difficult to implement without further information. (CROSS REFERENCE: Access, Soil; Access, Percent Slope)

413

SOILS

RESPONSE: Soil factors considered include such things as: soil texture, percent sand greater than .1mm, soil organic matter content, soil structure, soil permeability, clay mineralogy and coarse fragments in the surface soil layers. Trails that are properly designed for motorized use can be constructed on steeper slopes. Soil concerns focus on slopes where cross-country travel and trails were not designed for motorized use. DM

COMMENTS: The U.S. Fish and Wildlife Service Biological Opinion on Plateau BMU states: "In newly harvested units, soil disturbance shall not exceed 20 percent of unit," (p. 35). Adopt this language for prescription on page III-135.

643

RESPONSE: Regional direction for soil quality maintenance is more restrictive. No more than 15% of an activity area is allowed to be in a detrimentally disturbed condition (FSH 2509.18). DM

Erosion Concern-General

COMMENTS: Restrict human disturbances on steep slopes and easily erodable soils.

1367a

RESPONSE: Steep slopes and erodible soils were considered when designating ASQ lands and restricting cross-country OHV use (refer to the standards and guidelines under the Recreation section for OHV and under Timber for logging systems). Slopes and soils are analyzed in site-specific NEPA for all proposed projects. DM

COMMENTS: Opposed to all activities which might degrade soils; the local farming community is helped by winter vehicles because of the resulting packed snow which aids in reduction of erosion and prolonged spring run-off.

276, 307, 311

RESPONSE: Your comments are acknowledged. The purpose of regional and forestwide standards and guidelines for soil quality are to better protect the soil resource. DM

COMMENTS: Surface disturbing activities in areas with slopes greater than 40% are a special concern because of potential problems with soil stability. Special technical consideration should be given to the proposed activities in these areas, including coordination with Wyoming Game and Fish.

389

RESPONSE: Refer to the standards and guidelines under the Recreation section for OHV and under Timber for logging systems. Steep slopes and erodible soils were considered when designating ASQ lands and restricting cross country OHV use. Slope classes are also analyzed for all site-specific proposals. DM

SOILS

COMMENTS: Should designate potential erosion areas and to place them off limits before erosion occurs. This should be addressed in the standards and guidelines.

330

RESPONSE: Site-specific analysis is the appropriate avenue for identifying and protecting highly erosive areas. Steep slopes and erodible soils were considered when designating ASQ lands and restricting cross-country OHV use.

Refer to the standards and guidelines under Recreation section for OHV and under Timber for logging systems. DM

Recreational Vehicles

COMMENTS: Restrict horse use, pack animal use, mountain bikes, motorized vehicles such as snowmobiles, winter skiing, and bulldozers preparing for winter skiing because they increase soil erosion and disturbance.

175, 219, 307, 311, 1203, 1365

RESPONSE: Your comments are acknowledged. Refer to the standards and guidelines under the Recreation section for OHV. Effects of these uses are best evaluated at the site-specific level. DM

COMMENTS: ORV use should be restricted because it increases soil erosion.

293, 632

RESPONSE: Soil properties, such as slope, were used to restrict cross-country OHV use. Refer to Standards and Guidelines-OHV in Chapter III of Revised Plan. DM

COMMENTS: Big game retrieval by ATVs is a poor idea because of increased erosion.

293, 1365

RESPONSE: The big game retrieval concept was dropped. DM

COMMENTS: Snowmobiles do not cause erosion because of snowpack.

307, 311

RESPONSE: Erosion can result from snowmobile use in the early or late season when snow packs may be marginal or intermittent, but damage would be limited in extent. DM

COMMENTS: The standards and guides on III-17 don't go far enough in preventing soil erosion.

697

RESPONSE: Forestwide and regional soil quality standards and guidelines apply and are sufficient to reduce risks to soil erosion. DM

SOILS

Recreational Vehicles - OHV Impacts

COMMENTS: Soil disturbances caused by OHVs can favor the establishment of weedy vegetation (Bury 1980); OHV use can lead to a loss of surface organic horizons (Burden and Randerson 1972); OHV use can lead to mineral soil compaction, resulting in an increase in the mechanical resistance of soil to root penetration which can in turn reduce emergence of seedlings (Iverson et al. 1981); soil compaction can lead to soil invertebrate declines (Bayfield 1979; Chappell et al. 1971; Duffey 1975).

OHV use leads to reductions in soil microbe activity that impairs decomposition processes (Seastedt 1984); OHV use has negative effects on the germination, establishment, growth, and reduction of plants (Harper et al. 1965); OHV use causes soil compaction which reduces the heterogeneity of soil surfaces and the density of favorable germination sites (Harper et al. 1965); OHV use can lead to reductions in macro and total porosity that can in turn result in oxygen and water depletion (Monti and Mackintosh 1979); OHV use can lead to reductions in infiltration rates (James et al. 1979); OHV use can lead to increases in soil erosion (Wilshire et al. 1978).

OHV can lead to changes in soil moisture (Settergren and Cole 1970); OHV use can lead to increase in diurnal and possibly a seasonal range of soil temperatures; the use of leaded gasoline in OHVs can lead to soil contamination. Refueling, accidental spills and on-trail maintenance can all lead to chemical contamination of soil; OHV use can result in dramatic shifts in species composition of soil fauna and microfauna (Anderson 1978; Paul and Clark 1989; Wallwork 1970); as a consequence of these sorts of impacts, OHV use can result in reduced vegetation vigor and productivity.

1365

RESPONSE: Your comments are acknowledged. Currently, approximately 62 percent of the Targhee is open to cross-country travel. The Revised Plan limits summer cross-country to seven percent of the Targhee. Forestwide standards and guidelines provide mitigation for these effects. DM

Streams/Riparian

COMMENTS: In riparian areas with increasing erosion problems, use boardwalks and culverts to improve or maintain stability.

307, 311

RESPONSE: This is more appropriately addressed at the site-specific level.
DM

COMMENTS: Protect riparian areas from any activity which would decrease cover and soil stability and increase siltation in streams and rivers.

335

RESPONSE: Refer to Prescription 2.8.3 in Chapter III of the Revised Plan. The purpose of this prescription is to provide protection to riparian ecosystems. DM

SOILS

Roads and Trails

COMMENTS: Leave roads open not causing erosion problems.

219

RESPONSE: Roads not causing erosion were considered in the recommended travel network for various themes presented in each alternative. DM

COMMENTS: Take this opportunity to design a trail network that eliminates use of fine-textured, erodible soils in the Big Hole Mountains; build small bridges across some creeks.

219, 1312

RESPONSE: Design of trail networks in the Big Hole mountains is more appropriately evaluated at the landscape or site-specific level. Trail networks were designed to address themes in the various alternatives. DM

COMMENTS: Issue of soil erosion was presented poorly and is misleading to the public.

307, 311

RESPONSE: Your comment is acknowledged. Soils sections in the Revised Plan are rewritten to help clear up points of confusion. DM

COMMENTS: If the Forest Service would maintain their trails and roads, erosion would not be a problem.

307, 311

RESPONSE: Annual budget allocations for road and trail maintenance fluctuate. Reducing the number of roads may lead to better and more consistent maintenance than in the past. The Forest continues to build partnerships, such as "Adopt-a-Trail" and coop maintenance agreements with counties, to help maintain transportation networks. DM

COMMENTS: Road management is crucial to protect water quality and soil stability.

1249

RESPONSE: The 2.8.3 Aquatic Influence Zone Prescription is designed to protect water quality and soil stability. DM

COMMENTS: Permanent closures will actually increase erosion by concentrating use.

97

RESPONSE: This may be true in certain locations. Overall problems should not increase and closures will also help reduce impacts by having fewer miles of roads to evaluate and maintain. Road maintenance dollars will go farther in maintaining a smaller road network. DM

SOILS

COMMENTS: Rutting or displacement of soils on trails is caused by the design and maintenance of the trail, not the type of use on it.

629

RESPONSE: While this may be true, the level or season of use a trail receives compounds rutting and soil displacement. The Targhee considered these factors in designing trail networks to address themes in each of the alternatives. DM

Timber

(CROSS REFERENCE: Timber)

COMMENTS: Statement on Page III-13 of DEIS is unclear. Assume that concerns about soil quality in relation to conifer encroachment are related to the

hypothesis that soils will become more acidic. Cite data to support this hypothesis.

489

RESPONSE: Refer to Cryer, D.H., and J.E. Murray, 1992. "Aspen Regeneration and Soils." Rangelands 14(4). Page 223-226. Ecological Unit Inventory of the Targhee National Forest, Idaho. Interim Report #4. July, 1996. DM

COMMENTS: Until Forest Service has data to definitely demonstrate that Douglas-fir expansion is having detrimental impacts on soil quality, there should be no vegetation treatments based on those assumptions.

489

RESPONSE: Refer to Cryer, D.H., and J.E. Murray. 1992. "Aspen Regeneration and Soils." Rangelands 14(4). Page 223-226. Ecological Unit Inventory of the Targhee National Forest, Idaho. Interim Report #4. July, 1996. 1914-1922. Historical Vegetation Inventories. USDA Forest Service, Targhee National Forest, St. Anthony, Idaho.

The intent is not to wait until changes occur in the soil, but to maintain or return plant biodiversity being lost as ecosystems simplify as-a result of removal or disruption of disturbance regimes. DM

COMMENTS: Harvest constraints to avoid erosion are excessive. (Page III-25, DFPR), a requirement to stay on designated skid trails with skidding equipment during periods of wet weather would be better to prevent rutting or compacting.

90

RESPONSE: Soils are susceptible to compaction, erosion and displacement when dry. Designated skid trails, that are properly located and laid out, greatly reduce the area of disturbance created by harvest operations. Designated skid trails have been used effectively in all regions of the west to maintain soil quality. Timber sale contract provisions include this requirement. DM

COMMENTS: Aspen should only be skidded on dry or frozen soils.

90

SOILS

RESPONSE: Skidding requirements are addressed within the timber sale contract provisions. Skidding is usually conducted when soil conditions are favorable (that is, dry or frozen conditions) for this type of operation and its effect on soil quality. DM

COMMENTS: Logging is the removal of valuable nutrient, fiber, and organic matter from the forest and its soils, in conjunction with the serious impacts from roading.

150

RESPONSE: The intent of the table in Chapter III of the Revised Plan is to present required minimum levels of woody residue to be dispersed on the site during project implementation. Minimum woody residue levels are based on research findings on representative habitat types. DM

COMMENTS: Intent to increase amount of woody debris on ground after harvest will benefit soils.

625a

RESPONSE: Your comment is acknowledged. DM

COMMENTS: Prohibit timber logging in areas prone to landslides unless found by scientific studies that harvest activities will not degrade the soils or release sediment to streams.

1367a

Prohibit logging or mining on fragile sites pending conclusive demonstration through scientific study that soil can be protected and forest regeneration accomplished.

1367a

RESPONSE: In determining timberland suitability, unsuitable acres were identified, specifically where irreversible damage could occur or where low site productivity exists (regeneration is doubtful). Intensive management activities are not planned on these acres. DM

TIMBER - ASPEN

COMMENTS: Explain the basis for the footnote (Page III-23) in the lower table stating that aspen counts toward stocking levels in other forest types.
643

RESPONSE: Stocking guidelines in the past sometimes failed to count aspen in minimum stocking levels. In the current Forest Plan, minimum stocking is, in part, designed around the reestablishment of big game hiding cover. Aspen does not contribute as much year-round big game hiding cover as conifers and was not included in hiding cover calculations. The Targhee has since established a cover value for aspen. (Elk Habitat Effectiveness and Elk Vulnerability Process Papers, Revised Plan). Aspen was highlighted in a footnote as a reminder to record its presence. Aspen has cover value and is an important seral species in natural succession. JC/LB

COMMENTS: Explain the basis for the aspen guideline and why you picked the target successional stage distribution as ideal.
1369

RESPONSE: The rotation age of 60 years for Aspen is a guideline to help managers design entry cycles for areas where aspen is being managed as a commercial timber species. The National Forest Management Act requires that all even-aged commercial stands scheduled for harvest during the planning period will be at the culmination of mean annual increment of growth. Sixty years is only an estimate of aspen culmination. (See 60-year cycle study by Schiers, Jones and Winoker 1985 and Schier and Campbell 1980). JC

COMMENTS: Define the age class distribution you plan to manage for in aspen stands that are experiencing conifer encroachment.
1273b

RESPONSE: A 60-year rotation is a reasonable guideline for sustainable aspen stands, however site-specific analysis may conclude conifer encroachment is better for the health of the Forest in some areas. See previous response. AM

Supports Aspen Management Goals

COMMENTS: I support aspen component in Plan. Aspen has incredible regenerative abilities.
719

RESPONSE: Your comment is acknowledged. Aspen's ability to regenerate rapidly is the result of an aggressive root system. JC/LB

Improve Discussion of Age/Class Distribution for Aspen

COMMENTS: Discuss the basis you will use for determining the appropriate distribution of aspen age classes, and your strategy for maintaining a sustainable aspen resource.
1368

RESPONSE: Appropriate distributions of age classes on a large scale can be discussed as part of a mid-level analysis such as in a landscape analysis. A landscape analysis looks at large areas of the forest and establishes the historic distribution of aspen communities. This is accomplished through on-site examinations, historic records and techniques such as stand backdating. Then, many important site specific resource concerns are evaluated at the project level. This information influences the final recommended distribution of age classes. For example, the distribution of age classes could be a function of how often a disturbance would be allowed to occur, how large an area could be disturbed each time and what size classes are needed for other resources such as wildlife, watershed integrity, visuals, and so forth.

A project to reestablish aspen communities is then evaluated and disclosed as part of the NEPA process and a site-specific silvicultural prescription proposes how this is achieved over time.

The National Forest Management Act directs National Forests to grow commercial timber to a point called the "culmination of mean annual increment" which means the point at which the tree growth slows and begins to decline. The Guideline states that aspen should be grown to a minimum age of 60 years which is based on the estimated culmination of mean annual increment. After 60 years stands begin to decline and their ability to regenerate after a disturbance is reduced (Schier, Jones, and Winokur 1985 and Schier and Campbell 1980). Following this strategy, about every 60 years an aspen stand would have to be regenerated either by fire, girdling, felling, logging, root ripping or a combination of these practices. This is the basis for determining the appropriate distribution of aspen age classes and to maintain a sustainable aspen resource. A simplistic example is, if 90 acres of aspen needed to be maintained and you want three age classes, you enter a third of the stand every twenty years. The strategy for sustaining aspen must consider numerous variables on a site-specific basis. Most situations would be more complex and the 60 year time period is designed as a guideline. JC/LB

Aspen Management Need More Analysis

COMMENTS: Assess the effects of aspen regeneration in the Centennials and its affect on wildlife values and habitat. Conclusions are drawn from site-specific examination which does not consider the ecosystem.

161

Provide an evaluation of the proposed aspen management guidelines and objectives on wildlife. Include a discussion of the impacts of aspen harvest on wildlife and on the structured rotation age.

1369

RESPONSE: Effects on wildlife are discussed in Chapter IV of the FEIS, including impacts from planned activities, such as regeneration of aspen. Because the Revised Plan is programmatic rather than a site-specific document, the effects are summarized on a forestwide basis. The effects of these activities are evaluated in Chapter IV. For the purposes of the Targhee's Revised Forest Plan evaluation of effects in Chapter IV is sufficient for wildlife at the Forest scale. JC

TIMBER - ASPEN

COMMENTS: Reassess the logic that vegetation occurring on the Forest, particularly the decline of aspen due to conifer encroachment, is outside the Range of Natural Variation and is in need of treatment. Various studies disagree with this assumption.

643

RESPONSE: Studies, research, and historic documents indicate seral aspen is rapidly declining on many areas of the Targhee and are outside, or soon-to-be-outside, their range of natural variability due to replacement by conifers. This is also true in other areas of the Rocky Mountains. Researchers (Mueggler 1988) indicate that throughout the West "...stands once dominated by aspen are well along in the process of replacement by conifers." Aspen studies reviewed as part of the Revision process support these findings. Field observations the last two years by the Targhee in the Centennials, also substantiate these findings.

Not all forest types historically supported aspen. The higher elevations of the lodgepole pine type along the western boundary of Yellowstone Park, for example, had very few aspen. Historic vegetation analysis in these areas indicates few aspens occurring historically, and that the current level of aspen is likely within the historic range of natural variation. JC

Succession in Aspen

COMMENTS: Clarify RNV for aspen. Reevaluate succession conclusions regarding lodgepole pine, Doug-fir, and aspen that led the Forest to conclude that aspen is outside RNV and thus is a reason for management intervention. Aspen is more abundant now than historically.

489, 643

RESPONSE: The Forest's findings do not support a conclusion that aspen is more abundant now than in the past. Fire suppression has virtually eliminated the primary disturbance regime responsible for perpetuating aspen which allows other shade-tolerant community types such as Douglas-fir to replace aspen. RR

COMMENTS: Include livestock grazing impacts and fire suppression in your analysis that aspen is outside the RNV.

695

RESPONSE: Fire and fire suppression are discussed in the FEIS in Chapters II and IV. Research shows that grazing is not as significant an effect (refer to Camas Creek Aspen Rejuvenation Project NFMA/NEPA documents) in causing the loss of aspen as is conifer encroachment. Conifer encroachment is the result of removing or suppressing the natural fire disturbance regime. Grazing is a factor in reducing or altering fire patterns. DM

COMMENTS: Consider historical aspen regeneration is a result of low ungulate numbers, climatic conditions and extensive fires that favored aspen regeneration and that Doug-fir were commonly found in lower elevations over much of the last several thousand years.

643

TIMBER - ASPEN

RESPONSE: The distribution of vegetation, and the processes that maintained these distributions will be defined through Properly Functioning Condition assessments as they are completed for various areas of the Forest. The direction to establish PFC's in each subsection is included in the forestwide goals and objectives.

Ungulate use, climate, and fire are factors considered in aspen studies. Refer to the NFMA/NEPA documents for the Camas Creek Aspen Rejuvenation Project on the Targhee National Forest as an example of analysis at a landscape and site-specific level. These documents provide information about aspen management in aspen-dominated parts of the Forest. DM

Manage Aspen as a Wildlife Resource

COMMENTS: Aspen is not a merchantable product on the Targhee and therefore cannot be considered in the ASQ and should be managed as a wildlife resource.

693

RESPONSE: The Allowable Sale Quantity (ASQ) does not include fuelwood or other nonindustrial wood. The majority of aspen on the Targhee is nonindustrial and is not included in the ASQ for the Revised Plan. LB

Reconsider the Option to Log Douglas-Fir to Maintain Aspen

COMMENTS: Clarify why Douglas-fir are being cut to encourage Aspen. This is a natural and healthy progression.

Consider planting aspen (as well as fir) in clearcuts and let aspen be replaced by firs slowly and naturally.

Prohibit the cutting of mature Douglas-fir to make room for quaking aspen.

F-K(4), 58, 176, 656, 726

RESPONSE: The Revised Plan allows aspen regeneration projects in areas historically occupied by aspen to meet biodiversity objectives of maintaining a diverse distribution of plant communities. Aspen developed across the Forest over many centuries and was perpetuated by periodic lightning and human-caused fires. Without a cycle of disturbance, more shade-tolerant conifers may replace aspen in a single generation (Brinkman and Roe 1975, Mueggler 1985).

Logging conifers is proposed to create fuel loading that is more conducive to prescribed fire or prescribed natural fire treatments. Unpredictable fires, including wildfires, may result in the loss of habitat for threatened, endangered and sensitive species and critical hiding cover for economically important species such as elk.

Planting aspen in clearcuts may be an option in areas where aspen occurred historically. If the area has been clearcut and was historically occupied by aspen, aspen responded to the clearcutting and regenerated. This is typically the case across the Forest.

Currently the range of natural variation for forest types has not been established. Historical vegetation conditions have been developed for two watersheds: 76,000 acre Camas Creek in the Centennial Mountains and the upper Henry's Fork. Environmental assessments will be developed for

TIMBER - ASPEN

project-level activities not specifically described in the Final Revised Plan and will concentrate on issues unique to the project. DS/JC

Aspen Regeneration Impacted By Grazing

COMMENTS: Exclude livestock from regenerating aspen stands until saplings are well above the reach of those stock. Current guideline on Page III-21 is inadequate to protect regenerating aspen.

Restrict livestock grazing to protect young aspen shoots.
489, 634

RESPONSE: The need to protect aspen regeneration will be evaluated on a project-by-project, site-specific basis. The need for protection is a function of grazing levels, timing of grazing, distribution of livestock, anticipated number of aspen suckers, distribution and size of aspen regeneration sites, and so forth. More restrictive protection may be needed, in areas where livestock or wildlife concentrate. These concerns will be identified during site-specific analysis with appropriate mitigation. JC

Conifer Encroachment on Aspen Caused by Climatic Trends

COMMENTS: Consider other factors like regional climatic trends toward warmer and wetter growing seasons since the end of the Little Ice Age as a possible cause for conifer encroachment on some high mountain meadows.

489

RESPONSE: Climatic trends over hundreds of years and how they relate to local changes in vegetation are hard to establish, controversial, and are beyond the scope of the analysis for the Final Revised Plan and EIS. Forest observations indicate that conifer encroachment into high mountain meadows is a slow process and takes a long time to complete. The absence of fires igniting at lower elevations and burning up into higher meadows allows this process to continue.

Shrub and herbaceous vegetation is appearing in alpine areas where tree encroachment appears to be limited because of defoliation and harsh winds. Subalpine areas contain open meadows with tree islands (transition zones) between forested and alpine plant associations. These tree islands are generally 200 years old when considering initial whitebark pine establishment followed by subalpine fir growth. If these areas were established prior to the 1800's, warmer/wetter climate of the Little Ice Age did not influence their presence. Limited individual tree data in other high elevation forested areas show whitebark pine age from 165 to 395 years. It is doubtful that the Little Ice Age played a significant role in vegetation development. JC/JR

Reconsider Use Of Clearcutting To Treat Aspen Stands

COMMENTS: Reconsider the use of clearcuts in aspen stands to mimic fire disturbance. Burning adds organic carbon and increases soil pH allowing aspen to better compete with other vegetation. Clearcuts remove organic matter and lower pH.

643

RESPONSE: Unless Forest objectives dictate otherwise, harvesting either leaves the timber stand in an improved condition or provisions are made for regeneration. The Revised Forest Plan permits all harvest methods, including even-aged systems and burning. Clearcutting is a viable method of regenerating a stand of trees and not an expedient of logging. Clearcutting does not duplicate the role of fire (it does not increase pH or soil carbons to the degree fire does) but clearcutting can approximate the role of fire. (Daniel, Helms, and Baker 1979). DS

COMMENTS: Refrain from treating aspen stands until it is demonstrated through monitoring and research that such treatments like burning and clearcutting are effective.

489

RESPONSE: Studies show that clearcutting in aspen stands usually results in profuse and rapid aspen suckering (regrowth of young trees) (Crouch 1983; Crouch 1981; Bartos and Mueggler 1982; Baker 1925; Hittenrauch 1976; Jones 1975; Mueggler and Bartos 1977; Sampson 1919; Smith et. al. 1972).

In aspen stands seral to conifers, clearcutting is the method of choice. Any other method puts the objective of aspen regeneration at risk. (Examples of Aspen Treatment, Succession, and Management in Western Colorado 1985).

Numerous examples of successful aspen regeneration exist on the Targhee. Regeneration is evident in many clearcut areas specifically along Highway 20. The potential to regenerate aspen through logging and other techniques is evident in types other than lodgepole.

Clearcutting and extensive removal of logging slash can reduce the organic material available on the site. Nutrients contained in a tree are in the small limbs and foliage. Standards and guidelines for retention of downed woody material and logging slash to maintain site productivity over the long term are found in the Revised Forest Plan.

The Forest will evaluate appropriate methods to achieve regeneration. Clearcutting may not always be used to regenerate aspen. Many other techniques exist, such as prescribed fire, aspen felling, girdling aspen and conifers, partial removal of conifers, and removal of small groups of conifers, among others. JC/DS

COMMENTS: Test prior to implementing aspen treatments. The paper by Cryer and Murray, 1992 is only a hypothesis. No data is presented and no studies are cited to support it.

489

RESPONSE: Soil profiles, and their associated chemistry and nutrient cycling processes occurring within different types of aspen stands, have been studied extensively (Jones and Debyle 1985, Morgan 1969, Morgan and Tew 1968, Hoff 1957, Tew 1968, Lutz and Chandler 1946, Stoeckler 1961, Daubenmire 1953, Troth et. al. 1976, Young and Carpenter 1967, Bartos and Debyle 1981, Daubenmire and Prusso 1963, Hayward 1945, Potter and Krenetsky 1967, and others). Several studies are documented in the Cryer and Murray (1990) article that describe changes in soil characteristics and losses in organic matter when aspen stands are invaded by conifers (Birkeland 1974, Brady 1974, Tisdale and Nelson 1975, Boul, Hole and McCracken 1973). These changes can result in soil

TIMBER - ASPEN

characteristics that make it difficult for aspen to reestablish (Epstein 1972).

The high concentrations of litter created by forbs, grasses and aspen leaves and the rapid rate of litter decay associated with aspen stands contribute to the soil's characteristics (Bartos and Debyle 1981). In northern New Mexico, Potter and Krenetsky found that grasses underneath aspen stands contributed greatly to the organic matter in the soil beneath aspen improving soil water-holding capacity, percentage of base saturation, soil structure, and permeability.

Aspen soils differ from soils found in adjacent conifer stands (Hoff 1957) in that they are darker and contain considerably more organic matter. Aspen foliage has a higher nutrient content than conifer foliage (Jones 1985; Daubenmire 1953; Troth et. al. 1976; Young and Carpenter 1967). This, combined with the rapid decay in aspen stands, provides a quick return of nutrients to the soil (Bartos and Debyle 1981; Daubenmire and Prusso 1963; Hayward 1945).

Soil pH is generally higher on aspen soils than in those areas dominated by conifers (Jones and Debyle 1985, Morgan 1969). Jones (1985) documents that after several generations of aspen occupancy, a soil typical to aspen develops. Jones also notes that even after one generation of conifer occupancy, the result is a leached, light colored upper soil horizon which increases soil acidity making it hard for aspen to compete with spruce-fir forests (Epstein 1972).

In aspen stands are seral to conifers, clearcutting is the method of choice. If the stand objective is to improve or initiate aspen regeneration, clearcutting (including all the conifer stems) is the preferred method. Any other method, including fire, puts the objective of aspen regeneration at risk. (Examples of Aspen Treatment, Succession, and Management in Western Colorado 1985). Numerous examples of successful aspen regeneration exist on the Targhee as a result of management treatment. JC

Aspen Patch Cuts

COMMENTS: Eliminate the statement, "patch cuts are used to provide disturbance needed to regenerate aspen. " Patch cuts are used for many reasons.

283

RESPONSE: Your comment is acknowledged. The Forest made this change. LB

Use Aspen as Marketable Species

COMMENTS: Use aspen as marketable species at least in proportion to its availability. It is a quicker growing species with quicker regeneration.

625

RESPONSE: The majority of the aspen component on the Targhee does not produce crops of industrial wood. Aspen is not included in the 8.0 ASQ calculations. Aspen will be treated where appropriate or needed and counted as part of the 3.8 MMBF ASQ for product or firewood. LB

Monitor Aspen Treatments

COMMENTS: Include monitoring on the effectiveness of vegetation treatments related to aspen regeneration or upland rangelands as a high priority.

489

RESPONSE: Monitoring aspen regeneration is part of each District's annual program of work. Each time a Forest regeneration project is implemented, stocking surveys are scheduled. All areas required by the National Forest Management Act to be reforested within the five year standard are tracked annually in a data base.

The frequency of surveys depends on the type of regeneration project. Planted areas are examined during the first, third and fifth growing season after planting. Areas of natural regeneration are examined the third and fifth year after cutting. JC

Include Skidding Standards and Guidelines For Aspen

COMMENTS: Prohibit skidding or harvesting of aspen with ground based equipment in wet weather as this causes serious damage to root systems of the clones. Skid only on frozen or dry soil.

90

RESPONSE: Standards are developed for each timber sale on a site-specific basis and implemented through contract provisions. Many standards and specific contract provisions are included in every timber sale contract. Some of these include: CT6.3 Schedule of Operations, CT6.410 Felling and Bucking, CT6.411 Directional Felling, CT6.425 Tractor and Rubber Tired Skidder Yarding, and CT6.61# Wetland Protection. These provisions, among others, are designed to reduce soil disturbance and compaction, especially during wet weather.

JC/JR

COMMENTS: Include standards and guidelines and other pertinent information you will use to treat aspen plant communities. Currently, there is no way to analyze the scope of impacts based on information in the Draft Forest Plan Revision.

643, 766

RESPONSE: Refer to subsection descriptions and direction to establish Properly Functioning Condition. Properly Functioning Condition Assessments establish a range of conditions under which aspen can function as a viable part of the ecosystem. A landscape analysis will determine total areas, specific stands and successional stages needed to maintain the aspen component.

Standards and Guidelines in Chapter III of the Revised Plan address recommended silvicultural systems, rotation ages and minimum stocking for aspen. Planned acres and volumes of timber sale activity are identified by watershed in Chapter IV. The levels of harvest are included in the impacts evaluated in Chapter IV of the Final EIS.

Areas on non-ASQ lands have set maximum levels of harvest and are included in the evaluation of impacts. JC

TIMBER - ASPEN

Reflect Effects of Yellowstone Fires on Aspen Component

COMMENTS: Discuss the effects of Yellowstone fires on regional landscape patterns. The Targhee Forest has not considered fires in the proposal to treat aspen stands to reduce conifer encroachments.

643

RESPONSE: Historic patterns and processes at the regional scale are beyond the scope of the analysis needed to assess the impacts of the Revised Plan and EIS. Direction is included in the Revised Plan to identify Properly Functioning Conditions at various landscape scales in each subsection under forestwide goals and objectives. Identifying natural structure, composition, disturbance regimes and patterns across the landscape will be part of assessing Properly Functioning Condition. Patterns of fires in the Yellowstone area will be considered in this assessment.

Direction to use fire where appropriate is included in the Revised Plan. Fire may be used to regenerate aspen but will be evaluated on a site-specific, case-by-case basis. Fire may not always be safe or the most effective method to use. JC

Include Aspen Restoration Harvests In 3.7 MBF

COMMENTS: Conifers harvested to restore aspen should be part of the 3.7 MMBF/ASQ. To do otherwise offers unlimited cutting.

Aspen is not a merchantable product on the Targhee National Forest and therefore cannot be considered in the ASQ and should be managed as a wildlife resource.

658, 693, 1267

RESPONSE: Aspen will not be included in the 8.0 ASQ. Most of the aspen on the Targhee is unmerchantable. Harvested aspen volume will either fall under the firewood program if the acres are suitable or under the unscheduled program if acres are unsuitable. Where conifers are removed on suitable lands they will be counted against ASQ. LB

TIMBER - ALLOWABLE SALE QUANTITY

General Comments and Questions On Allowable Sale Quantity (ASQ)

COMMENTS: Display existing ASQ level.

166, 1367

RESPONSE: This is displayed in Table II-1 in the FEIS as potential yield. LB

COMMENTS: Display the 10-year average sale volume in the Table on Page 11.

166

RESPONSE: The 10-year average sale volume is not a component used to compare alternatives in the Table on page II. It is discussed in Chapter III (Affected Environment) of the FEIS. LB

TIMBER - ALLOWABLE SALE QUANTITY

COMMENTS: Be specific regarding when, where, and how much logging will be permitted so industry, recreationists, preservationists can predict impact on their area of interest, and display the harvest.

496, 625a, 669, 1269, 1330, 1392

RESPONSE: The DEIS and DREV were silent on potential location of unscheduled acres. Proposed harvest acres, both ASQ and unharvested, are provided by watershed for each alternative. Site-specific effects are determined through a project-level EA or EIS when a timber sale is proposed. LB

COMMENTS: Is there really 7.5 MMBF left on the forest without going into roadless areas, old growth and sensitive areas?

625a

RESPONSE: Roadless areas account for approximately 8% of the suitable acres in the Revised Plan. Suitable acres account for 40% of the total forested acres on the Forest. Most sensitive areas are not included in the suitable base. LB

COMMENTS: ASQ is very low. Can amendments on timber yield and access be made as needed over time?

314

RESPONSE: Changes to the Revised Plan can occur over time. Changes are generated through site-specific NEPA analysis which indicates the need for a plan amendment are part of a project decision. LB

COMMENTS: Green sales should be reduced commensurate with increase in salvage sales.

1365

RESPONSE: ASQ levels for all alternatives are revised. ASQ volume is generally considered green or "live" volume. The Revised Plan proposes to increase green sales as salvage sales decrease. Salvage efforts have largely been completed. LB/RR

COMMENTS: Incorporate studies by Henjum (Henjum et al, 1994) and by Patten and Hansen (1995) into the Revised Plan.

690

RESPONSE: Patten and Hansen (1995) are incorporated in the Biological Assessment for the Revised Plan and provide supportive information regarding old growth on the Forest. Henjum, et.al. was not used as a source in these documents. LB

Long-Term Sustained-Yield Capability

COMMENTS: Support an effective long-term sustained yield management approach that properly conserves a full spectrum of forest resources and reflects multiple-use responsibilities.

244, 408, 411, 490, 1203

TIMBER - ALLOWABLE SALE QUANTITY

RESPONSE: Long-Term Sustained-Yield (LTSY) is 22.0 MMBF. The ASQ is 8.0 MMBF. The difference between these amounts reflects the multiple-use responsibilities the Targhee is required to meet. LB

COMMENTS: Provide documentable evidence that ASQ is sustainable and that it will not reduce elk cover, increase road density, soil erosion or disturb watersheds above existing levels.

625a, 1365

RESPONSE: LTSY is approximately 22.0 MMBF. ASQ is 8.0 MMBF. Effects of implementing the proposed ASQ harvest level are discussed in Chapter IV of the FEIS. Whether the Targhee achieves this level depends upon site-specific analysis. Harvest activities could reduce elk cover, increase road density, soil erosion or disturb watersheds above existing levels. LB

COMMENTS: Move more of the 27 MMBF of sustained yield ahead to show some attempt at leveling out sales instead of boom-bust cycles.

334, 1339

RESPONSE: Long-Term Sustained-Yield is approximately 22.0 MMBF, not 27 MMBF. The Forest increased ASQ from 3.7 MMBF to 8.0 MMBF. Our analysis shows an ASQ of 8.0 MMBF is sustainable and provides a reasonable program level until regenerated lodgepole pine stands become commercially available. LB

COMMENTS: Targhee has been a non-sustainable tree farm for loggers far too long.

60

RESPONSE: The Targhee intends to manage the Forest for the sustainability of all ecological components. The proposed ASQ of 8.0 MMBF is significantly lower than the 22.0 MMBF for long-term sustained yield. LB

COMMENTS: Long Term Sustained Yield at 27 MMBF a year is constrained by goshawk habitat.

154

RESPONSE: The LTSY for the Revised Plan is approximately 22.0 MMBF. Proposed ASQ is 8.0 MMBF. The difference between these two figures reflects other multiple-use objectives, including goshawk needs. LB

COMMENTS: Disclose and discuss the method and process of field validation used to arrive at the LTSYs in Table IV-19.

Discuss process used to reduce LTSY in Alternative 3 by 14.9 mmbf. Such a large reduction calls formulation of the model into question.

Discuss how FORPLAN results for LTSY were field validated.

1389

RESPONSE: On-the-ground timber inventory data was used in FORPLAN. LTSY calculations are derived from FORPLAN outputs. LTSY calculations are a measure of average annual growth of the forest on all of the suitable acres and field validations are not useful. Two field validations were completed on the ASQ output generated by FORPLAN. Both indicated a reduction of

TIMBER - ALLOWABLE SALE QUANTITY

approximately 35% from the FORPLAN output. The reduction reflects management prescriptions, objectives, standards and guidelines which could not be modeled in FORPLAN and that affected the ASQ estimate. LB/RR

COMMENTS: Re-examine data and process for arriving at LTSY and proposed ASQ. Re-examine constraints that could result in pulling more harvest volume into the first decade of the Plan.

1389

RESPONSE: The FORPLAN model was rerun between the Draft Plan and Revised Plan. The Targhee overconstrained ASQ by only allowing 20% of the suitable base to be in a created opening at one time. The correct constraint is 20% of total forested acres. LTSY, which is a measure of the growth on suitable forested acres, was calculated at approximately 22.0 MMBF. The field-validated ASQ is 8.0 MMBF which is an increase over that shown in the DEIS. LB

Alternatives and ASQ

COMMENTS: Define how much of the ASQ in Alternative 2 and Alternative 3M are in a NIC component.

228

RESPONSE: The total NIC acres for roadless and steep slopes in these two alternatives are 92,845 and 45,074 respectively. It is not possible to determine an ASQ level in the NIC component until site-specific analysis is completed. A site-specific analysis will determine where harvest will occur. LB

COMMENTS: Don't blame motorized trails in roadless areas not even being considered for harvest as a reason for the decline in the ASQ.

228, 1202

RESPONSE: Motorized trails in roadless areas are not included in ASQ calculations. JR

Alternatives and Economic Concerns

COMMENTS: Any alternative that decreases ASQ will have a negative impact on fiscal health of surrounding communities.

432

RESPONSE: Any alternative that decreases ASQ may have a negative impact on the fiscal health of some surrounding communities. Because of the interplay between Payment in Lieu of Taxes and the 25% Fund and recent changes in the formula used in the Payments in Lieu of Taxes program, the negative impacts are minimal. The actual numbers are shown in the FEIS. DP

COMMENTS: High percentage of NIC in Alternatives 1-5 lowers practical ASQ to the point that all alternatives are nearly equal. 40 CFR 1502.41 requires the Forest Service to explore and evaluate reasonable Alternatives.

393

TIMBER - ALLOWABLE SALE QUANTITY

RESPONSE: The range of alternatives is reasonable. Based on public comments, ASQ in the alternatives is adjusted upward 0.0 - 12.9 MMBF compared to 0 - 5.9 MMBF in the DEIS. The percentage of NIC acres decreased as a result of removing aspen from the ASQ totals. NIC acres (slopes, roadless, and sensitive areas) are still included in suitable acres. LB

New Alternative Suggestions

COMMENTS: Consider an alternative that has a larger ASQ to prevent or reduce the amount and impact of insect and disease damage. Waiting until an epidemic starts is too late and increases the risk of wildfire.

413

RESPONSE: The number of acres proposed for harvest has doubled between Draft and Final. Assuming mature/at risk acres are prioritized for harvest, the opportunities for reducing risk to insect and disease damage have increased. More treatment could occur in future decades as stands grow back. RR/JR

COMMENTS: Consider an alternative of 12 MMBF of live, with at least 30-50% in lodgepole pine. A harvest weighted toward Douglas-fir will not help local timber industry. 413, 767, 1267

RESPONSE: ASQ levels for Alternatives 1-5 were adjusted upward. The Revised Plan proposes an ASQ of 8.0 MMBF. FORPLAN modeling indicates lodgepole pine would make up approximately 25% with the rest coming from other species, including mixed conifer types which includes some lodgepole pine. During the current planning period, lodgepole pine was extensively treated due to the mountain pine beetle epidemic. Since most areas of lodgepole pine have been treated, the majority of harvests will come from the mixed conifer and Douglas-fir components. Harvest location is a function of silvicultural need and multiple use objectives and is determined through site-specific analysis. LB

COMMENTS: Evaluate an alternative that maintains the existing Southeast Idaho timber industry - 20 MMBF without an NIC component.

393

RESPONSE: Alternative 2 proposes a potential ASQ of 12.0 MMBF, 3.8 MMBF of firewood/products and 2.0 MMBF of unscheduled harvest, for a total of 18.7 MMBF. A NIC designation is required in certain instances, such as for roadless areas, in all alternatives. LB/JR

COMMENTS: Analyze an alternative that reflects economic impact of decisions since 1985 and the closure of four lumber mills. Implementation of any of the existing alternatives will continue this impact. (CROSS REFERENCE: Economics, Timber)

393, 394

RESPONSE: Timber harvest at the 1985 level is not sustainable. Alternatives that did not meet long-term sustained yield requirements were dropped from further analysis. Information on decisions made from 1985-1995 are beyond the scope of this analysis. DP/JR

TIMBER - ALLOWABLE SALE QUANTITY

COMMENTS: Evaluate an alternative closer to the Long Term Sustained Yield capability.

228

RESPONSE: The LTSY of the Preferred Alternative is 22.0 MMBF. Alternative 2 proposes an ASQ of 12.9 MMBF, firewood/product of 3.8 MMBF, and 2.0 MMBF of unscheduled harvest potential for a potential harvest of 18.7 MMBF. LB/JR

COMMENTS: Include EM acres/volume expected over the next ten years and calculate how successful regeneration might contribute to Long-Term Sustained-Yield.

154

RESPONSE: The Forest provided an estimate of the maximum EM volume of 2.0 MMBF/year from unsuitable or non-ASQ acres. Growth in regeneration stands does contribute to Long-Term Sustained-Yield in the models the Targhee used. LB

COMMENTS: Increase the proposed 49% set aside to 100%. Even 100% does not take care of local community needs.

1349

RESPONSE: The proposed set aside is determined by regulation and computed by analyzing all sales sold over the prior 5 year period. (It has to be agreed on with Small Business Administration). It cannot be increased or decreased arbitrarily. BR

ASQ Is Too Low

COMMENTS: ASQ is too low.

20, 29, 267, 283, 285, 290, 309, 310, 394, 445, 473, 474, 476, 1198

RESPONSE: The Forest increased the ASQ from 3.7 MMBF in the Draft to 8.0 MMBF in the Final. ASQ is the amount of allowable timber that is sold from a plan area in a decade. Each Forest Plan proposes an allowable sale quantity. The allowable quantity is a ceiling, not a future sale level or target, and does not reflect all of the factors that may influence future sale levels. FORPLAN ASQ estimates are field-validated by resource professionals who are familiar with on-the-ground conditions and the constraints in management prescriptions. Actual ASQ may be more or less than those stated. If actual ASQ is higher than what was proposed, an amendment to the Plan is required with input and review by the public. LB/JR

COMMENTS: Too much of a drastic change from current direction. ASQ should be staged in small increments and over longer periods of time.

7

RESPONSE: ASQ was re-analyzed between the Draft and Final Forest Plan and increased from 3.7 MMBF to 8.0. The five year average sale volume for 1992-96 was 13.8 MMBF, including sawtimber, firewood, and product volume. The three year average sale volume 1994-96 was 9.6 MMBF. The Final Revised Plan allows an ASQ of 8.0 MMBF and firewood/product harvest of 3.8 MMBF. While this level

TIMBER - ALLOWABLE SALE QUANTITY

is less than the period 1985-94, it is in line with the past 3-5 year sale activity. Future decadal programs show an increase in ASQ over time. LB

COMMENTS: Need to harvest dead and dying trees so Forest will flourish; eliminate fire hazard.

12, 34, 272, 665, 709, 728, 1200, 1240, 1257, 1264, 1316, 1319, 1335

RESPONSE: The Revised Plan permits timber harvest and prescribed fire to regenerate stagnant stands. The Revised Plan also allows insects and disease to play a role in natural vegetation succession. LB/JR

COMMENTS: Should not cut back on timber sales - trees are falling over and going to waste or increasing fire danger.

Allow as much cutting as possible to avoid huge stands of bug, rust, and fire dead trees.

391, 661

RESPONSE: Timber harvest will continue to be a tool used to meet forest vegetation objectives. LB

COMMENTS: Alternative 3M will result in the accumulation of older age classes susceptible to mountain pine beetles in 40 to 50 years - even 20 mmbf will not be sufficient.

413

RESPONSE: All alternatives display predicted outcomes of age classes. The Revised Plan provides direction for the next decade and establishes goals for managing lodgepole pine density to reduce the risk of susceptible to bark beetles. The current decade ASQ is constrained by past harvest. Properly functioning condition assessments will be completed for lodgepole pine to address long-term management that will guide management activities. LB/RR/JR

COMMENTS: The needs of the timber resource should drive the ASQ. Elk, goshawk, grizzly bear, song birds, road densities, water quality should not determine ASQ.

432

RESPONSE: Management prescriptions were established to provide balance between competing resources. The ASQ is derived from management prescriptions. The National Forest Management Act requires that all resources be considered. JR

COMMENTS: The quickest way to destroy the sustainability of the environment is to take away the tools needed to allow it to work and remain healthy, diverse and full of vitality.

432

RESPONSE: The Revised Plan allows the use of a variety of tools and methods to sustain the forest environment. Monitoring, evaluation and adaptive management will determine if and when the Revised Plan needs to be amended.

LB

TIMBER - ALLOWABLE SALE QUANTITY

COMMENTS: Log at a sustainable rate. We need to be able to get firewood to burn. (CROSS REFERENCE: Firewood)

257, 649, 1315

RESPONSE: An ASQ of 8.0 MMBF is sustainable based on a LTSY of 22.0 MMBF. The Revised Plan allows for fuelwood harvest. Future decades should show an increase in harvest opportunities as regenerated lodgepole pine stands reach commercial size. LB/RR

COMMENTS: Makes no sense to harvest only 3.7 MMBF out of a sustainable 30 MMBF.

346, 380

RESPONSE: The Long-Term Sustained-Yield for the Revised Plan is 22.0 MMBF. Adjusted ASQ for the Revised Plan is 8.0 MMBF. The ASQ is less than LTSY because of the need to maintain and improve other resources. LB/JR

COMMENTS: Manage timber for better productivity. Cut mature timber, clear non-producing thickets, remove firewood, and plant when necessary.

439

RESPONSE: Your comment is acknowledged. Silvicultural prescriptions are developed on a site-specific basis. Harvest levels are balanced with other resource needs. LB

COMMENTS: Embarrassingly small volume of ASQ when you consider the extensive productive land base of 487,000 acres which are growing at a rate of 54 mmbf a year and only 7% of this net annual growth is being proposed for harvest.

1389

RESPONSE: The Long-Term Sustained-Yield for the Revised Plan is approximately 22.0 MMBF. The ASQ is 8.0 MMBF. Firewood/product volume is an additional 3.8 MMBF. A net annual growth of 36% is proposed for harvest. ASQ increased from 3.7 MMBF in the Draft to 8.0 MMBF in the Final. Harvest is reduced in this planning period, because of the intensity of past treatments. LB/JR

COMMENTS: Write in flexibility to the plan to increase the decade harvest above 37 MMBF if salvage, forest health or as ecosystem goals dictate.

90

RESPONSE: If monitoring and evaluation determine a higher ASQ is appropriate and desirable, the Plan will be amended. LB/JR

COMMENTS: Harvest more timber, but do it more profitably and efficiently without damaging new growth.

182

RESPONSE: ASQ was increased from 3.7 MMBF in the Draft EIS to a sustainable 8.0 MMBF in the Final EIS. Economic efficiency, consistent with meeting ecological and multiple use objectives, is required by NEPA. RR

TIMBER - ALLOWABLE SALE QUANTITY

COMMENTS: Increase timber production while protecting over logged watersheds.
285

RESPONSE: The Revised Plan directly addresses this concern. The ASQ in the FEIS was increased in Alternatives 1-5. Increases in ASQ do not include regeneration harvest in Watersheds 9-13. LB/JR

COMMENTS: Offer more post and pole sales as well as a few more timber sales.
F-G2(2), 311

RESPONSE: Site-specific analysis determines the mix of sawtimber and products offered on an annual basis. Stand needs, silvicultural analysis, supply and demand, and Desired Future Condition guide these decisions. LB

Miscellaneous

COMMENTS: Plan limits harvest activities to 11,430 acres for the decade. Land manager's options are constrained as new methods of providing ecologic diversity are developed.
90

RESPONSE: The new proposed ASQ of 8.0 MMBF/year allows harvest on approximately 20,520 acres over the decade. An additional 2.0 MMBF/year could come from unscheduled harvest to meet other resource objectives. LB/RR/JR

COMMENTS: Use a "mature trees" only logging policy with exceptions for disasters.
428, 608

RESPONSE: ASQ volume is mature trees. LB

ASQ Is Too High

COMMENTS: ASQ is too high.
42, 174, 266, 620, 668, 1365, 1368

RESPONSE: ASQ is the amount of allowable timber that can be sold from a plan area in a decade. Each Forest Plan establishes an allowable sale quantity. The allowable quantity is a ceiling, not a future sale projection or target, and does not reflect all of the factors that may influence future sale levels. FORPLAN ASQ is field-validated by resource professionals who are familiar with on-the-ground conditions and the constraints in management prescriptions. If ASQ is increased, an amendment to the Forest Plan is required. An ASQ of 8.0 MMBF/year is sustainable and is well below projected Long-Term Sustained Yield of 22.0 MMBF. LB/JR

COMMENTS: The ASQ should not exceed 37 million board feet over the decade and the ASQ will be from areas of the forest that do not violate other guidelines and standards.
697

TIMBER - ALLOWABLE SALE QUANTITY

RESPONSE: ASQ in the preferred alternative is 8.0 MMBF/year or 80 MMBF for the decade. The Revised Plan provides direction in the form of goals, objectives, standards, and guidelines that prevent harvest in unsuitable or sensitive areas. LB/RR

COMMENTS: The Revised Plan should focus on restoration in general or specifically fish and wildlife restoration.

F-H(8), 11, 136, 239, 266, 325, 620, 651, 652

RESPONSE: The Revised Plan addresses ecosystem needs. Improved guidance for fish and wildlife including restoration are incorporated. LB

Reduction Of Mountain Pine Beetle Requires Reduction In ASQ

COMMENTS: Recognition that pine bark beetle salvage is finished suggest a greatly reduced ASQ.

527, 634, 668

RESPONSE: All proposed ASQ levels are less than ASQ levels during the current planning period. The preferred alternative proposes an ASQ of 8.0 MMBF/year below projected LTSY of 22.0 MMBF. LB

COMMENTS: Green timber sales were not balanced with extensive salvage of pine beetle timber. Need change in management enthusiasm.

341

RESPONSE: ASQ levels in each alternative reflect green volume. Salvage will be limited during this decade. LB/JR

COMMENTS: Reduce harvest to improve scenery.

6, 215

RESPONSE: Visual objectives are incorporated in each alternative. Harvest is lower than in the previous decade. LB

ASQ Too High If Majority Of Harvest Occurs In Centennials & Beaverhead Ranges

COMMENTS: ASQ is too high if the Forest carries out its proposals to harvest, on average, half of the proposed volume from the Centennials Mountains and the Beaverhead Range. (CROSS REFERENCE: Centennials)

643

RESPONSE: Approximately 35% of the proposed annual ASQ harvest is scheduled in the Centennial Mountains and Beaverhead Range. Site-specific analysis with public input will be used to develop individual project proposals. Field verification indicates timber harvest is feasible in these areas and will meet standards and guidelines in the Revised Plan. LB/RR/JR

Prefer Current Harvest Levels No Action

COMMENTS: We are satisfied with the current harvest levels of the Forest.

23, 738

TIMBER - ALLOWABLE SALE QUANTITY

RESPONSE: ASQ has changed from 3.7 MMBF in the Draft to 8.0 MMBF in the Final. LB

Support For ASQ In Cuff Proposal

COMMENTS: Support ASQ as described in the CUFF proposal in general or for economic reasons, recreation, forest health.

288, 501, 1176, 1309

RESPONSE: ASQ was re-analyzed between the Draft and the Final Revised Plan. Alternative 2 approximates the CUFF proposal and is analyzed in the FEIS. LB

Support For ASQ In Alternative 1

COMMENTS: Support Alternative 1 because of economic benefits from recreation and timber.

292

RESPONSE: The Forest agrees Alternative 1 would be more responsive to local economy concerns, as shown in the FEIS, Chapter IV. The Targhee modified Alternative 3M, in part, to improve local economic conditions; however, Alternative 3M provides a more balanced response to the wide range of issues facing the Forest. DP

Support For ASQ Amount In Alternative 2

COMMENTS: Correct Alternative 2 to indicate timber harvest is allowed in the Plateau BMU (Page IV-34). (CROSS REFERENCE: Grizzly Bear - Plateau BMU)

413

RESPONSE: Alternative 2 was corrected in the FEIS. LB

COMMENTS: Support ASQ amounts in Alternative 2 for wildlife, forest health, and economic reasons.

30, 34, 36, 46, 47, 50, 54, 90, 98, 272, 296, 309, 334, 462, 687,
1335, 1378, 1390

RESPONSE: ASQ level for Alternative 2 increased from approximately 6.0 MMBF to 12.9 MMBF between Draft and Final. Firewood/post ASQ remains at 3.8 MMBF. LB

Support For ASQ Amount In Alternative 3M - With Exceptions

COMMENTS: Support ASQ in Alternative 3M as long as it does not affect firewood cutting. (CROSS REFERENCE: Firewood)

44, 49, 53

RESPONSE: All alternatives allow the harvest of 3.8 MMBF of firewood across the Forest. This volume is not included in ASQ projections. LB/JR

COMMENTS: Support harvest in Alternative 3M in general, for maximum sustainability forest recovery, science recommends this level, promotion of

TIMBER - ALLOWABLE SALE QUANTITY

forest health, improvement of environmental quality, reduction in wildlife impacts, multiple use oriented, economics.

F-B(4), F-J(3), 11, 27, 58, 143, 157, 159, 162, 165, 167, 173, 175, 180, 181, 183, 185, 190, 192, 193, 200, 203, 209, 212, 213, 226, 252, 278, 280, 335, 356, 357, 359, 360, 362, 368, 370, 377, 379, 390, 392, 398, 400, 405, 407, 410, 424, 430, 438, 441, 448, 490, 491, 496, 519, 622, 632, 640, 643, 644, 650, 652, 659, 662, 664, 666, 667, 690, 697, 719, 725, 731, 1197, 1243, 1257, 1270, 1273b, 1276, 1313, 1327, 1328, 1330, 1337, 1351, 1381, 1388, 1395, 1399, 1443

RESPONSE: ASQ output for Alternative 3M increased from 3.7 to 8.0 MMBF. Forestwide standards and guidelines for vegetation address most of these concerns. LB/RR

COMMENTS: Support ASQ in Alternative 3M except for 4,700 acres proposed for harvest in the Centennial Mountains. (CROSS REFERENCE: Centennials)
1204, 1314, 1387

RESPONSE: Approximately 35% of the proposed annual ASQ harvest is scheduled in the Centennial Mountains and Beaverhead Range. Site-specific analysis with public input will be used to develop individual projects proposals. All projects must meet standards and guidelines. LB/JR

Support For ASQ Amount In Alternative 4 - With Exceptions

COMMENTS Support for ASQ in Alternative 4 because of fish and wildlife, roadless set aside.
176, 308, 325

RESPONSE: ASQ level for Alternative 4 increased from approximately 2.5 MMBF to 6.0 MMBF. LB

COMMENTS: Support ASQ amount in Alternative 4 if timber is sold to local companies.
61

RESPONSE: Sales are sold by competitive bid. Local industry is invited to bid on sales. LB/JR

Support for Alternative 6

COMMENTS: Support for ASQ in Alternative 6 in general, for restoration, to protect headwaters, less impact to wildlife, protect riparian areas, wilderness.

F-G-1(475), F-K(4), 207, 279, 317, 328, 382, 609, 631, 655, 739, 1275, 1321, 1340, 1367, 1387

RESPONSE: The ASQ for Alternative 6 remains at zero and did not change between draft and final. LB

TIMBER - ALLOWABLE SALE QUANTITY

Support For 3MMBF ASQ

COMMENTS: Support 3 MMBF ASQ because it takes waste practices/waste margin into consideration and thereby reduces ASQ.

1324

RESPONSE: The timber sale appraisal process considers various defects that occur in the timber resource and in harvest operations, regardless of the selected alternative. LB

COMMENTS: The Final Plan should include a strict adherence to the specified ASQ of 3.7 MMBF per year and the specified 3.8 MMBF per year for other forest products.

690

RESPONSE: Re-analysis of ASQ between the Draft and Final Revised Plan increased from approximately 3.7 MMBF to 8.0 MMBF. Firewood/forest product levels remain at 3.8 MMBF/year. LB

Support 5MMBF ASQ - Economics Reasons

COMMENTS: Local timber interests need 5mmbf to remain viable.

154

RESPONSE: The Revised Plan provides 8.0 MMBF. LB

COMMENTS: Limit logging to 5 MMBF for sound management.

179

RESPONSE: The ASQ for each alternative was recalculated. The Preferred alternative proposes an ASQ of 8.0 MMBF, below the LTSY of 22.0 MMBF/year. LB

COMMENTS: Goshawk constraint was only applied to 487,000 suitable acres rather than total Forest lands (1,219,741 acres) or tentative total Forest lands (703,100 acres). The 20% constraint was intended to apply across the whole forest. A recalculation would increase ASQ to 5 MMBF.

Adjust proposed ASQ upwards to 5 MMBF by revising Goshawk constraint. (CROSS REFERENCE: Wildlife, Goshawk)

154, 1258

RESPONSE: Your comments are acknowledged. The Targhee re-analyzed ASQ predictions and applied the goshawk constraint against total forest acres. As a result ASQ increased from 3.7 MMBF to 8.0 MMBF in the Revised Plan. LB

Support for 10MMBF ASQ

COMMENTS: Ensure that the Forest retains expertise to put out quality timber sales; supports viable timber industry.

283

TIMBER - ALLOWABLE SALE QUANTITY

RESPONSE: The Final Revised Plan proposes an ASQ of 8.0 MMBF/year which should allow timber sale preparation and administration expertise to remain on the forest. LB

Support For 20MMBF ASQ

COMMENTS: None of the existing alternatives will support a viable timber industry which affects local communities.

692

RESPONSE: Chapter III of the EIS projects that a viable timber industry would need 31.0 MMBF for survival including firewood. Approximately 50% of this amount would come from the Targhee. The Revised Plan proposes 8.0 MMBF of sawtimber and 3.8 MMBF from firewood and a potential of 2.0 MMBF from unscheduled timber harvest for a total of approximately 13.7 MMBF. Alternatives 1-3 come close or exceed this level. LB/JR

COMMENTS: A reasonable NEPA/NFMA analysis to sustain timber industry in Southeast Idaho would provide 20 MMBF a year.

393

RESPONSE: The Long-Term Sustained-Yield for the Targhee is 22.0 MMBF. Based on the prescription mix and validation of ASQ, a 20.0 MMBF level can not be sustained in this decade and would not be supported by NEPA/NFMA analysis. LB

COMMENTS: Early in the planning process, the Forest was looking at 20 MMBF/year including post, poles, firewood, and sawtimber with half of the ASQ to be sold in small class lodgepole. Stick to your agreement.

1267

RESPONSE: Early ASQ estimates were based on the best information available but did not represent an "agreement". Based on our re-analysis, the Targhee is proposing a potential harvest program of 13.7 MMBF under Alternative 3M

(includes products). To propose a 20.0 MMBF program under 3M would not meet other important resource needs associated with this alternative. Alternative 2 proposes 18.7 MMBF. LB

Support For 25-30 MMBF ASQ

COMMENTS: Support for 25-30 MMBF for economics, scenery, reduce fire hazard, forest health.

Support for 26-28 MMBF ASQ for economics.
471, 476, 694, 1202, 1239

RESPONSE: An increased ASQ of 25-30 MMBF would exceed the Long-Term Sustained-Yield level of 22.0 MMBF and would benefit these areas of concern only in the short term. Until previous harvest areas reach harvestable growth, a 20.0 MMBF level would not meet objectives outlined in the FEIS for other resources. LB/JR

TIMBER - ALLOWABLE SALE QUANTITY

COMMENTS: Support for ≥ 30 MMBF for sustainability, economics, reduce fire frequency.

98, 275, 413, 495, 503, 564, 702, 1202

RESPONSE: LSTY is generally viewed as a cap. Changes in ASQ that exceed LSTY predictions require a Forest Plan amendment. This was the case in the current planning period when the Targhee departed from estimated ASQ levels to reduce impacts from insect and disease in lodgepole pine stands. The Long-Term Sustained-Yield for The Revised Plan is estimated at 22.0 MMBF. None of the proposed alternatives exceed the LSTY. LB/JR

COMMENTS: Prohibit Logging: 1) in the Centennials, 2) Big Holes, 3) Teton Basin, 4) Plateau Area, 5) Snake River Range, 6) All roadless areas, 7) All aquatic/riparian areas, 8) Old growth stands, 9) Grizzly bear, Sit 1, 10) Spotted frog habitat, 11) Winter range and calving areas, 12) Yellowstone ecosystem and surrounding corridors.

F-G-1(475), F-H(8), F-J(3), F-K(4), 23, 203, 212, 278, 335, 389, 489, 611, 625, 640, 643, 650, 655, 690, 695, 697, 739, 1194, 1239, 1243, 1276, 1328, 1330, 1395

RESPONSE: Management prescriptions that describe permitted activities in various areas on the Targhee are included in the Revised Plan. Although harvest may be permitted in some of these areas, site-specific analysis is required. Standards and guidelines were designed to provide adequate protection of resources. LB/CC/JR

Wildlife Habitat Needs Should Be Tied To Timber Harvests

COMMENTS: Associate wildlife habitat needs with proposed ASQ.
136, 1369

RESPONSE: The majority of the management prescriptions are designed for resources other than timber, but allow different levels of harvest to take place as long as the direction for the area is followed. Therefore, wildlife habitat needs are associated with ASQ. LB

COMMENTS: On wildlife and ecosystem projects that include removing conifer, let it be a wildlife project instead of including it in the ASQ.
1267

RESPONSE: To count as part of the proposed ASQ level of 8.0 MMBF, volume must come from suitable lands. If the project, regardless of its objectives, is located on suitable land, any harvest would count toward ASQ. If the project is located on unsuitable land, any harvest would be counted against the Non-Interchangeable component that limits volume to 2.0 MMBF/year. LB

COMMENTS: Don't stop logging, just make sure new roads get closed and that some cover is left for game.
336, 1333

RESPONSE: All alternatives in the Revised Plan allow logging. Roads and access will be managed according to the needs of the resource through

TIMBER - ALLOWABLE SALE QUANTITY

site-specific analysis. Many existing roads are scheduled for closure and road density standards have been established. Elk cover standards were established to ensure cover is provided for game. LB/JR

Restore Degraded Wildlife Habitat From Past Harvest Activities

COMMENTS: Restore any habitat that has been degraded as a result of logging and road-building.

396, 640, 651, 652, 665

RESPONSE: Laws, regulations, and the Revised Plan's standards, guidelines, goals, and objectives emphasize restoration of degraded habitat regardless of the activity that created the problem. LB

COMMENTS: Need to restore areas and get back to sustainable harvest of trees.
60

RESPONSE: All alternatives propose ASQ levels that are sustainable and lower than the Long-Term Sustained-Yield of 22.0 MMBF. LB

COMMENTS: Move toward protection of all plants and animals and the habitat that supports them. Too much harvest has occurred in the past.

620

RESPONSE: Management prescriptions and standards and guidelines in the Revised Plan are designed to provide adequate protection of all resources. Each alternative's proposed ASQ level is lower than the anticipated LTSY of 22.0 MMBF. Site-specific NEPA analysis may determine more restrictive protection measures are necessary than those outlined in the Revised Plan. LB

TIMBER - BIG GAME

(CROSS REFERENCE: Wildlife, Elk)

COMMENTS: Improve analysis of the effects of harvest on wildlife and include the following: How was it determined, how many acres could be harvested to maintain wildlife species; assess existing wildlife populations, source habitats and determine if the habitats are adequate; evaluate impacts on big game security in timber harvest areas; show the effect past logging roads has had on declining big game populations, and existing forest conditions.

244, 475, 643, 1369

RESPONSE: Management indicator species were selected for the Revised Plan. These species include all threatened, endangered, and sensitive species on the Forest, plus other species. Habitat requirements were identified, and appropriate standards and guidelines and management prescriptions were developed to maintain suitable habitat conditions. The Revised Plan's standards and guidelines and management prescriptions were incorporated into the Forplan Model used in calculating ASQ.

The AMS, DEIS, FEIS and Process Paper D assess the available population and habitat conditions for each of the management indicator species.

TIMBER - BIG GAME

The Forest evaluated effects on big game security with two models: elk habitat effectiveness (EHE) and elk vulnerability (EV). The Revised Plan reduces the amount of motorized access on the Forest, which improves both EHE and EV. The Forest also developed two Management Prescriptions (5.1.4 and 5.4) which address security issues associated with timber harvesting.

The EHE and EV analysis in the FEIS discusses existing condition, which incorporates all past timber harvests and all motorized access. MO

COMMENTS: Draft implies elk depend on logging to create forage habitat which conflicts with studies documenting a loss of forage caused by regeneration logging practices (stem exclusion phase).

RESPONSE: Nowhere in the Revised Plan is there an implication that elk depend on logging. MO

COMMENTS: Reduce harvest so 100% of the Forest meets Fish and Game goals for elk security.

625a

RESPONSE: One of the goals for the Revised Plan is: "Provide habitat to support the wildlife and hunting goals of the States of Idaho and Wyoming." The Revised Plan reduces the timber harvest volume, but timber harvest is only one of many factors considered in meeting Fish and Game goals for elk security. Other factors, such as travel management, road density, and hunter density are also considered.

Proposed changes in more restrictive snowmachine travel, cross-country motorized travel, and a reduction in open road and open trail route density should result in improved habitat effectiveness and lower elk vulnerability.

During the next decade, the number of forested acres proposed for timber harvesting is reduced from what occurred in the past decade. In the Revised Plan, about 30,500 forested acres are proposed for timber harvest or vegetative treatment (such as prescribed fire) during the first decade. Only

2.5% of the total forested acres on the forest will be affected by harvest activities. A net increase is predicted in cover as the previously harvested areas continue to grow and provide cover for elk and other wildlife.

Predicted improvements in habitat conditions are only part of the answer. Some areas of the Forest have high hunter density. State Fish and Game agencies must also manage hunter densities if goals are to be met. MO

Goals For Wildlife Do Not Provide For Other Multiple Uses

COMMENTS: Goals for elk security are unsubstantiated and do not consider other multiple uses and resulting economic effects. Elk populations have increased over the last ten years and as long as numbers remain high, the argument for limited access and setting aside 50-60% of the watershed for cover is a moot point.

692

RESPONSE: Goals for elk security are developed by State Fish and Game departments. The FEIS considers other multiple uses and economic effects.

TIMBER - BIG GAME

Elk populations have increased in many areas of the Forest, but declines in elk use have occurred on portions of the Forest which have experienced timber management or have high road densities. The Idaho Department of Fish and Game indicates that elk goals are not being met in Game Management Units 59, 59A, 60, and 62A. The Revised Plan reduces motorized access and allows cover to increase in previously harvested areas in support of State Fish and Game goals. MO

Reconsider Timber Harvest On Winter Range

COMMENTS: Specifically disclose habitat needs of wintering big game and proposals to improve winter habitat quality. Cite scientific evidence to demonstrate a wildlife need for timber harvest on winter range or delete from the Plan.

766

RESPONSE: The Targhee cooperated with State Fish and Game agencies to identify important elk and deer wintering areas on the Targhee. A winter range management prescription was developed to provide habitat conditions needed by wintering big game animals. In these areas harvesting will only be allowed when site-specific analysis indicates winter habitat conditions will be maintained or improved. Any timber harvest occurring in elk and deer winter range prescription is not counted in the proposed 8.0 MMBF/year. Timber harvesting can improve winter range, especially when trees have shaded out important forage plants and reduced the amount of winter forage. MO

Change Standards

COMMENTS: Change last item under standards and guidelines for the management prescription of Timber Management (Big Game Security Emphasis) to read as follows: "No timber harvest activities or similar type of activity can occur within a security area during the time it is designated a security area. Security area designations will be at least ten years in duration. New security areas will be designated and protected at least 19 months prior to entry into a currently designated security area."

643, 1401

RESPONSE: From 1980 to 1992, the Targhee conducted an elk monitoring project associated with several timber sales on the Dubois Ranger District. Results indicated elk use declined (but was not eliminated) in timber sale areas during years of road building and harvesting, but increased again after management activities were completed. Elk and deer will use clearcuts, shelterwood, and seed tree cuts. The Targhee determined elk security was an important issue. Habitat features that affect elk security are motorized access density, hunter density, and hiding cover. Hunter density is regulated by the State Fish and Game departments. Motorized access and hiding cover are regulated by the Forest Service. Management Prescription 5.4 establishes direction for low motorized access and maintenance of appropriate levels of hiding cover over time. The prescription provides direction for maintaining security areas adjacent to timber harvesting activity which eliminates the need to designate these areas for 10 years. MO

TIMBER - BIG GAME

Prohibit Harvest Activities In Elk Calving And Summer Habitat

COMMENTS: Prohibit logging in elk calving and big game summer habitat.

278

RESPONSE: Elk calving and summer use occurs where timber harvesting has and does occur. The Targhee conducted long-term monitoring on elk use in timber sale areas on the Dubois Ranger District.

Harvested areas are used by elk during calving periods and throughout the summer. Study results indicated elk use declined, but was not eliminated, during active management years of the logging, and returned to pre-logging levels after the harvest activities. Elk use occurs in all stages of forest succession, from grass/forb and seedling stage to old growth stages.

The Revised Plan allows for timber harvesting, but takes into account important habitat considerations for elk, including motorized access density and hiding cover. The Revised Plan reduces motorized access density from existing levels and allows hiding cover to increase as trees in previously logged areas to grow. Management Prescriptions 5.1.4 and 5.4 allow timber harvesting, but require that only 20% of the forested acres to be in a created opening at any point in time. Approximately 80% of forested acres in these management prescriptions will provide adequate cover for elk at any point in time. The management prescriptions require large blocks of cover (greater than 250 acres in size). MO/LB

Include Appropriate Mitigation Measures

COMMENTS: Consider appropriate mitigation measures to maintain elk habitat effectiveness and require Fish and Game to manage elk populations.

393

RESPONSE: The Revised Plan reduces motorized access (reduces open roads and trails and eliminates summer cross-country motorized travel) on about 94% of the Targhee and reduces timber harvesting. These actions should improve elk habitat effectiveness in most areas. State Fish and Game departments are responsible for managing elk populations. MO

TIMBER - DESIRED FUTURE CONDITION

Alternative 3M

COMMENTS: Ensure Alternative 3M meets recommendations on Page 3 (DEIS) and identify the most important priority...wildlife, recreation, timber harvest, etc. (CROSS REFERENCE: Alternatives)

625

Explain why road closures and other items cannot meet DFC while still cutting timber and providing jobs.

625

RESPONSE: All alternatives address the Purpose and Need and Desired Future Conditions including sustainability. The Revised Plan responds to a variety of issues and concerns. The expected outcome of plan implementation through site-specific projects, is to move forest resources toward a desired condition

TIMBER - DESIRED FUTURE CONDITION

described in the Revised Plan. In response to wildlife issues and concerns, the Targhee proposes to close more roads to motorized access and to close more areas to cross-country motorized use. All alternatives except Alternative 6 propose timber harvest.

Resource priorities were replaced by Desired Future Condition statements. Information on sustainability is presented in the EIS in each resource section and under the topic of Ecosystem Management. AS

Timber Harvest

COMMENTS: Be more specific about how logging will be used to achieve DFC, e.g., in overstocked Douglas-fir, smaller trees will be harvested to create open, park-like structure of widely spaced old trees thought to exist prior to settlement.

489

RESPONSE: The DFC for Ecosystem Processes and Patterns states: "A mosaic of age classes and types of vegetation are sustained through time and exist across the landscape." A Table in Chapter III of the Revised Plan displays tentatively suitable acres by species and age group. The table indicates that 94% of the Douglas-fir group is in the mature category. Specific silvicultural needs will be determined through site-specific analysis and will reflect direction provided by management prescription. DFC statements are broad and long-term in nature and may not be realized during a 10-15 year planning cycle. The Targhee will use properly functioning condition assessments to maintain healthy ecosystems. (Refer to new standards and guidelines for Properly Functioning Condition).

The "vegetation" section under biological elements was expanded to provide direction for using timber harvest to achieve desired conditions in forest ecosystems and to meet a broad range of ecological and multiple-use objectives. LB/RR

Roadless Areas

COMMENTS: Eliminate Timber Prescription 5.1.4 (b) and 5.3.5 from roadless areas. Timber harvest eliminates or reduces future wilderness preservation options.

695

RESPONSE: The decision to allow timber management activity in roadless areas is a specific element of the Revised Plan to meet multiple-use objectives. Less than 0.2 of one percent of total roadless acres would be impacted by the Revised Plan, and the DFC would be met. AS

TIMBER - ECONOMICS

Needs Additional Analysis/Changes

COMMENTS: Correlate the price of lumber and the proposed ASQ or lack of wood coming off the Forest.

602

TIMBER - ECONOMICS

RESPONSE: No correlation is made between the price of lumber bought and sold in a national marketplace with the ASQ of the Targhee. The volume of timber provided by the Targhee is insignificant relative to the price of lumber in a national market. DP

COMMENTS: Discuss more about new building innovations in relationship to supply and demand for wood products (for example, vinyl siding, steel studs, joists) where the source is to sustain lodgepole pine wood products (most can not be made from fir or aspen); and what the production of "services" has to do with the production of natural resources.

613, 697, 1339

RESPONSE: These factors, (among others) are considered by prospective bidders competing for Targhee timber. The marketplace constantly develops new markets, competing materials, and applications for traditional products like lumber. Expanded discussion of the marketplace are unwarranted in an EIS for an individual National Forest Plan. DP

COMMENTS: Reduce unnecessarily strict constraints on FORPLAN model.

413

RESPONSE: In response to this and other comments received on the question of timber harvest, the Targhee re-examined constraints on scheduled timber harvest. Initial Forplan calculations incorrectly constrained ASQ, for goshawk considerations. The constraint was calculated only on suitable acres and should have been calculated on total forested acres, regardless of suitability. As a result of correctly applying the goshawk constraint to total forested acres, the Revised Plan shows an increase in ASQ from 3.7 MMBF/year to 8.0 MMBF/year. DP/LW

COMMENTS: Table IV-13 skews the PNV analysis in Alternative 6 toward undeveloped recreation which you admit is hard to predict.

393

RESPONSE: Table IV-13 in the DEIS showed identical recreation figures for all alternatives. DP

COMMENTS: Ensure that timber pays its way; don't operate at a fiscal loss, requiring public subsidy. Address the issue of below-cost timber sales, especially as it relates to salvage logging, since Rocky Mountain salvage logging is clearly not beneficial to the U.S. taxpayer.

F-G-P(1), 219, 279, 320, 336, 340

RESPONSE: The Forest Service maintains a tracking system for reporting costs, benefits, receipts and other information pertinent to the timber sale program on this and other forests. The costs associated with the timber program have exceeded receipts and benefits. The Targhee does not expect any of the alternatives will move the timber program into the black. This is largely the result of the costs associated with building roads and reforestation, coupled with comparatively low stumpage values and volumes per acre. The Revised Plan emphasizes reliance on natural reforestation and

TIMBER - ECONOMICS

silvicultural systems that promote natural reforestation and greater attention to cost effective road design.

The costs and benefits associated with the timber program, and other Forest programs, were considered in developing the Revised Plan. They were, not however, the primary concern. Rather, the Forest seeks to achieve the best balance of goods and services for people while ensuring the protection and sustainability of the resources. DP

COMMENTS: Evaluate a new alternative that sustains current timber industry and personal use needs and shows the significant economic impacts that have occurred as a result of a reduced ASQ in the 1985 plan.

394

RESPONSE: The Targhee recalculated the timber harvest model so it met as many constraints as possible on lands which were not scheduled for timber harvest which caused substantial increases in the timber (ASQ) in every alternative with an ASQ. ASQ volumes displayed in some alternatives generally approximate harvest levels from 1992-1995.

During the time the 1985 Forest Plan has been in effect, the level of timber harvests has declined sharply. The reduction in ASQ was not a result of Plan Revision and is not included in this analysis. DP

COMMENTS: There is only a difference of 15 jobs, or 1%, projected between Alternative 2 and Alternative 3M. This difference is too small to be a significant factor in supporting a higher ASQ.

667

RESPONSE: Even though the difference is small, disclosure is required by law. DP

Include Non-consumptive Uses in Timber Economics Rewrite

COMMENTS: Re-write economic section and show benefits of non-consumptive uses to local economy.

643

RESPONSE: The sections of the EIS dealing with economics were rewritten. The benefits of nonconsumptive uses to the local economy are described there. DP

COMMENTS: Support or qualify the Page S-7 statement that "a greater harvest of timber aids the local economy . . ." since this applies to a consumptive industry and not to local recreational business, much less regional tourism incomes.

727

RESPONSE: Within the context of the Revised Plan, the statement is correct. Predicted timber harvests are not expected to adversely affect recreation or other local or regional businesses or personal income. DP

TIMBER - ECONOMICS

COMMENTS: Reconsider economic time frames since Dr. Tom Powers, University of Montana, maintains that long-term economic impact of resource exploritive industries is likely to be negative, even for timber dependent communities.

727

RESPONSE: The long-term economic impacts of resource extractive industries may be negative or positive even for timber-dependent communities. Timber harvests proposed in the Revised Plan are not estimated to have long-term negative economic impacts. Growth in recreational activities and recreational residences has occurred in the vicinity of past timber harvests. DP

COMMENTS: Manage forest resources better even at the economic expense of logging. If not, we lose more than economic opportunity.

168

RESPONSE: The Revised Plan emphasizes lower timber harvests and more protection for basic resources such as soil and water. JR

COMMENTS: Recreation will bring more prosperity to the area than will logging.

F-G-P(1), 187, 190, 208

RESPONSE: Recreation and logging are viewed as compatible uses in the Revised Plan. The Targhee does not exclude one to achieve the other. The Revised Plan predicts that the overall level of prosperity will be greater with both uses than if either one were excluded. DP

COMMENTS: More fully discuss PILT payments to counties and the economic consequences of a reduced harvest level, but an increase in non-consumptive uses. Write-up perpetuates common misconceptions and is biased against non-extractive uses.

643

RESPONSE: The Forest updated and expanded the discussion of Payments in Lieu of Taxes in the FEIS in response to this and similar comments. DP

Include Non-consumptive Uses in Timber Economics Rewrite

COMMENTS: Include economic facts about low paying recreation seasonal jobs that can not replace 187 timber jobs and the more predictable levels of employee compensation in timber and livestock industries.

228, 346

RESPONSE: The FEIS presents information on both job numbers and employee compensation to address this concern. Overall levels of recreation are expected to be about the same in each alternative. The Targhee contains sufficient recreation capacity to handle substantial increases in almost all forms of recreation proposed in each alternative. Timber and livestock employment is expected to vary by alternative, because the amounts of timber harvested and the level of livestock grazing varies by alternative. Employee compensation in timber and livestock is not necessarily more predictable than

TIMBER - ECONOMICS

that associated with recreation. There is uncertainty in every sector of the economy. DP

Discuss International Timber Company Impacts on Local/Regional Economy

COMMENTS: Discuss the role of multi-international corporations in modern timber economy and make distinctions between the needs/desires of rural communities and the goals of major corporations and associations. Elaborate on the difficulty of supporting communities by profit requirements of corporate logging enterprises with headquarters in other regions. Include an analysis of the percent of revenue generated from timber sales that remain within the local area versus the percent that leaves the region in the form of profits.

1364

RESPONSE: This is beyond the scope of a Forest Plan. Economic effects are displayed on a local economic level by alternative. JR

General Economic Issues

COMMENTS: Provide small timber sales, post and pole, and all types of salvage sales to keep qualified local loggers in the area, for small business and local use only.

64, 1240, 1313, 1330

RESPONSE: Small timber sales are provided under the Revised Plan. DP

TIMBER - GENERAL

Manage for More Than Timber Harvests

COMMENTS: Manage for the benefit of all forest values including wildlife, fisheries, and recreation because these are important values and because managers are obligated to protect the resources.

278, 1396

RESPONSE: The Revised Plan provides balanced management direction for the benefit of all forest values. The management prescriptions apply different management intensities to various resources based on suitability and capability. LB

COMMENTS: Educate loggers and farmers on the importance of sustaining diversity because indiscriminate logging driven by economic need is devastating our forests. Manage by science, not local cultural preferences.

179, 293, 507

RESPONSE: The science of adaptive management is a focal point of the Revised Plan. Through time, the Targhee will learn more about the resources and the science that results in good stewardship. Logging and ranching operations have changed over time based on needs of the land and consumers. The Revised Plan reflects changed attitudes and increased knowledge but should not be viewed as the ultimate answer. Science continues to provide information

TIMBER - GENERAL

critical to good decision-making. Fundamental EM principles incorporate "best science". LB/RR

COMMENTS: Oppose all logging, grazing and mining because of impacts on all other resources especially wilderness.

No letter #

RESPONSE: The Multiple-Use, Sustained-Yield Act requires the Targhee to manage National Forest System lands for a variety of uses within the capability and sustainability of the land. Timber harvests are prohibited in wilderness areas. Mining and grazing are usually permitted to some extent and are subject to specific laws and regulations regarding wilderness areas. LB

COMMENTS: Restore fish and wildlife habitat degraded by past logging and roading.

F-G-1(475)

RESPONSE: The Targhee addresses habitat restoration through Watershed Needs Inventory. The inventory identifies problems and prescribes remedial measures. The Revised Plan proposes to reduce miles of open roads forestwide. No new roads are proposed for any new created opening in decades 1-3 in watersheds that were affected by lodgepole salvage harvesting activities. RSM/MO

COMMENTS: Transition to alternative resources and recycling because the loss of trees is a loss of recyclable minerals and nutrients and a loss of microhabitat.

No Letter #, 1314

RESPONSE: The Targhee supports recycling, both locally and nationally. Standards and guidelines in the Revised Plan address the need to retain an adequate amount of down woody debris to ensure an ample and continuous supply of nutrients, minerals and microhabitat to maintain forest productivity. LB

COMMENTS: Calculate net cooling effect on northern hemisphere as a consequence of proposed plan. Timber harvest will increase global warming.

275

RESPONSE: A calculation of this magnitude is beyond the scope of this analysis. Little change in effect on global warming is anticipated as a result of implementing any of the seven alternatives. Timber harvest will only affect 1.56% of total Forest acres during the decade. LB

COMMENTS: Reconsider an aggressive management approach that promotes harvests, salvage harvest, thinning, prescribed fire without considering wildlife or the beneficial aspect of fire renewal. Reconsider the assumption that managed lands are more healthy than unmanaged.

695, 1365

RESPONSE: The Revised Plan presents a balanced program of management activities that should result in healthy ecosystems. None of the management prescriptions emphasize timber production over other resources. Although some

TIMBER - GENERAL

prescriptions permit timber harvest, generally this use is subordinate within the prescription. Some prescriptions limit timber harvest in support of wildlife needs. If managed properly, public lands can remain healthy and resilient to natural and human-caused disturbances. LB

COMMENTS: Explain on Page S-4 how the forest will manage conflicts between resources when forest health is not an issue. Consider something like, "Forest production within forest health limits is managed to minimize conflicts with non-consumptive uses and is curtailed (with due regard to economic considerations) if conflicts cannot otherwise be minimized."

341

RESPONSE: Management prescriptions are designed to resolve conflict between uses. Goals, objectives, standards and guidelines are developed for resources and reflect resource importance in achieving prescription goals. LB

Manage for Timber Harvests

COMMENTS: Manage logging. Further reduction of logging & grazing do not produce long-term forest health. "No use" does not translate to "wise use".

660, 1448b

RESPONSE: The Revised Plan permits timber harvests in areas that are suitable and capable of sustaining this type of management activity. Other direction provided in standards, guidelines and timber contract provisions ensure timber harvest is completed in a managed and environmentally sound manner. RR

COMMENTS: Explain why the Forest constrained timber harvest by timber compartment and watershed rather than ecological subsection.

228

RESPONSE: Harvest is constrained by watershed because of potential cumulative effects from harvest in a given watershed. Watersheds were the land unit used to assess cumulative effects on hydrology. RSM

COMMENTS: Clarify the amount of timber and wilderness on the Forest and how much is in ASQ.

314

RESPONSE: Chapter III of the FEIS describes the current acres designated as wilderness. A Table in Chapter III of the FEIS displays the total forested suitable acres. The ASQ is 8.0 MMBF/year. LB

TIMBER - GOALS AND OBJECTIVES

Goals

COMMENTS: Develop goals that are realistic and consider Greater Yellowstone ecosystem, social and economic values of local communities and the unique ecosystem of the Targhee National Forest.

393

TIMBER - GOALS AND OBJECTIVES

RESPONSE: The Forest goals are realistic, based on resource needs, and recognize the Greater Yellowstone ecosystem. Social and economic values of local communities were considered and disclosed in the FEIS, Chapter III. LB

COMMENTS: Consider big game security habitat in timber management goals. (CROSS REFERENCE: Wildlife, Elk; Timber)

389

RESPONSE: The management prescriptions are a composite of the specific multiple-use direction applicable to all or part of a management area. While there is one prescription where timber management is the primary purpose, past harvesting activities limit extensive management action. All of the prescriptions concentrate on resource objectives other than timber, although varying degrees of timber activities are allowed in each.

The Revised Plan allows for future timber harvesting, but takes into account important habitat considerations for elk including motorized access density and hiding cover. The Revised Plan reduces motorized access density from existing levels and allows hiding cover to increase as trees on past logged areas grow. Management Prescriptions 5.1.4 and 5.4 allow timber harvesting, but limits to 20% the forested acres that can be in a created opening at any point in time. Therefore, 80% of the forested acres in these management prescriptions will provide cover for big game at any point in time. These management prescriptions also require management for large blocks of cover (greater than 250 acres in size). LB/MO

Objectives

COMMENTS: Remove Item #2 in the Precommercial Thinning section. Future resource products, other than saw timber, should be produced naturally.

283

RESPONSE: Post, pole, firewood, ornamentals, and such are products that develop naturally and are not usually managed. This objective provides for specific areas with ecosystem, environmental, or silvicultural needs. As a result products that may not develop naturally could become available. LB

COMMENTS: Add the following as Objective 5 in Chapter III on Page 123 and Objective 7 on Page 131: "Maintain or enhance inherent habitat values associated with fish, wildlife and vegetation of the area." This will assist in obtaining goals and DFC.

1446

RESPONSE: Forestwide standards and guidelines, in the Revised Plan, Chapter III address this concern. LB

TIMBER - MISCELLANEOUS

Prohibit Timber Harvest In Special Management Areas

COMMENTS: Prohibit timber harvest in special management areas for the long-term maintenance of vegetation conditions. Maximum diversity will be

TIMBER - MISCELLANEOUS

achieved without timber harvest. (CROSS REFERENCE: EM, Diversity)
1369

RESPONSE: In general, timber harvest is excluded from special management areas except where needed to meet specific objectives. DP

COMMENTS: Prohibit timber harvest in eligible recreational river management areas. (CROSS REFERENCE: Wild and Scenic Rivers)
1273b

RESPONSE: According to the Wild, Scenic, Recreation Rivers Act, timber harvest is allowed in recreational river management areas as long as standard timber harvest practices are followed which protect the river environment and associated values (Forest Service Handbook). Resulting volume is not included in calculations of the ASQ. AS/JR

Define Harvest Criteria For Rangelands

COMMENTS: Define criteria for what timber harvests on rangeland constitute habitat or wildlife improvements and when optimum conditions occur that require timber harvest.
1369

RESPONSE: These areas are outside the suitable timber base and are limited to 2.0 MMBF, or less, per year, forestwide. Removal of timber products, for any reason, requires a site-specific analysis that identifies consequences and advantages of the project and conditions under which the project may proceed. Recent timber harvest projects demonstrate that timber can be harvested on the Targhee for the benefit of other resources. A recent example of conifer removal to improve resource conditions is the Environmental Assessment for Reestablishment of Aspen Plant Communities in the Camas Creek Watershed signed July 18, 1996. The Revised Plan provides direction for using timber harvest to achieve a wide variety of non-timber objectives, such as removing encroaching conifers from rangelands. WG/RR

COMMENTS: Address grazing impacts on Doug-fir having small stems in forests that are dominated by non-lethal underburning. This consideration may influence management prescription for restoration of Doug-fir where fire suppression has disrupted fire cycles.

Consider various studies by Rummell, Madany, West, Zimmerman, and Neuenaschwander that identified livestock grazing as the principle factor in causing forest overstocking, not the exclusion of fire. Other studies describe the complex interactions needed to provide increased tree density once grazing has been introduced. (CROSS REFERENCE: Range)
1273b, 1365

RESPONSE: Grazing does not mimic natural disturbances and may effect these disturbances, such as helping with the control of fire. Analysis of conifer expansion or encroachment is better evaluated at the landscape or project level. Numerous factors such as site conditions, fire suppression, or management emphasis may contribute to the expansion or encroachment of conifers within a given area. DM

TIMBER - MONITORING

Improve Monitoring for Timber

COMMENTS: Incorporate a two step monitoring process: Check suitability assessments and volume projections frequently for their accuracy through regular monitoring; and where monitoring shows that assessments and projections fail to reflect the true productivity and sustainability of the land base, adjust the ASQ promptly.

1365

RESPONSE: This process is already in place and described in 36CFR 219.10 (f) and 219.14 (a) and (c). LB

COMMENTS: More information is necessary for landscape level research and more comprehensive monitoring is needed for future forest planning.

1194

RESPONSE: Adaptive management is central to the Revised Plan. Management direction can be changed as new information from monitoring, evaluation, and research evolve through the amendment process under NFMA. LB

COMMENTS: Include monitoring of the effectiveness of vegetation treatment (unscheduled harvests) related to aspen regeneration or upland rangelands as a high priority. (CROSS REFERENCE: Timber, Aspen)

489, 643

RESPONSE: All vegetation treatments including unscheduled harvest are analyzed through site-specific NEPA analysis. Completed projects are routinely reviewed to determine if NEPA direction was followed as a standard operating procedure. These activities are monitored regardless of our monitoring plan. LB

COMMENTS: Reassign a higher priority of monitoring to the Biological Diversity Study and all timber items.

643

RESPONSE: The Forest reassessed priority ratings on a number of monitoring and evaluation items based on public input. Several items were assigned a higher priority in the Final Revised Plan. The suggestion to raise the priority of this (biodiversity) item was considered but not adopted. The Targhee in cooperation with academic and research communities, continues to search for appropriate monitoring to assess the impacts of management activities on biodiversity. EF

COMMENTS: Include monitoring to evaluate the effects of removing conifer from aspen and riparian areas and effects of creating more patches in late seral forests. If vegetation is removed, changes in plant species (type and number) used by wildlife and the effects of these altered vegetation types on other wildlife species should be monitored.

643, 690, 697

RESPONSE: These types of monitoring are more site-specific in nature. As projects are implemented, monitoring activities will be identified to assess

TIMBER - MONITORING

effectiveness. This type of monitoring is not displayed in the Forest-level monitoring program of the Revised Plan but will be included with site-specific project analysis. RR

TIMBER - OLD GROWTH

Note: The citation Characteristics of Old Growth Forests in the Intermountain Region, USDA Forest Service, 1993 is referred to as Characteristics of Old Growth Guide.

COMMENTS: Question breakdown of age classes; show ages for each class, e.g. pole, mature. Clarify whether the classification included structural classes and ages.

Clarify definition of late successional, display size and age class distribution of stands larger than pole; and to use the best available science when determining definitions, classes etc.

489, 643, 644, 690, 1276, 1368, 1369

RESPONSE: Refer to the Table in the Revised Plan for the revised definition of age classes. The Forest used the six successional stages found throughout silvicultural literature, most recently in Characteristics of Old Growth Guide. Late seral and climax species may be present in young stands. This can occur in any habitat type. DS

Age Class Delineation Portrays Inaccurate Existing Condition Data

COMMENTS: The portrayal of forest age classes in the DEIS creates the erroneous impression that much of the forest is in an advanced age class, and this bears little resemblance to the areas on the forest that have been harvested heavily in the past.

643, 695, 1277, 1368, 1369

RESPONSE: The Forest is classified 79.6% mature. Of the 1,237,281 forested acres approximately 120,000 acres have been harvested and regenerated. Corrections to old growth were made in the Revised Plan. The subsection descriptions discuss differences between various areas of the Forest. DS

COMMENTS: The forestwide percent of stands in the mature age class (78%) is too high for wanting age class diversity.

432

RESPONSE: Silviculture techniques and other practices such as prescribed fire will be used as tools to manage or manipulate vegetation for the purpose of achieving Forest Plan resource objectives. In some areas fire plans will be developed to facilitate ecological change. Even so, it will be a long-term effort to restore historical age class distribution in many areas. See Ecological Processes and Patterns, Chapter III, Revised Plan Revision. DS

Definition of Mature is Inadequate

COMMENTS: Define mature age class.

228

TIMBER - OLD GROWTH

RESPONSE: Plant communities evolve through a series of conditions, as they progress from seedlings to the final stage called climax. This gradual process is called succession. Mature stands have reached their height growth when their crowns start to widen, but other stand conditions do not meet all old growth characteristics. For example, climax (shade tolerant) tree species are evident in the understory, but large snags and down woody materials are uncommon. (Characteristics of Old Growth Guide). DS

COMMENTS: Clarify the relationship between mature age class and late successional (Page III-3 Plan).

643

RESPONSE: Mature stands have reached their height growth when their crowns start to widen, but other stand conditions do not meet all old growth characteristics. Climax (shade tolerant) trees species are evident in the understory, but large snags and down woody materials are uncommon. Vegetation classified as mature is found in the later successional stages of a plant community. As mature trees age or fall down in the late successional stage, the early phase of old growth begins. (Characteristics of Old Growth Guide). DS

COMMENTS: Consider using the following ages for your definition of mature: spruce/fir and mixed conifer at low elevations, 250-300; aspen on sites where aspen is a seral species, 100 years; lodgepole pine at lower elevations, 150; lodgepole pine at higher elevations, 250.

489

The Forest delineation of late successional is arbitrary and not supported by science.

489, 643, 766, 1249

Use the Despain study of Yellowstone National Park for historic age classes.

489, 643, 731, 1276

RESPONSE: The definition of old growth characteristics by forest type is found in Characteristics of Old Growth Guide. Refer to the Table in the Revised Plan for the definition of late successional stages by forest type. Clarifications were added to old growth in the Revised Plan. DS

COMMENTS: Old growth definition of 20 years for juniper and mountain mahogany seems too short. Sixty to 80 years would be reasonable.

489

RESPONSE: The Forest lacks adequate data about juniper and mountain mahogany. It was dropped from the Table that defines late successional stages. DS

COMMENTS: Develop an old growth analysis displaying acreages and distribution.

389, 643, 690, 1273b, 1365

RESPONSE: The Forest completed additional analysis between the Draft and Final Revised Plan. Changes were made to the Revised Plan. The Forest used the best data available from Forest Stand Inventory and Landsat data. A task

TIMBER - OLD GROWTH

group analyzed permanent forest inventory plots using the Regional definitions for old growth. DS

COMMENTS: Define old growth and relate its value to biodiversity.
1273b

RESPONSE: Refer to the Biodiversity Section of the forestwide standard and guidelines for a discussion and direction on biodiversity. Table AA summarizes the characteristics of old growth forests as described in Characteristics of Old Growth Guide. DS

COMMENTS: The Plan is lacking in its old growth management strategy because: no plan on how to replace old growth; no provision to increase old growth habitat; no areas are designated as potential old growth.
389, 643, 1194, 1401

RESPONSE: The Revised Plan was expanded and revised old growth information to address these concerns. Refer to "Ecological Processes and Patterns." DS

COMMENTS: Use R4 definition of old growth and conduct an analysis evaluating the effects of each alternative on old growth dependent species and values.
643, 1194, 1368, 1401

RESPONSE: Chapter III of the Revised Plan outlines the standards and guidelines for maintaining or enhancing a diverse array of habitats and relate to the natural occurrence and distribution of plant communities. Using permanent forest inventory plots and the Regional definitions for old growth, the Old Growth Task Group concluded the Forest contains approximately 8.7% of all acres in old growth acres. Specific standards and guidelines were added in the Revised Plan to ensure that old growth will be maintained. DS

COMMENTS: Clarify how the plan distinguishes between 6" lodgepole and old growth.
658

RESPONSE: Plant communities evolve through a series of conditions as they progress from bare ground to the final stage called climax. This gradual process is called succession. Stage 3 defines trees that are taller than 10 feet, but are usually less than 8 inches in diameter. Old growth, stages 6 and 7, is defined by the attributes outlined in Characteristics of Old Growth Guide. Refer to guidelines in the Biodiversity Section of the forestwide standards and guidelines in the Revised Plan. For lodgepole to be defined as old growth, according to the R4 Guidelines, a stand must have at least 25 trees/acre, be greater than 11 inches in diameter at breast height, and at least 140 years old. DS

COMMENTS: Studies dispute your claim that the lack of old growth is due to ecological conditions which do not favor very old trees.
643

RESPONSE: For the most part, lodgepole pine on the Targhee plays a dominant seral role, while in other areas of the Greater Yellowstone Ecosystem,

TIMBER - OLD GROWTH

lodgepole pine is in a persistent seral role and can even be a climax species. The dominant seral role of lodgepole pine shows it occupies a site for 100 to 200 years. In these stands, more shade tolerant species are present and will generally replace lodgepole pine in the absence of fire. In these circumstances, old growth characteristics are usually not found, because stand density is usually too high to allow large tree that meet the characteristics defined of old growth. (Characteristics of Old Growth Guide). DS

COMMENTS: Table on Page IV-1 for Alternative 2 appears incorrect as it implies 275,000 acres are scheduled, and if this is 1.7%, the total acres are much higher than the 1.8 million acres on the Forest.

1311

RESPONSE: Table IV-1 displays 275,000 acres of forested lands in Prescriptions 5.1 and 5.1.3 that have a potential to be harvested over time. However, not all stands are scheduled for harvest this decade. This portion of the table was misleading and was dropped from the Final EIS. LB

COMMENTS: Your current vegetation map should include a finer classification of age classes.

No Letter #

RESPONSE: The map displayed in the FEIS map package is a representation of the actual data. Because of scale limitations, it is impossible to display the data at a more refined resolution. The actual data was collected on areas as small as one acre and broken out by five age classes within eight species groups. LB

Old Growth Analysis

COMMENTS: Complete an old growth analysis that includes the following: Large snags used as an indicator of old growth; identify more thoroughly all old growth associated and dependent species; analyze connectivity of existing old growth stands; add standards and guidelines for forest carnivores; add a prescription for old growth; add standards and guidelines for maintenance of old growth; determine how many acres are necessary to maintain 100 acres of old growth; discuss impacts on TES Species when old growth is lost.

134, 389, 489, 643, 644, 1194, 1276, 1361, 1364, 1365, 1369, 1401

RESPONSE: The Forest completed additional analysis between the Draft and Final EISs. Changes were made to the Revised Plan to address these concerns. Table AA summarizes the characteristics of old growth, as described in Characteristics of Old Growth Guide. Refer to Final Environmental Impact Statement, Affected Environment, Chapter III, Fisheries - Scale: Hydrologic Unit, Wildlife Associated with Aquatic and Riparian Habitats, and Wildlife Associate with Terrestrial Habitats. DS

TIMBER - OLD GROWTH

Goshawk

(CROSS REFERENCE: Wildlife, Goshawk)

COMMENTS: Change the rotation ages in goshawk PFAs and foraging areas to: 240 for Douglas-fir, 140 for lodgepole.

643

RESPONSE: Goshawk Post Fledging Areas (PFAs) and foraging areas are large (\geq 400 acres for PFAs and \geq 5,400 acres for foraging areas) and most often contain a variety of forest types which may include aspen, lodgepole, Douglas-fir, mixed conifer, and spruce-fir. The rotation ages in the forestwide standards and guidelines are presented as ranges and cover all of the various forest types which may occur within PFAs and foraging areas. MO

COMMENTS: 40% mature is below what is needed to maintain goshawk breeding pairs. Change to 60-80%.

643, 1273b, 1370

RESPONSE: The Targhee analyzed 28 goshawk territories on the Forest. Monitoring records showed these territories successfully produced young. The range in mature to old growth forests in the PFAs was 28 to 100 percent. The range in mature to old growth forests in the foraging territories was 34 to 100 percent. Based on monitoring results, the forestwide guideline for maintaining \geq 40 percent mature to old growth forests in the PFAs and foraging areas is within the range.

The forestwide standards and guidelines limit the amount of acres in an area that can be in the nonstocked/seedling stage at any point in time. Standards and Guidelines limit how fast timber harvesting can occur. Reductions in mature and old growth harvest to maintain this \geq 40% level will take several decades to accomplish. MO

COMMENTS: Analyze the effect logging has on mature forests, foraging habitat and increases in fragmentation (Crocker Bedford).

1273b

RESPONSE: The DEIS and the FEIS display how mature forests will change over time as a result of proposed timber harvesting. On a forestwide basis, proposed timber harvesting during the first decade is proposed on 2.5 percent of the forested acres. The Revised Plan contains new standards and guidelines for old growth and late successional forests. The FEIS contains additional information about old growth and late successional forests on the Targhee. MO

Miscellaneous

COMMENTS: Songbirds, including those dependent on older forest should be addressed (CROSS REFERENCE: Wildlife, Specific Species).

1369

RESPONSE: No songbird species were selected as management indicator species for the Revised Plan. However, the Analysis of the Management Situation and

TIMBER - OLD GROWTH

Process Paper D provide the following: 1) a list of all bird species which may occur on or immediately adjacent to the Targhee; 2) a summary of the types of habitat these bird species may use; and 3) the effects that proposed timber harvesting may have on these species.

The Forest is currently cooperating in several studies to gather more information about songbirds on the Forest and how management activities may affect them. MO

Disturbance Inaccuracies

COMMENTS: No evidence to support EIS contention that overstory removal and regeneration in mature stands will reduce fire and insect and disease hazards. Rather, intensive logging in mature stands would more likely exacerbate fire and insect and pathogen outbreak intensities and durations.

The DEIS's flawed assumption belies the fact that "mature" forests are usually less susceptible to stand replacing fire than younger stands. Forest fragmentation and removal of older green trees, snags and down wood, can reduce the capacity for biological pest control.

1368

Explain why large fires, insects and disease are viewed as problem in "mature age class" when they are not going to be in the timber base.

695

RESPONSE: Fire has had a more profound effect on the character of the Forest than any other factor. As a result of fire, lodgepole pine often exists in extensive, pure stands. The effects of fire, fuel accumulation, stand development, and insects and diseases in lodgepole pine are all part of a set of complex biological and physical relationships. One example is the relationship between mountain pine beetle epidemics and fire. Mortality from beetle epidemics creates large jackstraw fuel loadings some decades after the epidemic (Ecology and Regeneration of Lodgepole Pine). These conditions are found in the late successions and old growth stages, not in younger stands.

Amman (1978) listed the following stand characteristics associated with epidemics: 1) trees more than 80 years old, 2) mean tree diameters over eight inches, 3) a substantial proportion of trees over 12 inches d.b.h. with phloem thickness of 0.1 inches or more, and 4) elevations where temperatures are optimum for brood development.

Bark beetles present the most serious insect threat to lodgepole pine (Amman 1975). The mountain pine beetle is by far the most significant insect pest of lodgepole pine (Amman 1978). The significance of the problem was thoroughly discussed in a symposium held in 1978 in Pullman, Washington (Berryman et al. 1978). The epidemics that periodically occur in many lodgepole stands seriously affect the sustained yield and regulation of managed stands (Wellner 1978). DS

COMMENTS: Would like to see the percent in mature/old growth reduced to 30% in lodgepole pine since mountain pine beetles generally prevent stands from reaching old growth. 40% in other types is okay.

413

RESPONSE: Your comment is acknowledged. Standards and guidelines in the Revised Plan provide that: "In each principal watershed (38 watersheds in

total), the combination of old growth and late forested successional stage acres will be $\geq 20\%$ of the forested acres." DS

COMMENTS: DEIS (Page III-6) portrays an overriding concern that mature age classes are more susceptible to stand-replacing fires. If the Targhee is to move toward ecosystem management that more closely emulates natural processes, managing for a larger portion of mature forests would be appropriate.

489

RESPONSE: Biodiversity is maintained or enhanced by a diverse array of habitats that relate to the natural occurrence and distribution of plant communities. Objectives outlined under Vegetation, Chapter III, Revised Plan state: By 2007, "identify Properly Functioning Condition (PFC) and systems at risk for forested landscapes." DS

COMMENTS: In subsection descriptions, the Plan's definition of old growth concludes these types of mature stands are more susceptible to large fires and insects and disease. Silvicultural systems that promote mature and old growth stands increase the risk of insect and disease epidemics. Characteristics of large diameter, low vigor attract insects and disease. To reduce susceptibility to insects and disease is to convert to a younger age class, which thereby allows for more harvest of old growth.

695

RESPONSE: Fire has had a more profound effect on the character of the Forest than any other factor. As a result of fire, lodgepole pine often exists in extensive, pure stands. The effects of fire, fuel accumulation, stand development, and insects and diseases in lodgepole pine are all part of a set of complex biological and physical relationships. An example of these relationships is the one between mountain pine beetle epidemics and fire. Mortality from beetle epidemics creates large jackstraw fuel loadings some decades after the epidemic (Ecology and Regeneration of Lodgepole Pine). The Revised Plan allows fire to play more of a natural role than in the past. Prescribed fire plans will include ecosystem management objectives. DS

Old Growth Should be Protected and Preserved

COMMENTS: Older forests are a rare ecosystem component. Conservation efforts should focus on retaining as much of it as possible.

643

RESPONSE: ~~Biodiversity~~ is maintained or enhanced by managing for a "diverse" array of habitats related to the natural occurrence and distribution of plant communities. The Forest will maintain $\geq 20\%$ of the forested acres in a late successional/old growth stage in each biological subsection. The Revised Plan was changed to reflect this direction. DS

COMMENTS: Preserve all old growth in a national Old Growth Preservation System.

276

TIMBER - OLD GROWTH

RESPONSE: This consideration is outside the scope of this analysis and is not within the purview of the Forest Service. LB

COMMENTS: Late successional old growth stands are critical to maintaining ecosystem health in the interior Columbia River Basin. Old growth for all forest types is, on a regional scale, far below historic levels.

643

Need to quit logging and roading the remaining old growth because they are less plentiful and are rich in biodiversity.

695

RESPONSE: The Final Revised Plan includes new standards and guidelines to maintain old growth and late successional stands. Based on the Targhee's analysis, the Forest has more late successional stands than historically. The Targhee Landscape I Team's detailed study on the 76,000 acre Camas Creek watershed in the Centennial Mountains and Montana State University's study of historic vegetation patterns on the upper Henry's Fork watershed show a large increase in mature acres from 1870 to present. DS

COMMENTS: Given the length of time for regeneration of Douglas-fir, it should be considered a non-renewable resource which should be managed for its old growth value.

1276

RESPONSE: Regenerating Douglas-fir naturally is usually more difficult than other species, such as lodgepole pine. By using proper "leave tree" spacing, shading, scarification and timing, regeneration can be successful. Artificial regeneration, such as bare root planting, has also been successful on the Forest. DS

COMMENTS: We support the halting of all logging in remaining old growth areas on the forest.

690

I am against the harvesting of old growth.

1371

RESPONSE: Permanent regional plots show that approximately 8.7 percent of the Forest meets the old growth definition. In each principal watershed, the combination of old growth and late successional acres will be $\geq 20\%$ of the forested acres. Where it exists, at least half of this (10% of the forested acres) should meet old growth characteristics. Biodiversity is maintained or enhanced by managing for a diverse array of habitat that relates to the natural occurrence and distribution of plant communities. Refer to goals under Vegetation in the Revised Plan (Chapter III-Part 1). DS

Old Growth Should Be Harvested

COMMENTS: Continue to convert mature age classes to younger classes on a planned, sustainable basis; concerned that 20 MMBF per year will not do that.

TIMBER - OLD GROWTH

A change in mature stands ranging from 0 to 3.4% for the decade indicates you are not harvesting enough for forest health reasons. The Forest should be closer to 8-10% for the decade.

413

I recommend 15-20% of forested acres remain as old growth.

719

Prevent old growth from just falling over and going to waste or becoming fire fodder.

661

RESPONSE: Permanent regional plots show that approximately 8.7 percent of the Forest meets the old growth definition. In each principal watershed, the combination of old growth and late successional acres will be $\geq 20\%$ of the forested acres. Where it exists, at least half of this (10% of the forested acres) should meet old growth characteristics. Biodiversity is maintained or enhanced by managing for "diverse" array of habitat related to the natural occurrence and distribution of plant communities. Direction in Chapter III, Revised Plan states, "Regenerate and maintain plant association within the range of natural variability for each ecological subsection and watershed." More harvest is predicted to occur in future decades as watersheds recover. DS

COMMENTS: Maintaining at least 78% of the Forest in a "mature" age class in all alternatives indicates you are perpetuating the factors that almost guarantee another major catastrophe that will provide a more balanced age class distribution.

166

RESPONSE: The ASQ was increased in the Revised Plan for the first decade. A Properly Functioning Condition (PFC) assessment will evaluate long-term management options for lodgepole pine types. More harvest is predicted to occur in future decades as watersheds recover. Standards and guidelines, restrictions and mitigations contained in the Plan, are designed to achieve balance between needs and uses of the Forest. DS

COMMENTS: Harvest in spruce-fir or Douglas-fir types should only occur when there is evidence the site will naturally regenerate within the designated 5-year period.

389

RESPONSE: National Forest Management Act requires all stands harvested using regeneration methods will be regenerated within five years. The Revised Plan complies with this Act. LB

COMMENTS: Remove mature trees to keep forest healthy. Young timber is great cover for wildlife and will also help the economy.

1390

RESPONSE: Harvesting mature stands for forest health reasons is permitted in the Revised Plan. Harvest is constrained to meet objectives for effective cover for wildlife. DS

TIMBER - OLD GROWTH

Site-Specific

COMMENTS: Some stands on the Targhee National Forest would conform to the Region's old growth definitions, but the Targhee failed to delineate these. They are: South of the Snake River in the Caribou subsection; Rainey Creek in the Palisades; in and throughout the Palisades drainage; in the Big Hole Mountains; in the unharvested areas of the Centennial Mountains.

643

RESPONSE: A task group analyzed permanent forest inventory plots using the Regional definitions for old growth. Results indicate that 8.7% of the plots met all old growth characteristics. See Old Growth and Late Successional Forests, Chapter III, Revised Plan. DS

COMMENTS: Forest's numbers are grossly inaccurate, specifically in the subsection descriptions for Island Park and the Madison Plateau that claim more than 61% and 63% respectively are in a "mature or older age class". Yet when that description, along with map 23 are compared to the landsat photos of the same areas, widespread clearcutting has occurred over the past 30 years in these same areas.

643

RESPONSE: The Targhee's analysis shows the existing percent of old growth, late successional, and mature timber are as follows: Island Park, 60.7%, and Madison Plateau, 63.3%. DS

COMMENTS: The DEIS states there is a lack of age classes in subsections such as the Centennial Mountains and Big Hole Mountains due to an overabundance of "mature" forest habitat. Apparently the inventory data used as a basis for this claim normally only counts "mature" size trees for most plots. This means that if all trees sizes were tallied, the Forest and public would see that these supposed "mature" stands contain a large age class diversity within them. The supposed lack of age class diversity is due to biased sampling and data analysis more than an actual lack of diversity on-the-ground. 643

RESPONSE: Stand Exam, Landsat, and Permanent Forest Inventory plots were used to determine age classes on the Targhee. All three methods take into account all age classes. Stand Exam and the Permanent Forest Inventory plots use both variable and fixed plots. DS

TIMBER - PRESCRIPTIONS

Change Timber Harvest Prescriptions

COMMENTS: Address EM timber harvest and road building in Prescription 2.6.1 (a). This area serves as a critical link for wildlife even though lands are not included in the suitable base.

643

RESPONSE: EM timber harvest and road building can occur in Prescription 2.6.1 (a) to maintain and improve grizzly habitat. The type and level of harvest is subject to NEPA analysis and must follow all standards, guidelines, and

TIMBER - PRESCRIPTIONS

management prescriptions. While harvest projects could occur in this prescription the Revised Plan does not require harvest to take place. The EM harvest volume of 2.0 MMBF/year is not included in the ASQ. LB

COMMENTS: Change the Big Game Security Emphasis Prescription: "No timber harvesting activity or similar type of activity can occur within the security area during the time it is designated as a security area. Security area designations will be at least ten years in duration. New security areas will be designated and protected at least 18 months prior to entry into a currently designated security area." (CROSS REFERENCE: Wildlife)
643, 1194

RESPONSE: From 1980 to 1992, the Targhee conducted an elk monitoring project associated with several timber sales on the Dubois Ranger District. Results of this monitoring illustrated that elk use declined (but was not eliminated) in timber sale areas during years of road building and harvesting, but increased again after management activity was completed. Elk and deer will use clearcuts, shelterwood, and seed tree cuts. The Targhee determined elk security was an important issue. Habitat features that affect security are motorized access density, hunter density, and hiding cover. Hunter density is regulated by the State Fish and Game departments. Motorized access and hiding cover are regulated by the Forest Service. Management Prescription 5.4 establishes direction for low motorized access and maintenance of appropriate levels of hiding cover over time. The prescription provides direction for maintaining security areas adjacent to timber harvesting activity, which eliminates the need to designate areas for at least 10 years. MO

COMMENTS: Consider land with 60% cover and over for possible harvest. 693

RESPONSE: The Revised Plan does not restrict harvest of forested vegetation based on percent cover within the stand. Harvest is based on silvicultural need and other management objectives. LB

COMMENTS: Revise Management Prescription 5.1.3 (a-b) Timber Management as submitted by the Greater Yellowstone Coalition.
643

RESPONSE: The Forest reviewed changes submitted by Greater Yellowstone Coalition and decided to retain Prescription 5.1.3 (a-b). The game retrieval provision was dropped. LB

COMMENTS: Add the two areas in the Caribou to the suitable base. One has 67% of its slopes under 40% and the other has 75% of its slopes under 40%.
693, 767

RESPONSE: The DEIS, Alternative 3M, showed the Black Mountain area in the 5.4 (c) Prescription - a timber based prescription. However, in Alternative 2, this area was in Prescription 3.2 (f) Non-Timber Base. The Black Mountain area appears suitable for harvest. The FEIS shows it suitable for harvest in Alternatives 1 through 3, but not in Alternatives 3M through 6. The Fall Creek area does not contain adequate contiguous stands of timber to justify placing it in an ASQ prescription.

TIMBER - PRESCRIPTIONS

Road development and timber harvest would cause significant adverse effects on wildlife winter range and unstable soils in these areas. The anticipated consequences of intensive management are contrary to the Desired Future Conditions and Need For Change outlined in the Purpose and Need section of the DEIS, i.e., "need to balance timber harvest with wildlife needs," "need to meet goals for improving elk habitat," and "a system of trails and support facilities exist which are compatible with resource capabilities." AS

TIMBER - REGENERATION

Change Regeneration Discussion

COMMENTS: Discuss past regeneration successes and failures and make regeneration the #1 priority because of past unsustainable harvest.

625

Disclose how many of the clearcuts in lodgepole pine have regenerated satisfactorily and how many have not.

228, 1365

RESPONSE: Of approximately 120,000 acres harvested under the clearcut method, less than 7,700 acres have not successfully regenerated as of September 1996. This backlog will be completed by 1999. About 80% of the harvested acres regenerated naturally while approximately 20% were planted.
DS

COMMENTS: What is a "naturalized" species? Quantify "reasonable time" for specific project activity.

1446

RESPONSE: "Naturalized" species are introduced or alien (not native) species that have permanently established and are reproducing spontaneously (without human fostering). "Reasonable time" varies by specific project and the objectives the project is designed to meet. BS/RR

COMMENTS: On Page 84, change the word "consider" to "use" to be consistent with other areas.

1446

RESPONSE: The Targhee decided to retain the word "consider" in the context of a Guideline (G). The word "use" would change the Guideline to a standard.
(S). WG

COMMENTS: Improve suitability assessments to increase the success of regeneration and adjust ASQ to prevent wholesale over cutting based solely on optimistic estimates of the Forest's potential productivity.

1446

RESPONSE: Of approximately 120,000 acres harvested under the clearcut method, less than 7,700 acres have not successfully regenerated as of September 1996. This backlog will be completed by 1999. About 80% of the harvested acres regenerated naturally while approximately 20% were planted.

TIMBER - REGENERATION

Appropriate techniques for natural regeneration and/or planting of Douglas-fir are included in the Revised Plan. DS

COMMENTS: Regeneration should be initiated in cut-over areas.

405

RESPONSE: The National Forest Management Act at 219.27C3 requires that adequate restocking of harvested areas be accomplished within five years after final harvest. LB

Reconsider your Definition of "Forested"

COMMENTS: Reconsider the definition that any area where regeneration has reached a certain density of trees seven feet or greater is considered "forested." This creates the erroneous impression that most of the acres harvested over the last two decades have already succeeded to mature timber.

643

RESPONSE: "Forested" land by regulation is defined as "land with at least ten percent occupied by forest trees of any size, or formerly having had such tree cover and not currently developed for nonforest use." Using this definition, land could be bare and still be called "forested" if it has at least 10% cover.

The reference to tree height of seven feet or greater relates to wildlife hiding cover. It is also used to establish when "created openings" move out of a "created opening" status. The trees seven feet and greater responds to hiding cover or when a "created opening" moves out of a "created opening" status. LB

TIMBER - RIPARIAN/AQUATIC INFLUENCE ZONE

Prohibit Harvest in Riparian/AIZ Areas

COMMENTS: Prohibit timber harvest, including salvage logging in riparian and aquatic influence zones, including headwaters, and within 1/2 mile of any stream or riparian area. Riparian areas should be out of the suitable timber base. (CROSS REFERENCE: Riparian)

F-K(4), 58, 175, 212, 335, 611, 650, 697, 1239, 1273b, 1276

RESPONSE: Chapter III, Final Revised Plan removes the AIZ from the suitable timber base. They are not part of the ASQ.

Silvicultural prescriptions are only used in the AIZ where needed to meet AIZ Management Prescription Goals. Any silvicultural treatment proposal is evaluated on a site-specific level by an interdisciplinary team. Further, as a minimum, the Forest must meet the guidelines and rules found in the Idaho Forest Practices Act and Wyoming Silviculture Best Management Practices (specifically those dealing with stream protection). DM

COMMENTS: Logging will not benefit riparian areas, conifer encroachment areas or an aging forest. It does not make sense to provide buffer zones and then allow harvest in riparian areas. This is a warped view of ecosystem management and should be dropped. Cite research that supports the notion that

TIMBER - RIPARIAN/AQUATIC INFLUENCE ZONE

logging improves riparian conditions. Clarify how Objective 3 (fuelwood cutting) will restore ecological health and function.

23, 282, 643, 690, 695, 766, 1276

RESPONSE: Silvicultural prescriptions are used only in the AIZ where needed to meet AIZ Management Prescription Goals. Silvicultural prescriptions are only one option to attain AIZ goals. All silvicultural treatment proposals are evaluated on a site-specific level by an interdisciplinary team. One appropriate example where silvicultural methods could be used is in stands where overstories (e.g. conifers) might be inhibiting understory species that are important in providing channel stability (e.g. willows) and where prescribed fire might be risky. Another example might be in seral aspen stands that are experiencing conifer encroachment, and a disturbance is needed (e.g. prescribed fire or silvicultural techniques or both) to perpetuate a diverse, productive aspen community. Further, at a minimum, the Forest must meet the guidelines and rules found in the Idaho Forest Practices Act and Wyoming Silviculture Best Management Practices (specifically those dealing with stream protection).

Fuelwood gathering is another option that could be used to meet AIZ goals. Site-specific analysis would determine the appropriateness of this activity. Refer to the Timber section in the Aquatic Influence Zone Prescription. Fuelwood cutting is restricted to commercial use only. DM

COMMENTS: Include a statement that timber harvest is another impact to riparian areas and contributes to riparian areas not meeting DVC. 1446

RESPONSE: It is not the intent of the FEIS to identify all causes contributing to deteriorated riparian conditions. The Targhee agrees that inappropriate timber harvesting activities may cause deterioration in sensitive areas.

When properly conducted to improve or maintain healthy riparian ecosystems, timber harvest can be beneficial. WG/RR

COMMENTS: Detail your proposals for unscheduled timber harvest in AIZs as to exactly what circumstances would lead you to propose salvage, fuelwood cutting, or other manipulations. No habitat manipulations should be allowed unless you can realistically predict ramifications of these activities; it will be interesting to see whether felled trees are left or whether heavy equipment damages the area dragging logs away.

643

RESPONSE: The Revised Plan does not identify the site-specific location of unscheduled harvest; rather it sets the maximum amount of volume (20 MMBF/decade) that can be harvested under this activity. Site-specific analysis will determine if an unscheduled harvest is needed to meet an area's management objectives. Riparian resources are protected from adverse impacts in the AIZ through the application of standards and guidelines. RSM

COMMENTS: Prohibit timber harvest including road building clearcuts in important amphibian and spotted frog habitat which include along intermittent stream courses, vernal pools, areas adjacent to this habitat, and areas that have not had time for shrubs and trees to grow to provide shade for boreal

TIMBER - RIPARIAN/AQUATIC INFLUENCE ZONE

(western) toads. Harvest activities that alter hydrologic characteristics, temperature, moisture and connectivity of occupied habitat may have a large effect and may result in long-term losses. (CROSS REFERENCE: Wildlife, Frogs, Toads, Amphibians)

643, 1277

RESPONSE: State regulations in the Forest Practices Act require, "During and after forest practice operations, stream beds and streamside vegetation shall be protected to leave them in the most natural condition as possible to maintain water quality and aquatic habitat" (Rule 030.07). In streams used by fish or for domestic water supplies, 75 percent of the current shade must be left (Rule 030.07 (e)ii). No scheduled timber harvest may take place in Aquatic Influence Zones, and any timber removal must benefit riparian-dependent species, including amphibians. The potential effects are analyzed at the project level, and the activity is designed to avoid negative impacts to the local microclimate. RSM

Reconsider the Role of Timber in Riparian Habitat

COMMENTS: Reconsider your ecosystem view in regards to the artificial separation of forest dynamics from those of the aquatic/riparian system. For example, larger trees and snags are viewed as something to be eliminated from the system rather than a source of continual renewal of large debris for fish habitat and aquatic biota.

643

RESPONSE: Refer to Wildlife Standards and Guidelines in the Revised Plan, Chapter III; Description of the Aquatic Influence Zone; Objective 3, Insect and Disease section (where salvage is only permitted, "where needed to attain the Goals of this Management Prescription providing other Goals of this Management Prescription [2.8.3] are not adversely affected"); Wildlife Guideline; and new additional statements that were added, such as, "Riparian vegetation is maintained or restored to . . . provide an amount and distribution of large woody debris characteristic of natural aquatic and riparian ecosystems." RSM

COMMENTS: View trees and other upland vegetation in the riparian zone (or lack of willows) in the context of causative agents at a broader landscape level than assuming these changes are negative or an ecological concern.

643

RESPONSE: This concern is best handled within the framework of a site specific, project level or landscape level analysis where identifying ecological status of riparian areas and other issues are specifically addressed. WG

COMMENTS: Reconsider that the lack of understory in spruce forest riparian areas may be affected by livestock grazing and recreation, not just shading.

643

RESPONSE: This issue was reconsidered and the FEIS is modified in Chapter III. WG

TIMBER - RIPARIAN/AQUATIC INFLUENCE ZONE

COMMENTS: Clarify why 6.7 MMBF will have an adverse effect on world class fisheries when past harvest of 85 MMBF has not hurt these fisheries.

1267

RESPONSE: The EIS stated that some adverse effects to fisheries would result from implementing the various alternatives, specifically from timber harvest, road construction and use, livestock grazing, off-road vehicle use, camping along streams, and so forth. "Best management practices" are used during timber management activities to reduce the risk of adverse effects. Although some adverse effects may still occur, they are generally at an acceptable level.

Data shows that past timber harvest activities, including road construction and use, have had an adverse effect on fisheries habitat. Past timber harvest along streambanks removed much of the large wood needed for floodplain maintenance and fish habitat. Road construction and use increased sediment to streams, thereby reducing fish habitat quality in some areas. The Final Revised Plan includes several measures which will reduce the cumulative effects of all management activities on fisheries habitat. DD

Monitor Effects of Timber Harvest in Riparian Area

COMMENTS: Collect data on and monitor the effects of forest practices on aquatic, riparian zones.

282, 643

RESPONSE: Please refer to monitoring items: 1) Compliance with Policy of 15% Detrimental Soil Disturbance in Activity Areas (Chapter V); and 2) Monitoring of Application of Best Management Practices related to Maintaining and Improving Water Quality (Chapter V) in the Revised Plan. Each site-specific NEPA document contains a monitoring section. DM

COMMENTS: Tailor timber management to watershed needs through a comprehensive plan for watershed analysis, restoration, monitoring and adaptive management to inventory and develop site-specific plans for riparian areas.

643

RESPONSE: The Revised Plan meets these objectives. Watershed elements are used on several of the screens to determine the suitable timber base such as low productivity sites, irretrievable and or irreversible damage, and so forth). Refer to: 1) Standards and Guidelines for Watershed - General; 2) Objective 1 and 2 - Aquatic, Riparian Resources, and Watersheds; 3) Aquatic and Riparian Ecosystems Goals and Objectives within the Subsection Descriptions; 4) Objective 1 Prescription 2.8.3 (Aquatic Influence Zone); and 5) Chapter V (Monitoring and Evaluation). DM

Add Standards or Guidelines for Harvest Activities

COMMENTS: In order to protect amphibian habitat, create a guideline to avoid road construction or other management activities that will separate ponds, vernal pools, or marshes from permanent streams; create a guideline to maintain adequate slash piles; create a standard to prohibit harvest along intermittent stream courses and around vernal pools; create a standard to

TIMBER - RIPARIAN/AQUATIC INFLUENCE ZONE

prohibit harvest or clearcuts beside an area that has not had time for shrubs and trees to regrow and provide shade for amphibians.

643

RESPONSE: The Revised Plan and State regulations in Forest Practices Act provide this protection. "During and after forest practice operations, stream beds and streamside vegetation shall be protected to leave them in the most natural condition as possible to maintain water quality and aquatic habitat" (Rule 030.07). In those streams used by fish or for domestic water supplies, 75 percent of the current shade must be left over Class I streams. (Rule 030.07 (e)11). No scheduled timber harvest may occur in Aquatic Influence Zones, and any timber removal must benefit riparian-dependent species, including amphibians. The potential effects are analyzed at the project level, and the activity is designed to avoid negative impacts to the local microclimate. RSM

COMMENTS: Impose stricter standards for riparian protection when an area is to be logged or grazed.

204

RESPONSE: Utilization standards and other standards and guidelines in the Revised Plan will achieve desired results. The standards and guidelines will provide for a moderate rate of recovery of degraded riparian and aquatic systems with a moderately high level of fisheries habitat quality. WG

COMMENTS: Include a standard for a 100 foot vegetation buffer strip, managed for individual tree removal only (selective harvest) for lakes, streams, wetlands, and impoundments. A wider buffer is necessary for areas with steep slopes and/or erosive soils.

F-K(4), 389

Add a Standard that logging is prohibited or excluded from any area within 300 feet of a water source.

664

RESPONSE: The boundary widths used for the AIZ are sufficient to protect aquatic and riparian resources, and yet allow for management of these areas, too. The widths exceed the "minimum stream protection zones" defined in the Idaho Forest Practices Act regulations, and were designed using PACFISH and INFISH guidelines and site-specific knowledge of each ecological subsection. The Forest considered using a single boundary width, but a single width does not address the ecological and physical differences that exist across the Targhee. Adjusting boundary widths for channel stability and fish habitat, specifically, is not possible at this time as data is not available everywhere. The widths used should address these issues.

Regarding lakes and ponds: See Chapter III, Revised Plan. Lakes and ponds are included. RSM

COMMENTS: Include a standard to prohibit clearcuts of up to 50% of a timbered shoreline (lentic or lotic).

389

TIMBER - RIPARIAN/AQUATIC INFLUENCE ZONE

RESPONSE: This is not allowed under the Idaho Forest Practices Act regulations. RSM

COMMENTS: Expand and apply to the entire AIZ the standard that no burning will occur within the bankfull channel.

643

RESPONSE: The guidelines that limit mechanized treatment of wood residue, including burning, within the AIZ, should provide adequate stream protection. RSM

TIMBER - ROADLESS

Prohibit Harvest

COMMENTS: Prohibit logging, mining and ORV use in remaining roadless areas. 179, 204, 280

RESPONSE: Roadless area designation does not preclude management activities. Some activities can possibly be allowed without changing roadless characteristics (if impacts are minor). For example, aerial yarding or helicopter logging can be done without road construction or changing roadless characteristics. Mining may also take place but may be subject to additional restrictions. ORV use may be allowed, as well, without jeopardizing the quality of the roadless area. LB

COMMENTS: Remove roadless areas from the suitable timber base (eliminate Timber Prescription 5.1.4 (b) and 5.3.5) and do not include any timber management prescription because timber harvest eliminates or reduces future wilderness options.

643, 690, 695

RESPONSE: There is no policy or law prohibiting timber harvest in roadless areas. The Revised Plan provides direction to manage suitable timber lands in roadless areas. A complete analysis through NEPA (EIS) must be completed at the site-specific level before harvest is allowed. LB/JR

Allow Timber Harvest

COMMENTS: Eliminate the constraint that all roadless areas be in a non-interchangeable component (NIC) and change prescription in Alternative 2 to allow harvest as part of the suitable timber base without NIC classification.

413

Allow sustainable harvest in roadless areas with no NIC component unless it falls in Situation 1 Bear Habitat.

767

RESPONSE: The 1995 Draft RPA Assessment directs the Targhee to quantify the contribution of Rare II areas to the maximum amount of timber that can be sold in a decade. This amount is identified as a non-interchangeable component (NIC) of the ASQ in the Revised Plan to prevent over-harvesting in roaded

TIMBER - ROADLESS

areas, in the event roadless areas cannot be harvested. Site-specific analysis is necessary for entry into roadless areas. In the first round of the Forest Plan, much of the volume in roadless areas could not be harvested.
LB/JR

Better Describe Impact Between Alternatives

COMMENTS: Reduce linkage between the amount of wilderness and timber ASQ in all alternatives, i.e., more wilderness recommendation does not mean less ASQ and state that recommending more wilderness will have a minor effect on ASQ under any of the alternatives because only a small portion of tentatively suited timberlands fall within the roadless areas.

643, 695

RESPONSE: By definition Allowable Sale Quantity (ASQ) is: "The quantity of timber that may be sold from the area of suitable land covered by the Forest Plan for a time period specified by the Plan"(FSH 1900). If additional wilderness recommendation removes acres of timber suitability from the base, ASQ will decrease. If additional wilderness recommendation comes from an area that was not considered suitable, then no change in ASQ is expected. LB

TIMBER - ROADS

Discourage New Roadbuilding

COMMENTS: Discourage excessive logging and prohibit new road building because roads serve only a minor percent of users; reduce roading and clearcuts.

178, 179, 293, 325, 399, 411

RESPONSE: Any logging in the future will utilize existing roads where possible, and will minimize any new road building. LB

COMMENTS: Reduce and close roads immediately after harvest to prevent massive erosion and landslides. Studies in California show that regardless of improved design and construction, roads are still a major reason for erosion and landslides.

1367

RESPONSE: Roads are closed after timber harvest is completed unless there are other resource needs, such as planting new trees. Each prescription includes road density standards. Timber activities must adhere to the standards and guidelines of the prescription. Regardless of location, erosion and landslides are caused by many factors such as climatic and environmental factors such as intensity, duration, and flashiness of storms; occurrence of rain-on-snow events; freeze-thaw cycles; and snow accumulation in clearcuts and other clearings. Most road-caused erosional problems are attributed to improper road and skid trail design, location and layout. LAB

TIMBER - ROADS

Close Roads after Harvest

COMMENTS: Close timber access roads after harvest to allow for new crop of trees to establish.

336

RESPONSE: All single-purpose roads only used for timber harvest are closed at the completion of the timber sale. Some roads may remain open short-term to accomplish other resource work, such as tree planting. Road density standards set for each prescription area will be maintained. LB/LAB

COMMENTS: Close roads where applicable to allow past logging excesses to heal.

F-B(4), 162, 278, 400, 1313

RESPONSE: Roads are evaluated on a site-specific basis to determine if they are no longer needed for Forest administration or if they are causing resource damage. Through site-specific analysis, a decision will be made on whether to keep the road open or close it. LB/LAB

Other Timber Road Concerns

COMMENTS: Control historic logging roads from becoming open access and make timber companies pay for them.

650

RESPONSE: Some road closure methods, such as tank trapping and water barring, have not been effective on the Forest. These methods are usually successful for the first four or five years after management activities are completed. At that point, soils settle, and forest users are generally able to access these roads. Timber companies are responsible for closing timber roads once operations are completed. Enforcement of road closures is a Forest responsibility. LB/LAB

COMMENTS: Ensure access to State Land Sections.

314

RESPONSE: Forest roads that access state and private lands, State or National Parks, or special facilities or features will remain open. LAB

TIMBER - SILVICULTURAL/HARVEST

General

COMMENTS: Reduce inflammatory language designed to foster public hysteria regarding perceived forest health crisis. Consider recovery time frames presented and reconsider aggressive logging approach preferred in the Plan.

1364

RESPONSE: The Targhee presents the Forest health issue professionally. For example, the Plan under Insects and Disease states, "Insects and disease are allowed to play their natural role in ecosystem dynamics to the extent

TIMBER - SILVICULTURAL/HARVEST

compatible with other resource objectives." The Forest recognizes many damaging agents such as mountain pine beetle, dwarf mistletoe, and fire have been and are still a threat to forest health. Descriptions are rewritten to place the amount of mature forest in perspective.

During the last decade, due to the mountain pine beetle epidemic, the Forest employed an aggressive logging approach, harvesting up to 80 million board feet/year of dead and dying lodgepole pine. As stated under Timber Management, Chapter III, Revised Plan, "Silvicultural techniques will be used as a tool to manage or manipulate vegetation for the purpose of achieving Forest Plan resource objectives. Emphasis will be placed on restoration of ecological function, structure and composition," and elsewhere in the Chapter, "Design timber management projects to simulate natural patch sizes, patch shapes, connectivity, and species composition and age class diversity". DS/LB

COMMENTS: More timber harvesting, especially the dead stuff.

285

RESPONSE: The Revised Plan increases the ASQ to 8.0 MMBF/Yr compared to 3.7 MMBF/Yr in the Draft. Salvage will be less than in the past and focus is on long-term sustainability rather than salvage. JR

COMMENTS: Reconsider your management direction for logging when a section of the forest is designated "mature" or "unhealthy". Removal of trees eliminates advantages of leaving trees, such as recycling of natural materials in a healthy ecologic cycle, nurturing of succeeding generations of plants, no soil disturbance by logging activities, no destruction of moisture-holding and cooling created by canopy.

1337

RESPONSE: Not all of the stands on the Forest will be logged even though they may be designated "mature" or "unhealthy." The Targhee is a multiple-use Forest. The Revised Plan provides an increase in ASQ to 8.0 MMBF/Yr compared to 3.7 MMBF/Yr in the Draft. Salvage will be less than in the past and focus is on long term sustainability rather than salvage. DS

COMMENTS: Limit logging to five sustainable, low impact methods.

179

RESPONSE: Methods used will be those which meet the objectives of the specific project with the least impact. All methods must meet Forest Plan standards and guidelines for resource protection. The Revised Plan provides for significantly less clearcutting and more selection and shelterwood silvicultural methods. DS

COMMENTS: Allow certified silviculturist to determine appropriate silviculture treatment project-by-project on a site-specific basis. Don't limit silviculturist tools in the Plan because there is a big difference in a silviculture system and silviculture cutting methods.

283

TIMBER - SILVICULTURAL/HARVEST

RESPONSE: All silvicultural systems and harvest methods will be determined through a site-specific NEPA analysis by a certified silviculturist. The site-specific NEPA analysis will disclose which silviculture prescription and harvest method is appropriate. DS

COMMENTS: Log "mature trees" only.
608

RESPONSE: All silvicultural systems and/or methods will be determined through site-specific NEPA analysis by a certified silviculturist. To develop and manage uneven-aged stands, a desired number of trees of all age classes needs to be maintained. In regeneration cuts, such as shelterwood, all age classes need to be cut for desired stocking level. During thinning operations, small stems are removed. These are just a few of the examples of when seedling, saplings, poles, thrifty mature, and mature timber will need to be removed. DS

COMMENTS: Increase number of acres from 11,430 acres identified for timber management over the next decade. Land managers' options could be severely limited as new ways to provide ecological diversity are developed. Maintain suited land base to as many acres as possible to allow insect and disease treatment or fire and to allow maximum flexibility in implementing ecosystem management.
90

RESPONSE: Suited land base is a reflection of management prescriptions on the tentatively suitable base and is strictly fixed by the prescriptions. Flexibility exists within the Revised Plan to implement ecosystem management. After a reanalysis of the ASQ calculation, the ASQ increases from 3.7 to 8.0 MMBF per year. The acres treated are estimated to be about 2,052 per year or 20,520 during the decade. LB

Silvicultural Treatments Need Changes

COMMENTS: Clarify the definition of silviculture system. It is a process. There are only two silvicultural systems - even aged and uneven aged management.
283

RESPONSE: The revised definition of silvicultural system includes the addition: "... that results, even aged and uneven aged." DS

COMMENTS: Examine a full range of cutting methods by each alternative. This would remedy current legal deficiencies and help public understanding.
305, 1365

RESPONSE: All cutting methods are available for use in all alternatives. Silviculture prescriptions are site-specific or written for each treatment of a stand. The Final Revised Plan does not identify which stands will be treated or how. The Revised Plan gives general guidelines as to which silvicultural systems and methods may be used within a given area. DS/LB

TIMBER - SILVICULTURAL/HARVEST

COMMENTS: Maintain huckleberry and other berry-producing shrubs in timber harvest areas by limiting silvicultural practices such as soil scarification that destroys shrubs and shrub rhizomes.

643

RESPONSE: The Final Revised Plan, while still allowing clearcutting as a harvest method, favors liberation cuts in mature and over mature lodgepole pine stands with adequate regeneration. However, when the understory has been infected by mistletoe, gall rust or other pathogens, clearcutting with scarification for natural regeneration may be necessary. Areas of huckleberry and other shrubs that need protection will be identified in the individual project's NEPA document and silvicultural prescription on a case-by-case basis. DS

COMMENTS: Remove any reference to a supposed correlation between mature forest and elevated disturbance risks. There is no evidence that intensive logging of mature stands reduces disturbance hazards.

212, 1368

RESPONSE: Literature supports the characteristics associated with mountain pine beetle epidemics Amman (1978) listed the following stand characteristics associated with mountain pine beetle epidemics: 1) trees more than 80 years old, 2) mean diameters over 8 inches, 3) a substantial proportion of trees over 12 inches d.b.h. with phloem thickness of 0.1 inches or more, and 4) elevations where temperatures are optimum for brood development.

Ralph Thier, USDA Forest Service Entomologist, developed the Douglas-fir Beetle Hazard Rating. His studies show that increases in density, age, basal area, and diameter increase the potential outbreak rating. Other studies of insects and pathogens have shown the same results. DS

COMMENTS: Under "Ecological Processes, Insects and Disease" discard the guideline to control through silviculture practices. Remove references that silvicultural techniques can restore ecological function, structure and composition. The purpose of cutting trees is to provide lumber. Pure silviculture does not take into account wildlife, visual, aesthetics, fisheries, recreation values, etc.

697

RESPONSE: Silviculture is concerned with controlling the establishment, growth, composition, and quality of forest vegetation (Daniel, et al. 1978). Clearly defined management objectives that describe what is to be achieved in any given forest cover and locality is necessary. Each management objective, then, must be interpreted in terms of the kind of stand structure that is most suitable. Objectives vary between production of wood, water, wildlife, recreation, soils, and so on, and will obviously require forests of quite different structure; that is, the presence, absence, or relative abundance of litter, grass, brush, reproduction, saplings, poles, mature trees, and overmature trees should vary in managed stands depending on the particular management objective. Furthermore, each objective will influence the mixture of species and age classes present and the extent to which vegetation components are layered or grouped, both vertically and horizontally in relatively uniform aggregations or mosaics within a stand.

TIMBER - SILVICULTURAL/HARVEST

Complex objectives involving multiple-use commonly require a correspondingly complex and diverse structure with some loss in efficiency for any one particular use. Silvicultural strategy depends on the overall objective of stand management. As objectives change, so will the silvicultural prescription, since stands of different structure will probably be required. DS

COMMENTS: Design silvicultural prescriptions to specifically benefit smaller, locally owned logging companies. (CROSS REFERENCE: Timber, Economics)
204, 214, 1185, 1348

RESPONSE: Silvicultural prescriptions, in themselves cannot be altered, because they are used to achieve specific management objectives. Objectives may limit flexibility in altering cutting unit size or treatment methods. However, sale size, timing of when sales are sold, and the length of time a contractor has to complete a sale can often be modified to help smaller operators. The Forest has attempted to do this on many sales over the past several years. JC

COMMENTS Consider horse and mule logging; permit horse logging in the winter.
1314, 1316, 1392

RESPONSE: Horse and mule logging is allowed on all timber sales on the Forest. The size of the sale and/or environmental constraints determine the type of skidding equipment used. DS

COMMENTS: Use under thinning to remove fire ladders and reduce fuel loads.
1364

RESPONSE: The Revised Plan allows thinning from below when appropriate. Silviculture prescriptions are site-specific or written for each treatment of a stand. The Revised Plan identifies which silvicultural systems and methods may be used on stands within a given prescription. DS

COMMENTS: Logging may be an ineffective solution for the reduction of severe fires, because studies have shown (Williams and Rothermel 1992) large woody fuels are not usually consumed by fires, and weather and climate conditions are more important factors in fires than vegetation.
1273b

Re-evaluate your conclusions that silviculture treatment can minimize the effects of drought, fire, insects and disease and other pathogens. Various studies indicate scientific evidence does not support this hypothesis.

643, 695

RESPONSE: Silvicultural treatments such as harvesting, thinning, and prescribed fire can be used to create and restore forest conditions that are within their historic range of variability and that are less susceptible to insects, diseases, fire, drought, and other disturbance events. This is well established in scientific literature, though exceptions can be documented. DS

TIMBER - SILVICULTURAL/HARVEST

Consider Selective Harvest Methods Only

COMMENTS: Encourage selective harvesting, helicopter logging, or controlled burning and eliminate clearcutting to use renewable timber resource and maintain beauty of the area. Contention that clearcuts mimic the effects of fire has been refuted.

317, 321, 359, 489, 694, 1276, 1314, 1316, 1365

Adopt single tree selection method for less destruction and long-term forest health.

1243

RESPONSE: Unless objectives for nontimber commodities dictate otherwise, harvesting should either leave the stand in an improved condition or provisions must be made for regeneration. All harvest methods and systems are considered when writing a silvicultural prescription. Silviculturally, clearcutting is a viable method of regenerating a stand of trees and not an expedient of logging. The Revised Plan provides for significantly less clearcutting and more selection and shelterwood logging. Clearcut harvesting imperfectly mimics wildfire. Clearcuts with retention of ten to 20 percent standing and down lodgepole pine biomass more closely approximate wildfire effects (Koch 1996). Clearcutting under the standards and guidelines of the Revised Plan (requiring, snag retention, reserve trees, dead and down requirements, and so forth) differs from clearcutting in the past. DS

Opposed to Salvage Harvesting/Use on Experimental Basis

COMMENTS: Recommend an adaptive approach for salvage harvest as an experiment on a limited scale, monitored and evaluated to guide management in the future.

1365

RESPONSE: All silvicultural activities, whether salvage logging or logging of green trees are monitored and evaluated. This is and has been a standard practice of the Forest Service. Salvage logging during this revision period will be on a limited scale as compared to the previous decade. LB

COMMENTS: Salvage harvest is nothing more than an excuse to build more roads and cut more of the Forest under the pretense that a certain area of the forest is subject to fire, disease or past questionable maturity and facing death.

1314

Salvage harvest is a bogus excuse for past excesses.

664

RESPONSE: During the last decade, due to the mountain pine beetle epidemic, the Forest took an aggressive logging approach, harvesting up to 80 MMBF/Yr of dead and dying lodgepole pine. As stated under Timber Management, Chapter III Revised Plan, "Silvicultural techniques will be used as a tool to manage or manipulate vegetation for the purpose of achieving Forest Plan resource objectives. Emphasis will be placed on restoration of ecological function, structure and composition" and elsewhere in the same Chapter, "Design timber management projects to simulate the range of natural variation for patch sizes, patch shapes, connectivity, and species composition and age class

TIMBER - SILVICULTURAL/HARVEST

diversity." Salvage logging during this revision period will be on a limited basis as compared to the previous departure during the last decade. LB

COMMENTS: Use natural methods rather than logging.

1337

RESPONSE: Silvicultural systems and methods are essential to meet Forest Service objectives established by Congress. See "National Goals Relevant to Land and Resource Management," Appendix A, Revised Plan. LB

COMMENTS: Address the issue of below-cost timber sales, especially as it relates to salvage logging, since in the Rocky Mountains salvage logging is clearly not beneficial to the U.S. taxpayer. The Targhee is a "case study" of the economic effects of salvage logging. (CROSS REFERENCE: Timber, Economics)

1368

RESPONSE: Costs are related to meeting a variety of objectives. The Forest is managed to respond to the needs of a diverse constituency, subject to the body of existing laws and regulations. DP

COMMENTS: Restrict salvage until more information is available on the effects of current management techniques. No long-term plans should be made because we don't know.

1365

RESPONSE: Forest resource professionals are continually learning. All silvicultural activities are monitored and evaluated. The Targhee finished an extremely large salvage program and had tremendous success in regenerating thousands of acres of beetle killed lodgepole pine. Salvage will continue over the next decade, but to a lesser extent than in the past. DS

Clarify Salvage Logging

COMMENTS: Clarify salvage logging in terms of the number of trees and diameter to be left per acre after harvest and what will be logged or not logged.

317, 1324

RESPONSE: The Revised Plan does not give specific "how-to's" of project implementation. Implementation plans will be developed during the life of the Plan that will provide this operational direction. These plans will be adapted as new scientific principles and methods to improve resource management activities become available. Each salvage operation will be

proposed through site-specific NEPA analysis, and a silvicultural prescription will determine the number of trees, types of cutting methods used, and so forth. Refer to Chapter III, Ecological Processes and Patterns, Biodiversity, Dead and Down Materials. Also see Snag Requirements under Wildfire. DS

COMMENTS: Disclose on a forestwide level how many acres of dead timber remain with 2 mbf or more of dead per acre.

228

TIMBER - SILVICULTURAL/HARVEST

RESPONSE: Using fuel modeling, less than 2% of the forested acres on the Targhee, including mature, pole, sapling, seedling and non-stocked acres, have less than five tons of dead fuel remaining. Five tons equals approximately four cords or 2 MMBF. The Forest has 1,237,281 forested acres of which no less than 1,212,536 contain at least 2 MMBF of dead timber. This includes sound logs and logs in varying stages of decay. DS

COMMENTS: Discuss the impact of heavy timber harvest on native wildlife species in the lodgepole pine salvage areas.

1369

RESPONSE: Refer to Chapter III, Affected Environment, FEIS for a discussion on this topic. DS

COMMENTS: Disclose what is known and unknown about the health of the forest and how forestwide and project-level salvage decisions will be made in the future.

1365

RESPONSE: A comprehensive review of the existing Plan is included in the Analysis of the Management Situation (AMS). This analysis: 1) describes the present Forest condition; 2) defines progress made in implementing the Plan with respect to accomplishment of goals and objectives; and 3) shows how effective standards and guides are in achieving the desired future conditions described in the Plan.

The Revised Plan does not give specific "how-to's" of project implementation. Implementation plans will be developed during the life of the Plan that will provide this operational direction. These plans will be adapted as new scientific principles and methods to improve resource management activities become available. Each salvage operation will be proposed under a site-specific NEPA document, and a silvicultural prescription will determine the number of trees, types of cutting methods used, etc. DS

Clearcutting: Discuss and Clarify

COMMENTS: Include a full and open discussion of the pros and cons of clearcutting versus natural processes and events.

1365

RESPONSE: The Revised Plan provides for significantly less clearcutting than the existing Plan. However, clearcutting along with other silvicultural systems and methods are essential to meet Forest Service objective established by Congress. Refer to "National Goals Relevant to Land and Resource Management", Appendix A, Revised Plan.

The pros and cons of clearcutting can be compared to other silvicultural methods used to meet Forest Service objectives. Outcomes of these objectives can then be compared to natural processes and events. This comparison is evaluated in Chapter III, Final Environmental Impact Statement, Affected Environment. DS

COMMENTS: Find a balance between clearcutting and locking up the forest.

649

TIMBER - SILVICULTURAL/HARVEST

RESPONSE: During the revision process, alternatives were developed, analyzed, and compared, and a preferred alternative selected. The Revised Plan is based on a balanced approach between use and protection. DS

COMMENTS: Identify goals for this management method and clarify why clearcutting is the most appropriate technique for these goals.

389, 643

RESPONSE: Silvicultural techniques will be tools to manage or manipulate vegetation for the purpose of achieving Revised Plan resource objectives. The choice of reproduction method, such as clearcut, is frequently a compromise between what is biologically ideal and what is economically and socially acceptable. DS

COMMENTS: Discuss the relationship between water yield and timber harvest (clearcut equivalency) for each watershed. Some watersheds such as Packsaddle Creek have nearly all of their headwaters subjected to clearcutting.

643

RESPONSE: Total water yield on the Forest is about 1.4 million acre-feet. Management activities have the potential to change the timing and amount of water delivered to stream channels which is discussed by subsection in the Final Environmental Impact Statement (FEIS), Chapter III. A discussion on cumulative effects and which watersheds would be effected by alternative is discussed in Chapter IV, FEIS. An hydrologically disturbed constraint restricts the number of acres in each watershed that can be in a created opening status. LB/DS

COMMENTS: Define more clearly the cumulative impact of post-clearcut logging with its associated road network. Plan is deficient in the "reasonably foreseeable" choice of logging methods for individual projects.

1365

RESPONSE: Chapter III, Final Environmental Impact Statement, Affected Environment addresses current conditions regarding past logging and roads. Chapter IV describes the effect of alternatives. The Final Revised Plan serves as an "umbrella" for the environmental analysis for proposed projects at the Forest and Ranger District levels. Future environmental analyses, documented in EAs and EISs, will refer to the Plan, the accompanying EIS, and related documents wherever possible. Environmental assessments will be developed for project-level activities not specifically described in the Plan and will concentrate on issues unique to the project. DS

COMMENTS: Explain how you classified acres when a partial timber harvest eliminates cover, but still has more trees on it than a seed cut. Provide a classification for all habitat structures as per cover and forage rather than leaving a huge majority of acres in an undefined category. Extensive shelterwood cuts require clarity about what cover category these open stands fall in.

1369

TIMBER - SILVICULTURAL/HARVEST

RESPONSE: A stand is certified as stocked when there are 150 - 250+ trees/acre established, regardless of size, five years after a regeneration cut. Other objectives or guidelines, such as hiding cover (250 trees per acre, seven feet tall, capable of hiding 90% of an elk at 200 feet) are met for reasons other than stocking certification. DS

COMMENTS: Patch size is pertinent because of history of salvage logging on the Forest. (CROSS REFERENCE: EM, Patch Size)

317

RESPONSE: The Revised Plan provides extensive guidance for patch size to mimic historical patch sizes and shapes. Refer to Revised Plan, Chapter III: "Design timber management projects to simulate the range of natural variation for patch sizes, patch shapes, connectivity, and species composition and age class diversity." DS

Clarify Clearcut Patch Size

COMMENTS: Explain that clearcut size of 40 acres or less on 14% of the Forest does not mean clearcuts can be greater than 40% on the remaining 86% of the Forest and that the 40-acre clearcut unit size comes from research on elk distribution and movement and grizzly bear telemetry work.

625

Cite scientific data to support Size of Harvest Units and Leave Block/Strips Standard. Light, wind, moisture regime, and vertical stratification of vegetation may be such that the area is no longer a "created opening."

1446

RESPONSE: Created openings cannot exceed 20% of the forested acres within a watershed.

The 40-acre restriction comes from the National Forest Management Act. NFMA restricts openings on the Targhee to 40 acres except where larger units will produce a more desirable combination of net public benefits. Such exceptions shall be provided for in regional guides.

Size limits exceeding those established ...are permitted on an individual timber sale basis after a 60-day public notice and review by the Regional Forester. Identification of created openings will be made on a site-specific basis.

"The established limit shall not apply to the size of areas harvested as a result of natural catastrophic conditions such as fire, insect and disease attack, or windstorm." LB

COMMENTS: Include an analysis of fragmentation patterns and connectivity with patch size as more comprehensive indicators for Key Issue #1.

643

RESPONSE: Discussion on fragmentation is added in the FEIS. The Revised Plan provides several prescriptions, standards, and guidelines that limit the amount of early successional stage that can exist at one time. This direction should reduce cumulative impacts. MO

TIMBER - SILVICULTURAL/HARVEST

COMMENTS: Drop the statement: "Patch cuts are used to provide the disturbance needed to regenerate aspen." Patch cuts are used for many reasons. (CROSS REFERENCE: Timber, Aspen)

283

RESPONSE: We agree. This correction is made in the Revised Plan. LB

COMMENTS: Tier timber management to the NFMA and Intermountain Regional Guide which require Regional Forester and public approval of patch sizes of 40 acres or more.

1273b

RESPONSE: Regional Forester approval for openings > 40 acres is part of the normal procedures in project planning. LB

Reduce Patch Size

COMMENTS: Reduce patch size since you have no evidence to support stated size; reduce to a maximum of twenty acres.

61, 212

RESPONSE: The definition of patch size is adjusted to 1-20 acres in the glossary. LB

COMMENTS: The argument for aggregating small clearcuts into larger ones overlooks adverse impacts of larger clearcuts on recreation, visual quality, increased soil erosion, and ecosystem degradation.

1365

Pervasive use of many small clearcuts to reach timber targets can result in unacceptable habitat fragmentation.

325, 1365

RESPONSE: The Revised Plan contains direction to manage ecosystems in properly functioning condition. This entails an evaluation of four criteria: structure, composition, disturbance regimes, and patterns. Patch size, patch shape, patch distribution and connectivity are measures of "patterns". The size of clearcuts or patch sizes for timber harvesting are determined through the site-specific NEPA process. Impacts on recreation, visual quality, soils, and fragmentation as well as other resources are considered at this time. AM

Clearcutting - Standardize Clearcut Size

COMMENTS: Standardize the maximum clearcut size under the Preferred Alternative to adequately protect fish and wildlife resources.

1446

RESPONSE: The National Forest Management Act restricts the size of clearcuts to 40 acres unless site-specific analysis shows that larger openings would be environmentally sound. Some management prescriptions in the Revised Plan restrict clearcutting to less than 40 acres or not at all. LB

COMMENTS: Make patch size specific for the whole forest and include guidelines on how far apart patches should be.

305

RESPONSE: The Forest believes that standard patch size limits ability to maintain diversity. Using new tools in landscape analysis and design, and new direction to mimic historical patch size and shape is included in the Revised Plan. DS

Clearcut Patch Size Can Adversely Affect Wildlife

COMMENTS: Maintain adequate cover for wildlife and restrict large openings for timber harvest where you cut more trees than you can grow back.

1443

RESPONSE: The majority of management prescriptions that allow timber harvest are designed to benefit wildlife or other resources. Any harvest project will meet the objectives established in the prescription. LB

COMMENTS: Leave strips of a size large enough to provide cover for an adult elk and to withstand windthrow to protect migration corridors and habitat.

625

RESPONSE: We agree. The Revised Plan includes direction to provide adequate wildlife cover and protects habitat. See Elk and Summer Range Prescription in the Revised Plan (Chapter III-Part 3). LB

Clearcutting with Strict Guidelines is Necessary

COMMENTS: Include language that states clearcutting should be used only in settings and vegetative species where harm to natural environment will be insignificant and where other methods cannot achieve clearly defined multiple use objectives.

1365

RESPONSE: Harvest methods will meet the objectives of the specific project with the least impact. All methods must meet forestwide standards and guidelines for resource protection. The Plan provides for significantly less clearcutting and more selective and shelterwood logging. DS

COMMENTS: Monitor and evaluate the use of even aged management for any unexpected impacts and ensure management action is taken to mitigate those impacts in the future.

1365

RESPONSE: All harvest activities are monitored as outlined in the National Forest Management Act. The Revised Plan serves as an "umbrella" for the environmental analysis for proposed projects at the Forest and Ranger District Levels. DS

TIMBER - SILVICULTURAL/HARVEST

Prohibit or Consider Fewer Clearcuts

COMMENTS: Consider fewer clearcuts.

F-K(4)

Reduce clearcutting so there can be appropriate limits on both clearcuts and habitat fragmentation.

Develop plans that effectively implement the statutory presumption against the use of clearcutting.

1365

RESPONSE: Future environmental analyses, documented in environmental assessments (EAs) and EISs, will refer to the Plan, the accompanying EIS, and related documents wherever possible. Environmental site-specific assessments will be developed for project-level activities not specifically described in the Plan and will concentrate on issues unique to the project.

Clearcutting can be a valuable silvicultural option. Overall, the Revised Plan reduces clearcutting because of the reduced treatment of lodgepole pine species and includes additional direction that limits clearcutting in some areas. DS/LB

COMMENTS: Look beyond all even aged methods, including clearcuts, shelterwood and seed-tree cutting. Proposed plan perpetuates the application and abuse of clearcuts.

The use of even-aged management techniques is not acceptable. Harvesting techniques must be guided by a stringent set of standards. Standards are sorely lacking.

1365

Prohibit clearcutting. A forest should be a forest. TNF has had too many clearcuts in the past.

317

Initiate newer, more environmentally sound, methods of cutting timber than clearcutting.

1392

Eliminate clearcutting to ensure long-term health of the forest as a first priority.

F-K(4), 189, 318, 359, 399, 625, 656, 726, 1243, 1330, 1365

RESPONSE: Clearcutting remains as a silvicultural option. Overall the Revised Plan reduces the use of clearcutting because of the reduced treatment of lodgepole pine species and includes additional direction that limits clearcutting in some areas. LB

COMMENTS: Prohibit clearcutting to protect elk and grizzly bear.

244, 438, 519

RESPONSE: Management prescriptions in the Revised Plan are specific as to the extent clearcutting can or cannot be used in elk and grizzly bear habitat. LB

COMMENTS: Prohibit the use of logging to mimic natural processes and fire disturbances. Eliminate clearcuts in favor of select cut methods only. Contention that clearcuts mimic the effects of fire has been refuted. Support

TIMBER - SILVICULTURAL/HARVEST

with cited literature the statement on Page I-4 (EIS) that clearcutting can approximate the role of fire in the regeneration of lodgepole.

150, 489, 643, 1270, 1276, 1365, 1446

RESPONSE: Harvest methods will meet the objectives of the specific project with the least impact. All methods must meet forestwide standards and guidelines for resource protection. The Plan provides for significantly less clearcutting and more selection and shelterwood logging. The closest approximation to the extreme open situations created by clearcutting is a fire-killed stand (Daniel, Helms, and Baker 1979). Clearcut harvesting imperfectly mimics wildfire (Koch 1996). DS

COMMENTS: Discuss prescriptions to mimic fire disturbance (seed tree, shelterwood, select and clear cuts) and how they differ from the same kind of management that have previously failed on the Targhee National Forest where clearcuts of Douglas-fir have regenerated to only brush and lodgepole pine.

410

RESPONSE: Of the approximately 120,000 acres harvested on the Targhee, less than 7,500 acres remain unstocked as of September 1996. These remaining acres are expected to be stocked by 1998. The majority of these acres are in lodgepole pine stands. None of the Forest's Douglas-fir stands have been clearcut in the last decade, and no Douglas-fir clearcuts are planned. DS

Clearcutting - Continue To Allow

COMMENTS: Retain clearcutting silvicultural tool that may be needed in the case of fire or insect and disease. Continue to harvest in small clearcuts. Mature timber should be cut for wood products needed by American people.

5, 283

RESPONSE: Clearcutting remains a silvicultural tool. It will be used in small clearcuts (40 acres or less) in mainly mature stands. LB

Clearcutting - Regeneration

(CROSS REFERENCE: Timber, Regeneration)

COMMENTS: Replant clearcuts.

293, 377

RESPONSE: Of the approximately 120,000 acres harvested on the Targhee National Forest, less than 7,500 acres remain unstocked as of September 1996.

TIMBER - SILVICULTURAL/HARVEST

These remaining acres are scheduled to be stocked by 1998. Approximately 80% of all acres harvested regenerated naturally. The other 20% were planted. DS

Succession

COMMENTS: Studies show that clearcuts do not approximate the role of fire in the regeneration process in lodgepole pine. Stands include many seedlings in

TIMBER - SILVICULTURAL/HARVEST

the understory that provide succession and regeneration.

643

RESPONSE: The closest approximation to the extreme open situations created by clearcutting is a fire-killed stand (Daniel, Helms, and Baker 1979). Clearcut harvesting imperfectly mimics wildfire. Clearcuts with retention of 10 to 20 percent standing and down lodgepole pine biomass more closely approximate wildfire effects (Koch 1996). Clearcutting under the standards and guidelines of the Revised Plan (such as, snag retention, reserve trees, dead and down requirements, etc.) differs from clearcutting in the past. DS

COMMENTS: Consider that the presence of conifer in lodgepole pine does not mean stands will move to Douglas-fir or spruce. Lodgepole pine is a climax species on many infertile sites where conditions do not favor other species. Where spruce and fir have become established and canopy is more open, lodgepole pine regeneration is found in many forest gaps.

643

RESPONSE: Refer to the forestwide Ecological Unit Inventory which guides the Forest in the management of vegetative communities and identifies and maps Potential Natural Community. DM

COMMENTS: Correct statement that mountain pine beetle invasions in lodgepole pine stands allow more shade tolerant species to take over. Post-fire research shows that conifer species most likely to appear in lodgepole pine after canopy is opened is lodgepole pine.

643

RESPONSE: Your comment is acknowledged. This concern is best evaluated on a case-by-case basis at either the landscape- or project-level, rather than at a forestwide scale. DM

COMMENTS: Consider that post lodgepole pine seedling densities span four orders of magnitude, ranging from 80 to 1.9 million seedlings per hectare. Densities are dependent on the proportions of serotinous trees in the pre-fire stand and on fire severity.

489

RESPONSE: Your comment is acknowledged. This concern is best evaluated on a case-by-case basis at the project-level scale, since it is dependent on site-specific characteristics or factors. DM

COMMENTS: The Revised Plan does not elaborate what decision processes are to be used to ensure species complexes are maintained.

384

RESPONSE: Please refer to the Properly Functioning Condition section of the Revised Plan (Chapter III) where approximate project-specific NEPA analysis will yield the decision for management actions to maintain species. DM

COMMENTS: Consider the failure of lodgepole pine areas on infertile, subalpine sites to become adequately stocked as being within the RNV. Several

area studies suggest these sites will gradually fill in over relatively long periods of time as individual lodgepole pine are recruited from seeds from open-coned trees.

489

RESPONSE: National Forest Management Act, 1976, requires units to be fully stocked within five years after harvest. DS

COMMENTS: Do not break down successional stages into "mature" and "immature," rather follow Despain (1990) who uses five stages. To use only two stages is a poor scientific basis on which to manage biodiversity for Forest dependent species.

1273b

RESPONSE: The Forest used the six successional stages found throughout silvicultural literature, most recently in Characteristics of Old Growth Forests in the Intermountain Region, USDA Forest Service, 1993. Late seral and climax species may be present in young stands. This can occur in any habitat type. See table under "Late Successional Stages by Forest Type" in Final Revised Plan. The Forest is cooperating with Montana State University to develop succession modeling. DS

COMMENTS: Update plant succession discussion on Page III-5 of the DEIS to include ideas presented by Lyon and Stickney (1976). Description is archaic and research over the past several decades has shown this model seldom holds and it has been largely abandoned by plant ecologists.

489

RESPONSE: The description of the general pattern of succession is adequate. The Forest used the six successional stages found throughout silvicultural literature, most recently in Characteristics of Old Growth Forests in the Intermountain Region, USDA Forest Service, 1993. Late seral and climax species may be present in young stands. This can occur in any habitat type. See table under "Late Successional Stages by Forest Type" in Revised Plan. DS

COMMENTS: Reflect recent studies regarding succession that state idealized progression rarely happens and is more directly related to species present prior to disturbance and the mix of environmental conditions (slope, soil, aspect, elevation and other factors) that characterize the site.

643

RESPONSE: The Forest acknowledges that some inherent unpredictability exists in specific successional pathways, but the classic successional model is adequate for this analysis. RR

COMMENTS: Consider lodgepole pine as much of a climax species as subalpine fir or Engleman spruce, because as lodgepole canopy opens up, recruitment of new lodgepole pine occurs in many of the gaps or "leave strips".

Reconsider the assumption that the presence of subalpine fir or Douglas-fir in lodgepole pine stands will succeed to a Douglas-fir or spruce-fir forest. Environmental conditions may be such that two or more

TIMBER - SILVICULTURAL/HARVEST

species can co-exist. Suspect this is the case on the forested area on the west slope of Teton Range.

489

RESPONSE: A climatic climax is found on deep loamy soils of gently undulating relief; an edaphic climax develops on the other soils and types of relief; and a topographic climax reflects compensating effects of aspect or different microclimatic effect.

Lodgepole pine plays a minor seral role when in a component of stands with a mixed overstory composition, and is usually replaced by more tolerant associates in 50 to 100 years. It is dominant seral when it is the principal overstory component of stands with a vigorous understory of more tolerant associates that will ultimately replace lodgepole pine in 100 to 200 years. Where lodgepole pine stands are the result of catastrophic fires, it can be a persistent seral because there is no seed source for the normal replacement species. Even though most of the lodgepole stands on the Targhee developed as a result of catastrophic fire, few, if any, reflect the condition of not having seed sources of more tolerant species. Where lodgepole pine is the only available species capable of growing in a particular environment, such as in frost pockets, it is a self perpetuating climax.

Most of the lodgepole pine stands on the Targhee are considered serotinous, but approximately 70% of the cones are non serotinous which allows "gaps or leave strips" to become stocked. DS

COMMENTS: Clarify that for silvicultural purposes, stocking is achieved when trees are two feet tall, not seven feet tall. Requirements may be different for wildlife on visuals.

413

RESPONSE: A stand is certified stocked when 150-250+ trees are established, regardless of size, five years after a regeneration cut. Other objectives or guidelines, such as hiding cover (250 trees per acre, seven feet tall, capable of hiding 90% of an elk at 200 feet) are met for reasons other than stocking certification. DS

TIMBER - SITE-SPECIFIC

Lemhi/Medicine Lodge Subsection

COMMENTS: Explain the cause of the presumed lack of tree species diversity in the Lemhi/Medicine Lodge Subsection and whether the Forest Service expects an increase in diversity with more frequent fires or some sort of vegetation treatment. It's unlikely the area would support species that aren't there now.

489

RESPONSE: Douglas-fir commonly dominates many northern aspects of the drier mountain lands of southern Idaho and is typical of the situation in the Medicine Lodge area; the south slopes are sage/grasslands and the north slopes are Douglas-fir. In the Lemhi Mountains, Douglas-fir occupies a narrow elevational band that allows growing conditions for this species, but not

TIMBER - SITE-SPECIFIC

others. Farther north in the Lemhi Range the elevational band becomes wider. As moisture increases, the number of tree species becomes more diverse. Projects proposed in this subsection will focus on increasing the diversity of age classes rather than increasing species diversity. Forested systems in these areas have been dominated by successional pathways associated with dry Douglas-fir types and should remain dominated by these pathways. JC

Jackpine Loop and Leigh Creek

COMMENTS: Intensive timber harvests have occurred in the Jackpine Loop and Leigh Creek areas, creating unnatural openings that span many hundreds of acres. Shrub slopes at lower elevations that are critical ungulate range are no longer bordered by good hiding and thermal cover due to timber harvest. Shrub slopes are often in proximity to new houses, roads, and activities on adjacent private lands. Roads and trails are present in almost all of the drainages in the Tetons. Teton Pass Road and the Ashton-Flagg Ranch Road may have a major effect on landscape connectivity for large and small animals.

643

RESPONSE: The amount of timber harvest proposed in the Jackpine Loop area and Leigh Creek Watershed is 5.928 MMBF/decade, and considered an upper limit based on other constraints in the Revised Plan, such as the standard that more than 70 percent cover must be maintained in the Jackpine Loop area. In the Leigh Creek Watershed, maintaining forested blocks greater than 250 acres is a constraint that limits timber harvest. During site-specific analysis, the disturbance of adjacent lands becomes a factor as it relates to the landscape. Management prescriptions in the Teton Pass are not timber prescriptions. Harvest is unlikely, unless resource objectives for the area cannot be met otherwise. A site-specific analysis will be completed before any project is implemented. Management prescriptions for these two areas establish maximum road densities. In these two areas, road densities will be reduced from current levels. LD

Timber Harvest on the Palisades Ranger District

COMMENTS: Harvest on the Palisades Ranger District in Wyoming should only occur after development of a comprehensive cumulative impacts analysis that evaluates the impacts of old growth and wildlife and reviews public access to areas that winter big game species.

389

RESPONSE: Any harvest proposal requires site-specific analysis through the NEPA process. Site-specific analysis must address cumulative effects on all resources. LB

Boot Jack Pass to Red Rock Pass

COMMENTS: Eliminate further harvesting from this area and on the north side of Sawtell, Jefferson Peaks and adjoining mountains, because this is a major watershed to Henry's Lake that harbors big game. Harvest does not sustain

TIMBER - SITE-SPECIFIC

habitat or free movement of wildlife and our property is next to the Forest and we want peace and quiet.

1457

RESPONSE: The Revised Plan does not schedule any timber harvesting from Hope Creek to Red Rock Pass, the north side of Sawtell, and Jefferson Peaks. These areas are designated nonmotorized or semi-primitive motorized. This management prescription does not allow scheduled timber harvesting. The Revised Plan does allow a small amount of timber harvesting from Boot Jack Pass to Hope Creek. Timber harvesting must follow specific standards and guidelines to maintain grizzly bear habitat. MO

Big Holes

COMMENTS: If the Forest plans substantial management changes in Big Holes area, elaborate and disclose those plans and allow additional time for comment. The area in question is not labeled in regard to management prescription on page III-50. I would like to know the prescription number for the mile-wide area south and west of Driggs on the east slope of the Big Holes. Prohibit clearcutting in this area.

1186

RESPONSE: The management prescription for this area is 5.1.3 (b). Clearcutting is not allowed in this prescription. The intent of this prescription is to provide fuels management adjacent to an urban interface area. LD

COMMENTS: Fire risks in Big Holes area are the landowner's responsibility. This area is important for wildlife, and rich riparian areas need to be protected and rejuvenated from grazing. Creating new roads is expensive and provides more needless access to areas and could jeopardize wildlife security. Unsightly clearcuts would destroy the aesthetics and possibly devalue private property. Firewood gathering is fine as long as no new roads are built.

325

RESPONSE: Clearcuts are not allowed in the 5.1.3 (b) Prescription applied to the Big Holes area. New roads would not be permitted if road density exceeds 3 mi./sq.mi. The forestwide standard and guidelines covering grazing in

riparian areas and Prescription 2.8.3 guidance are designed for recovery of riparian areas. LD/RSM

Sheridan Creek - Table Mountain (Low Elevations)

COMMENTS: Prescribed Timber Management (Big Game Emphasis) is a concern in that harvest will reduce late seral conifer stands which are exceedingly rare throughout the US. Maintain representative examples of this habitat type wherever possible since old growth is important for wolverine and goshawk, both of which are indicator species as well as Category 2 candidate species

TIMBER - SITE-SPECIFIC

and sensitive species. It also provides unparalleled security cover for elk and grizzly bear.

1185

RESPONSE: Table Mountain is designated a special management area (Management Prescription 2.1.1) in the Revised Plan. This management prescription does not allow scheduled timber harvesting.

The lower elevation area of Sheridan Creek allows scheduled timber harvesting. Timber harvesting must follow standards and guidelines for Management Prescription 5.1.4, for goshawk territories, and for old growth and late successional forests. Targhee analyses shows 70% of forested acres will be unharvested and in a late succession or old growth condition at the end of the first decade. MO

Proposed Timber Sales

COMMENTS: The following proposed timber sales will have a direct impact on resource management on adjacent BLM land: (WA = WATERSHED)

WA 009A	Island Park/Centennials	WA 014	Big Bend Ridge
WA 016	Falls River	WA 019	Teton Creek
WA 020	Leigh Creek	WA 023/024	Canyon/Moddy Creek
WA 025	Camas Creek	WA 026A	Beaver Creek

Timber harvest may render BLM objectives useless due to individual or cumulative impacts adversely affecting resources such as water quality, riparian, big game habitat, raptor nesting, recreation. True ecosystem management analyzes the cumulative effects of timber harvest and OHV plans on BLM and Idaho Department of Public Lands. These areas have been identified by Idaho Fish and Game as crucial big game summer-fall habitat as well as secure migration areas. This proposed harvest would fragment this important habitat shared by the Forest Service and BLM.

1446

RESPONSE: Management activities adjacent to BLM administered lands will be coordinated with BLM. JR

Island Park and Madison Subsections

COMMENTS: Correct the statement that says no harvest is planned in Island Park and Madison Subsections over the next ten years. This is an error, specifically for Alternative 2.

413

RESPONSE: Your comment is acknowledged. Harvest activities are permitted in both of these subsections. The statement was corrected in the Revised Plan. LB

COMMENTS: Consider all forest types in percentages described on Page III-37, Paragraph five. This is 46% for lodgepole pine only. It is 35% for all forest types in this subsection. Seems to defeat the purpose. These percentages are from Page III-10 of the DEIS.

413

TIMBER - SITE-SPECIFIC

RESPONSE: The information was changed in the Revised Plan to show that 35.1% of the forested acres are in nonstocked, seedling sapling classes. LB

Sand Creek

COMMENTS: Changes in the demographics of the wintering Sand Creek elk population are directly related to past timber harvests. Forest cannot rely on the State of Idaho to modify hunting regulations to improve the herd. Reduced cover and high road densities are detrimental to a sustainable herd. Forest should strive to meet 100% of the state guidelines under any alternative selected. Timber harvest should still be achievable with an increase in permanent road closures and innovative cutting units. If not, then timber should be reduced to a level compatible with this objective.

625

RESPONSE: The Revised Plan supports the goals of the State Fish and Game departments. Motorized access and timber harvesting are reduced so that previously harvested areas can grow to meet cover objectives before additional timber harvesting is done. About 91% of the Forest meets State Fish and Game thresholds for elk vulnerability. The remaining 9% contain areas with high hunter densities. MO

Pack Saddle Creek

COMMENTS: Discuss the relationship between water yield and timber harvest (clearcut equivalency) for each watershed. Some watersheds such as Pack Saddle Creek have nearly all of their headwaters subjected to clearcutting. (CROSS REFERENCE: Riparian, AIZ - Timber)

643

RESPONSE: The headwater of Packsaddle Creek is assigned the 5.1.4 (b) Prescription. The proposed ASQ for this area is 1.365 MMBF/decade which is based on the amount of timber that can be harvested and not violate the other standard and guidelines that apply to this prescription. The most limiting is the standard that states no more than 20% of the acres will be in a created opening at any point in time. This area has almost reached that point and therefore any new proposed clearcuts will be carefully scrutinized by the Forest in site-specific analysis. However, harvesting that does not generate a created opening i.e., select, could be done. LD/CC

TIMBER - SNAG MANAGEMENT

Clarify Direction on Snags, Dead, and Down Material

(CROSS REFERENCE: Wildlife, Snags/Cavity Nesters)

COMMENTS: Clarify the direction for guidelines on dead and down material on Page III-4.

1369

RESPONSE: Habitat-type specific guidelines are designed to ensure adequate amounts of organic matter will be available to provide for the maintenance of long-term forest (site) productivity after vegetation manipulations. Woody

debris recommendations (R. Graham et al. 1994) were developed based on research of the Rocky Mountain Forests using ectomycorrhiza as a bioindicator of healthy productive forest soils. DM

COMMENTS: Describe the role that the structure of woody debris has on wildlife effectiveness and how wildlife effectiveness will be achieved in guidelines (III-6). If structure is not important, cite current science that this management assumption is based on.

1369

RESPONSE: The Targhee assumes this question refers to the woody residue (debris) guidelines on Pages III-4 and III-5 of the Draft Plan (no woody residue guidelines are found on Page III-6) regarding maintaining site productivity. The Targhee recognized guidelines in the Draft would not meet the needs for wildlife habitat. Additional guidelines were developed for dead and down material (debris) for wildlife habitat and are in the Revised Plan. The guidelines call for providing different decomposition classes and minimum sizes for the dead and down material to enhance forest structure. MO

COMMENTS: Cite references that indicate logs are the only limiting habitat factor for wildlife associated with woody debris.

1369

RESPONSE: Snags and logs, associated with woody debris, are an important factor in habitat requirements for wildlife. They may or may not be a limiting factor, depending on site-specific conditions. For example, numerous snags may exist in openings, but if a wildlife species needs snags on forested sites, availability of forested sites is the limiting factor and not the number of snags. References for the analysis on cavity nesting species are provided in Process Paper D. MO

COMMENTS: Explain how you derived the number of green trees needed for replacement of snags. Include estimated mortality rates per given basal area of lodgepole pine and Douglas-fir.

1369

RESPONSE: Mortality rates on green trees came from the prognosis model developed for the Revised Plan. Process Paper D discusses and displays the data for green tree replacement. MO

COMMENTS: Explain how a threshold value of 25 green trees per acre for snag recruitment was determined.

1369

RESPONSE: Mortality rates on green trees came from the prognosis model developed for the Revised Plan. Process Paper D discusses and displays the data for green tree replacement. MO

COMMENTS: Cite scientific reference regarding the statement that green tree replacement strategy will mitigate impacts on cavity nesters.

1369

TIMBER - SNAG MANAGEMENT

RESPONSE: This statement did not occur in the DEIS and does not occur in the FEIS. The statement that does occur is as follows: "As a result of the snag and green replacement tree requirements in the management prescriptions, there is no measurable difference in biological potential for primary cavity nesting species between the alternatives due to scheduled and unscheduled timber harvest activities." MO

COMMENTS: Discuss maximum snag potential and explain why snag recruitment does/does not increase along with the number of trees in the stand. Cite current research or monitoring for this assessment.
1369

RESPONSE: Process Paper D discusses and displays the analysis for primary cavity nesting species (snag) habitat. MO

COMMENTS: Discuss how snags have been measured or will be measured in the future.
1369

RESPONSE: Process Paper D discusses and displays the analysis for primary cavity nesting species (snag) habitat. The monitoring plan discusses how primary cavity nesting species (snag) habitat will be monitored. MO

COMMENTS: Explain how the Forest has determined future snag densities, since there are no standards and this information is needed to evaluate the impacts of each Alternative.
1369

RESPONSE: Specific direction for maintaining snag habitat is stated in each management prescription. Details of the analysis used to evaluate the alternatives is presented in Process Paper D. MO

COMMENTS: Explain how the Forest ascribed snags and replacement trees to the planned forest conditions since there are no actual standards for snags and tree replacement.
1369

RESPONSE: Specific direction for maintaining snag habitat is stated in each management prescription. MO

COMMENTS: Analyze the viability impacts of existing snag levels on the Forest. Explain why mitigation measures are not needed to correct the existing problems in past clearcuts without snags.
1369

RESPONSE: Process Paper D displays the complete analysis for primary cavity nesting species habitat. In areas where lodgepole salvage has occurred, no timber harvest is proposed for one to three decades. Management prescriptions that allow timber harvesting have guidelines for maintaining specific potential snag habitat. MO

COMMENTS: Cite scientific reference for the downed log guidelines. Explain the basis for 20 logs per acre and identify species for which these guidelines were developed.

1369

RESPONSE: Process Paper D discusses the dead and downed material guidelines, and references used in developing the guidelines. The species which use dead and downed material for habitat were identified in the Analysis of the Management Situation and are not repeated in the Revised Plan. MO

COMMENTS: Cite scientific references that are the basis for requiring only 60% of an area to meet the down and dead wood guidelines and how this requirement will ensure wildlife viability.

1369

RESPONSE: The dead and downed material requirements are applied to all activity areas. Even under natural conditions, dead and downed woody material is not evenly distributed, and distribution changes over time with natural disturbances. The 60% standard recognizes this fact. Process Paper D discusses the dead and downed material guidelines and references used in developing the guidelines. The species which use dead and downed material for habitat were identified in the Analysis of the Management Situation and are not repeated in the Revised Plan. MO

Reduce the Number of Trees Per Acre Requirement for Snag Recruitment

COMMENTS: Reduce the number of live trees per acre requirement for snags from 25 live trees per acre to ten per acre. Twenty-five trees is 250% of the biological need of ten dead snags per acre. Reduce the amount of woody debris by 50%.

413, 767, 1267

RESPONSE: The number of live trees requirement is retained in the Revised Plan because both snags and green trees decay or decompose over time. The need to retain more green trees is to maintain a consistent number of snags over time.

The dead and downed material requirements are based on a range of dead and downed material found in naturally occurring stands over time. MO

COMMENTS: Reduce to 20 logs per acre in each of the three decomposition classes. Sixty logs per acre is excessive. This density does not occur naturally, especially in lodgepole pine types.

413

RESPONSE: The standard sets a total of 20 logs per acre, distributed in decomposition classes 1, 2, and 3. MO

Increase the Amount of Trees Per Acre

COMMENTS: Forest stands dominated by 5" or 9" trees do not provide an adequate abundance of functional snags.

1365

TIMBER - SNAG MANAGEMENT

RESPONSE: This comment refers to the guideline for retaining live trees for future snag recruitment. In this guideline, some smaller live trees (5' to 9') are left, along with some larger live trees. As larger trees die and become snags, smaller live healthy trees continue to grow to replace larger, fallen trees. The intent is to manage for continual replacement over time by leaving a variety of tree sizes and ages. MO

COMMENTS: Leave more snags and deadfall for habitat.

359

RESPONSE: The Targhee's analysis indicates that the number of snags and deadfall established in the Revised Plan will provide habitat conditions within the range of natural conditions in unmanaged stands. MO

Use Snags as Indicator of Old Growth

COMMENTS: Use large snags associated with late successional forests and their relationship to biological potential for woodpeckers as an indicator of old growth.

643

RESPONSE: Old growth definitions include criteria for size and number of snags. However, woodpeckers on the Targhee are not restricted to old growth. Some species of woodpeckers use recently burned areas, and young forests, if suitable snag habitat is available. MO

TIMBER - STANDARDS AND GUIDELINES

Add Skidding Requirements

COMMENTS: Combine skidding constraint with a requirement to rip these skid trails if compaction occurs due to wet weather operations. Loosen skid constraints and require skid equipment to stay on designated skid trails during wet weather.

90

Use specific skid patterns. Felling trees toward a predetermined skid area (felling to the lead) may be appropriate in certain areas. In important fish habitat or where slopes are greater than 40% use winching logs directly out of sensitive areas (end-lining).

389

RESPONSE: Where appropriate, directional felling can be used to mitigate adverse impacts. Site-specific NEPA analysis addresses the needs of the land area involved in the individual project. Timber Sale Contracts contain specific requirements for the purchaser and provisions that may require ripping of skid trails and roads when required by the NEPA document. BR

Add Standards

COMMENTS: Soils - Set standard to keep soil disruption to a minimum as a result of logging.

697

TIMBER - STANDARDS AND GUIDELINES

RESPONSE: Timber sale contracts under section BT6.6, Erosion Prevention and Control, (FS-2400-6T Page 125) address this concern. LB

COMMENTS: Other Tree Species - Add a standard that all trees of other species (Douglas-fir, subalpine fir, spruce, limber and whitebark pine, etc.) be preserved when harvest occurs in lodgepole pine. Biodiversity - Add a standard that all trees under a certain size class be protected to hasten regeneration and preserve biodiversity in logged areas. The desired stand structure should be determined site-specifically based on management objectives.

643

RESPONSE: Such a standard may not meet the silvicultural need of site-specific stands or meet other resource objectives in the project area. Clearly defined management objectives determine applicable silviculture treatment. Each management objective influences the mixture of species and age classes present. Silvicultural applications are designed to meet the management objective and result in landscapes of various structure and composition that are responsive to the overall biodiversity needs of the Forest. DS

COMMENTS: Big Game - Delineate standards that assure that blocks of timber are a reasonable distance from open roads to protect big game.

1273b

RESPONSE: Management Prescriptions 5.1.4 and 5.4 require blocks of cover greater than 250 acres in size be left for big game. The distribution of these blocks, and whether they are always greater than 1/2 mile from an open road, will depend on site-specific analysis. MO

COMMENTS: Visuals - Page III-128 to III-129 - Develop Standards and Guidelines for silvicultural practices to assure that visual quality is maintained and improved.

1273b

RESPONSE: Based on the site-specific location, and visual quality objectives established for that area, silvicultural treatments are developed to meet the criteria. No additional standards are necessary. LB

COMMENTS: Establish a standard that no damaged or diseased trees will be removed, and specifically state exceptions to this standard. Let natural disturbance play its role in ecosystem dynamics.

695

RESPONSE: Requirements for dead and down woody material and snag retention are found in both Wildlife and Soils sections of the Revised Plan. Determination is site-specific based on the management prescription. DM

TIMBER - STANDARDS AND GUIDELINES

Develop Standards and Guidelines for Salvage Harvesting

COMMENTS: Develop standards and guidelines for salvage harvest methods to avoid detrimental impacts to other forest resources.

389

Develop standards and guidelines for salvage harvest methods, especially in old growth and crucial security areas, to avoid timber harvest levels that would have a detrimental impact on other forest resources.

643

RESPONSE: Standard and guidelines were developed for timber activities in general and apply to salvage logging. The Revised Plan serves as an umbrella for site-specific environmental analysis at the Forest or District level. Any timber harvest, whether salvage logging or removal of green volume, will be analyzed on a site-specific basis, and appropriate mitigation and monitoring will be implemented to address site-specific factors. Standards and guidelines serve as sideboards for all management activities. No additional standards and guidelines are needed. LB

COMMENTS: Use the standards and guidelines based on Beschta et. al. 1995: "Wildfire and Salvage Logging: Recommendations for Ecologically Sound Post-Fire Salvage Logging and Other Post-Fire Treatments on Federal Lands in the West."

1. Prohibit salvage logging in sensitive areas, which include, but are not limited to: Severely burned areas; on erosive sites, or any site where accelerated erosion is possible; on fragile soils; on roadless areas; in riparian areas; on steep slopes; and in watersheds with existing serious sedimentation problems.

2. Leave at least 50% standing dead trees in each diameter class; leave all trees greater than 20 inches dbh or older than 150 years; leave all live trees:

3. Prevent soil compaction and erosion in areas determined suitable for salvage logging by prohibiting conventional types of ground-based yarding systems (tractors and skidders) and using new equipment or techniques where it can be demonstrated that soil integrity will be protected.

1367a

RESPONSE: Recommendations 1 and 3 are found in forestwide standards and guidelines or in existing laws and regulations. All three items, and especially item two, are by definition "post-fire treatments". The Forest is not logging in a fire area at the present; however, these recommendations would be considered after this type of disturbance and would be based on the site-specific area at that time. Salvage is limited in the next decade. LB

Include Buffer Zones

COMMENTS: Buffer zones along side of each standing body of water or have water course. Consider factors such as slope, stream channel stability and fish habitat when determining appropriate buffer zone width.

389

TIMBER - STANDARDS AND GUIDELINES

RESPONSE: These items are covered in Chapter III of Final Revised Plan. Refer to the AIZ prescriptions. LB

Protect Steep Slopes

COMMENTS: Develop strict standards for harvest in the ASQ and non-ASQ prescriptions that protect soil, water, wildlife and other resources. For example, stricter standards are needed to regulate timber harvest on steep slopes.

1365

RESPONSE: The standards and guidelines are provided in the Revised Plan, along with existing laws and regulations, and establish constraints for management activities. The Revised Plan serves as an umbrella for site-specific environmental analysis for proposal at the Forest and District level. Any timber harvest proposals, whether for salvage or removal of green volume, will be analyzed on a site-specific basis, and appropriate mitigation and monitoring implemented to address site-specific factors. Standards and guidelines in the Revised Plan serve as sideboards for all management activities. No additional standards and guidelines are needed. LB

Add Standard for Coordination with Other Agencies

COMMENTS: Add a standard requiring analysis of land management practices on BLM lands adjacent to proposed sales and interagency coordination with BLM to ensure management of the total ecosystem. (CROSS REFERENCE: Soils, HD)

1446

RESPONSE: No additional standards and guidelines were added to the Revised Plan. Site-specific analysis requires disclosure of affected environment, including activities on adjacent land. LB

COMMENTS: On slopes greater than 40%, technical consideration should be given to protect soil stability and coordination with Wyoming Game and Fish personnel in Jackson for activities within Wyoming.

389

RESPONSE: See Chapter III of the Final Revised Plan. This is currently standard operating procedure on all projects. LB

Clarify Table on III-24

COMMENTS: Clarify the table on Page III-24 to show which treatments are standards or guidelines. Precommercial and commercial thinning treatments may cause an accumulation of slash that impairs movement of big game and other terrestrial species.

1446

RESPONSE: The entire table is designated as a guideline in the Revised Plan. The table title read "Guideline", but it is in a different format in the Revised Plan. LB

TIMBER - STANDARDS AND GUIDELINES

Change the Following from Guidelines (G) to Standards (S)

COMMENTS: 1) Change guidelines two on Page III-25; 2) Page III-124, (Timber) the final guideline should be a standard; 3) Page III-125, the first guidelines should be standards requiring the maximum use of non-chemical methods; 4) Page III-127, change this guideline to a standard; 5) Page III-128, change items two and three to standards; 6) Page III-130, change the regeneration systems guidelines to standards.

1365

RESPONSE: 1) Timber sale contracts have clauses that require logging operations be shut down any time the operation causes/could cause adverse resource damage. 2) The Forest will rely on natural regeneration when analysis indicates its probability. National Forest Management Act requires establishment of regenerated stands by the end of the fifth year after harvest. 3) This defeats the purpose of the prescribed silvicultural treatment for the area and does not allow consideration of other resource values. 4) See previous response. 5) Items two and three are standards. 6) Based on the wording in the guideline as written, it is meaningless to change to a standard. The Forest will rely on natural regeneration when analysis indicates its probability. National Forest Management Act requires establishment of regenerated stands by the end of the fifth year after harvest. LB

Change/Correct the Following Items

COMMENTS: Change Item E to a standard to be consistent with Item C.2.

1446

RESPONSE: The Revised Plan retains Item E as a guideline. Item E and C.2 are two separate items that can be implemented as proposed without being inconsistent. WG

COMMENTS: DFPR, Page III-99, eliminate the entire second item under timber so any changes to standards and guidelines would require an amendment.

1446

RESPONSE: Any project that recommends changes to standards and guidelines is analyzed in a separate NEPA process, including public review, and is approved by the Regional Forester and Forest Supervisor in a decision document. LB/CC

COMMENTS: DFPR, Page III-99, rewrite 4th item to read, "mechanized treatment of wood residue is eliminated."

1446

RESPONSE: The Revised Plan retains this statement. On a site-specific basis, this tool may be appropriate. JR

COMMENTS: Add the following words to the last sentence: "Only where salvage will improve AIZ."

1446

TIMBER - STANDARDS AND GUIDELINES

RESPONSE: Prescription 2.8.3 states, "Emphasis is directed at the application of ecological knowledge to restore and maintain the health of these areas in ways that also produce desired resource values, products, protection, restoration, enhancement, interpretation, and appreciation of these areas." Based on this direction, any activity in the AIZ is accomplished with the intention of maintaining or improving the condition. LB

COMMENTS: Remove the Standards and Guidelines section Logging System #2, since it is already part of Timber Sale Contracts and administered by a certified sale administrator.

283

RESPONSE: Although there is a contract clause about wet weather conditions, standards and guidelines provide the sale administrator with specific guidelines when resource damage occurs and when work should temporarily cease. LB

COMMENTS: Page III-122, 5.1 (b-c), change last paragraph to read, "By permit, from live and dead trees, designated . . ." There may be a need to harvest green trees, so why limit options?

283

RESPONSE: Your comment is acknowledged. The Revised Plan was changed to reflect this recommendation. LB

COMMENTS: Change Guideline 36 (sawtimber) from trees that are 9" in diameter dbh to trees that are 7" dbh.

283

RESPONSE: This comment refers to the definition of sawtimber in the glossary and is corrected in the Revised Plan. LB

TIMBER - UNSCHEDULED TIMBER HARVEST

Include ASQ From Unscheduled Harvest in 7.5 MMBF Per Year

COMMENTS: Include "unscheduled (EM) harvest" in 7.5 mmbf/yr. ASQ to remain within "sustainable" limits.

643, 658, 690, 693, 1194, 1381, 1401

Remove from the plan or include in the overall 3.7 mmbf/year ASQ allowed by the plan.

Include all EM harvest in the proposed ASQ of 3.7 MMBF.

337, 644, 658

RESPONSE: Unscheduled harvest is not counted in ASQ. Harvest volumes counted in ASQ come from suitable lands under a timber prescription. Unscheduled comes from forested lands in other than suitable-timber prescription lands. Unscheduled harvest is limited to a maximum of 2.0 MMBF per year in the Revised Plan. This amount is in addition to ASQ (8.0 MMBF) and firewood products (3.8 MMBF). The total of 13.8 MMBF potential is below the LTSY level of 22.0 MMBF. LB

TIMBER - UNSCHEDULED TIMBER HARVEST

Prohibit Unscheduled Harvests

COMMENTS: Prohibit unscheduled harvests for any experimental or ecosystem management purpose, especially on unsuitable lands, because it is the misapplication of ecosystem management; no rules or guidelines for its application are presented; focus should be to restore wildlife habitat, riparian areas and closing roads to protect wildlife, not on cutting trees and destroying wildlife habitat; logging does not mimic fire; logging should be sustainable; it's a "devious plan" to allow harvests, especially in areas generally unsuitable for timber production; you don't know the ramifications; you don't have an accurate Range of Natural Variation; and you haven't had a review by the scientific community or public.

F-G-1(475), F-H(8), F-J(3), F-K(4), 136, 161, 165, 167, 185, 196, 208, 212, 226, 280, 392, 396, 400, 405, 410, 438, 441, 496, 622, 631, 634, 636, 640, 643, 650, 652, 669, 690, 695, 766, 1194, 1197, 1203, 1241, 1258, 1270, 1277, 1313, 1327, 1330, 1368

RESPONSE: The Revised Plan allows unscheduled harvests and sets a cap of 2.0 MMBF/year. In order to meet ecosystem management principles for forest health, it may be necessary to treat forested lands that are not in the suitable base. ASQ provides the Forest with the means to treat suitable lands within a timber prescription. Unscheduled harvest covers the remaining forested lands, regardless of what prescription is applied. The Revised Plan does not mandate harvesting the unscheduled component. If unscheduled harvesting occurs, it is subject to the same laws, regulations, goals, objectives, standards and guides as ASQ harvest. Any proposal would use silvicultural prescriptions for identifying the need for harvest, and projects would be subject to site-specific NEPA analysis including disclosure of effects and public involvement. LB

Clarify/Limit Unscheduled Timber Harvest

COMMENTS: Clarify "experimental", "unscheduled", or "EM" harvests in regard to projected volume outside the ASQ; how it will improve wildlife and riparian conditions; impacts on MIS and other resources; and options for each prescription so that total impacts can be evaluated (Page III-70 and 72, Objectives 1 and 2).

161, 165, 167, 185, 228, 335, 669, 719, 766, 1257, 1258, 1276, 1364, 1365, 1368, 1369, 1371, 1446

Show how Em harvest fits into EM goals and establish rules or guidelines/criteria for unscheduled harvest.

280, 389, 644, 695, 1368

RESPONSE: The Revised Plan sets a maximum volume of 2.0 MMBF per year on other than ASQ lands. The number of acres depends on the treatment prescribed. Unscheduled harvest could be designed to meet specific ecological objectives, including wildlife habitat needs and would be subject to all laws, regulations, goals, objectives, standards and guides. The Revised Plan does not mandate the harvesting of the unscheduled component. Resource need must be shown, NEPA accomplished, and public review assured. Effects on wildlife will be addressed in a site-specific NEPA analysis. LB

TIMBER - UNSCHEDULED TIMBER HARVEST

COMMENTS: Set an upper limit/volume/acreage on unscheduled timber harvest and analyze environmental consequences of estimated level of unscheduled quantity to meet NEPA requirements.

Consider a cap of 1/2 to 1 MMBF as a maximum harvest for EM concerns.

143, 1273b

RESPONSE: An upper limit of 2.0 MMBF per year was set for unscheduled timber harvest in the Revised Plan. Unscheduled timber harvest is subject to NEPA. LB

COMMENTS: Eliminate stand maintenance logging, including sanitation and salvage, in habitat reserved for TES, in ceremonial areas sacred to Native Americans, wild and scenic viewsheds, and in designated back country areas.

1365

RESPONSE: All vegetation treatments in these areas will be analyzed through the NEPA process and include public participation. The goals and objectives and standards and guidelines in the Revised Plan address these concerns. LB

COMMENTS: Show how Forest will use unscheduled harvests in Douglas-fir stands where patch sizes exceed presumed historical patch size.

643

RESPONSE: Unscheduled harvest allows the Forest Service to treat forested areas outside of suitable acres. Each project would be site-specific and may be on a different scale (subsection, watershed, subwatershed, etc.) LB

Incorporate Public Review Process for Unscheduled Harvest

COMMENTS: Incorporate an adequate public review process for harvest outside the ASQ to ensure required public involvement.

644, 1273b, 1276

RESPONSE: All unscheduled harvest projects are subject to the same analysis and review as scheduled (ASQ) harvest, including disclosure of environmental effects and public involvement. LB

COMMENTS: Establish a working group of scientific advisors outside the Forest Service to assist in adaptive decision-making required of ecosystem management.

161, 1276

RESPONSE: The Targhee is currently involved in several cooperative efforts with various scientists and universities. On-going opportunities, such as the NEPA process, grants/agreements, and memorandums of understanding, allow the Targhee to benefit from collaboration with the scientific community.

LB/AM/JR

WILD AND SCENIC RIVERS

General Issues

COMMENTS: Support the 249 miles of eligible sections designated for wild and scenic status, including Henry's Fork and South Fork of the Snake River. These areas deserve protection because: they are unique and are some of the most famous rivers in North America; provide a basis for future protection; protect rivers for children/grandchildren; streams and rivers located in the Targhee deserve additional protection; protect damaged streams and waterways by designating as Wild and Scenic vital; for human health, historical significance, recreation, aesthetics and wildlife, specifically fish rearing and spawning; and the economic benefits received from fisherman who would use the Wild and Scenic Rivers. Support legislation for protection of our fish and wildlife that use our rivers. Do not support any dam proposal because of the environmental damage to fish and wildlife in river. Want more wild & scenic designation.

F-B(4), F-H(8), F-J(3), F-K(4), 60, 136, 157, 159, 162, 168, 174, 175, 178, 179, 180, 181, 185, 190, 195, 201, 203, 209, 212, 226, 244, 252, 271, 273, 318, 356, 360, 368, 377, 379, 382, 391, 396, 398, 400, 405, 408, 411, 424, 430, 433, 441, 443, 490, 491, 492, 494, 516, 518, 519, 609, 621, 622, 626, 629, 630, 640, 650, 651, 652, 653, 655, 659, 666, 690, 695, 697, 725, 726, 739, 1207, 1243, 1245, 1257, 1258, 1270, 1273, 1275, 1277, 1327, 1381, 1383, 1388, 1392, 1393, 1395, 1443

RESPONSE: The Forest agrees that many of the streams on the Targhee are unique and should be studied for additional protection. The Revised Forest Plan recommends streams for suitability studies. The designation of streams is determined by Congress based on recommendations of the suitability studies. The Wild and Scenic Rivers Act was established to preserve outstanding resource values in unique quality streams. Damaged streams will receive recognition and protection through the 2.8.1-3 aquatic influence zone prescriptions. The Wild and Scenic Rivers Act protects the existing resource value. In the Forest analysis, McCoy Creek's 3.5 miles were determined ineligible based on a joint analysis with the Caribou National Forest. The Forest ended up with 245.5 miles of eligible in Final Revised Plan. AS

COMMENTS: Oppose the 249 miles of eligible wild and scenic sections.
368, 391

RESPONSE: The Forest is required to study qualifying streams and rivers under the direction of the Wild and Scenic Act. Forest analysis indicates that the listed streams were eligible. Once eligible, the law requires protection of the streams until suitability studies and recommendations to Congress are completed. AS

Analysis Process

COMMENTS: Make eligibility studies a priority and support the completion of these studies by 2002.

1273a

WILD AND SCENIC RIVERS

RESPONSE: These suitability studies are a priority and funding requests to perform them have been made for several years. No funding has been received. Alternative approaches for completing the studies are being explored. AS

COMMENTS: Develop a single management prescription for all land, including rivers, in the South Fork corridor using the Snake River operations plan, incorporating BLM grazing criteria; adjust boundaries to restrict cattle; and address issue of trespass of cattle from the Targhee National Forest trespassing on BLM lands.

643, 766

RESPONSE: The two prescriptions for the South Fork address these concerns. Two prescriptions are necessary to cover the potential scenic and recreational segments of the river. Grazing issues are addressed in both prescription guidelines. AS

Prescriptions

COMMENTS: The prescription for the South Fork of the Snake should incorporate prescriptions for all scenic and recreational rivers on the forest, in addition to those addressed in 2.9.1 and 2.9.2.

1273a

RESPONSE: The scenic and recreational river prescriptions used elsewhere on the forest form the basic building blocks for prescription 2.9.1 and 2.9.2. The latter two prescriptions are specific to the South Fork; they can not reflect all of the language from the prescriptions used elsewhere on the forest. AS

COMMENTS: Recommend a prescription for candidate rivers that addresses prohibiting water supply dams, major diversions, flood control dams, levees and development of hydroelectric facilities; prohibit new trails or roads in the river corridors; close non system and existing system roads; prohibit timber harvest; allow salvage of insect-infested timber only if no adverse effects; and allow dispersed recreation only if no adverse effects are noted.

1273a

RESPONSE: The intent of the management direction and standards and guidelines of each of the five Wild and Scenic Rivers prescriptions is to provide interim protection such as that listed above. AS

COMMENTS: Present an evaluation of data on the impacts of jet skiing on nesting bald eagles.

1446

RESPONSE: The Forest considered the effects of jet skiing. The limited amount of use at the present time results in minor effects on bald eagles in comparison to the large number of jet boats and rafts. Restriction of use is generally the county's option, due to the amount of private land ownership in the area. AS

WILD AND SCENIC RIVERS

Other Agencies

COMMENTS: Reevaluate the eligibility of the Henry's Fork and South Fork Snake because of the results in the State of Idaho Comprehensive Basin Plans. Ensure the Idaho Water Resource Board designations are incorporated in the plan.

766, 1207, 1276

RESPONSE: The planning analysis and decisions for the various Basin Studies will be developed in future suitability studies. Current decisions on eligibility fully considered the Idaho Water Resource Board analysis and state legislative actions.

While there is some difference in analysis systems values, State interests are protected by eligibility and prescription designation. The Forest added this reference to chapter III - Wild & Scenic Rivers. Refer to the Wild & Scenic Rivers Process Paper for details on proposed segments and classifications. The Forest has also added a sentence to Chapter IV to show that the proposed eligibility classification and management prescriptions will protect the values identified in State designations. AS

COMMENTS: The Idaho Water Resource Board does not support federal wild and scenic designation currently designated or being recommended as State Natural or Recreational Rivers.

1207

RESPONSE: The Forest acknowledges your concern. The Wild and Scenic Rivers Act requires the Forest to provide an analysis and protection of the resource values found to be eligible. AS

Goals/Objectives

COMMENTS: The definition for goals for Wild and Scenic Rivers should be to maintain free flowing and outstanding values, and not only show a reflection of the amount of development. Provide objectives that have adequate direction to protect their outstanding values including the following: no mineral, oil or gas exploration should be allowed as directed by NEPA and Wild and Scenic Rivers Act; no new mining claims or mineral leases with 1/4 mile of wild rivers; and enforce the Wild and Scenic Act that prohibits management activities that threaten outstanding values, even when activities are conducted beyond 1/4 mile corridors especially as related to ORVs. Delete both objectives for recreational rivers because they protect off-road vehicles, not forest health.

1273a

RESPONSE: The prescription direction for each of these potential streams will maintain and protect the outstanding resource values. The prescription and manual and handbook policies provide direction in relation to all these concerns. Oil and gas leasing is allowed with conditions. The purpose of the objectives is to maintain the outstanding resource values. If those are maintained, forest health is maintained. AS

Standards & Guides

COMMENTS: Insert the objectives, standards and guidelines for wild, scenic, recreational rivers and visual quality after standards and guidelines for winter recreation.

1446

RESPONSE: Visual Quality Goal, Standards and Guidelines to follow Winter Recreation in the Forestwide Standards and Guidelines Chapter of the Revised Forest Plan (Chapter 111-Part I). Wild, Scenic and Recreational Rivers are handled with the Management Prescription (Chapter 111-Part 3). AS

DFPR

COMMENTS: Change or add the following to the Revised Plan: ensure that cross country motorized use is prohibited in Wild and Scenic River areas; include interim standards and guidelines to assure protection of wild, scenic and recreational rivers; change current wordage in dispersed recreation and timber salvage to avoid adverse effects to rivers to ensure protection of candidate river values until suitability studies are completed; address management direction used from the Snake River Activity/Operations Plan 1991 including domestic livestock grazing. (CROSS REFERENCE: Access, Timber, Recreation, Range)

494, 518, 626, 643, 766, 1203, 1273b

RESPONSE: Cross-country motorized use is prohibited in these prescriptions. The prescriptions for these rivers provide the interim direction needed to protect the resource values until suitability studies are completed and recommendations can be made on designation. The Snake River is addressed with two prescriptions that correspond to the Activity/Operations Plan direction.

COMMENTS: Recommend following revisions to DFPR in regard to Wild and Scenic Rivers: Page 3-75 through 3-86 - All eligible wild, scenic, and recreation rivers should be managed as though they had already obtained the appropriate designation; Pg. 3-75, Fire/Fuels - the guideline should be a standard; Pg. 3-76, Land - the guideline should be a standard; Pg. 3-76, Soil and Water - both guidelines should be a standard; Pg. 3-76, Lands - the guideline should be a standard; Pg. 3-76 and 3-77, Minerals/Geology - Guidelines 1,6,7 and 10 should be standards; Pg. 3-77, Fish and Other Aquatic Resources - the guideline should be a standard; Pg. 3-78, Recreation - the guidelines should be standards; Pg. 3-80, Fire/Fuels - the guideline should be a standard; Pg. 3-80, Insects and Disease - the guideline should be a standard; Pg. 3-80, Soil and Water - the two guidelines should be standards; Pg. 3-84, Soil and Water - the second and third guidelines should be standards. The standard regarding reestablishing vegetation should state "Whenever possible" instead of the phrase "consider the use of."; Pg. 3-82, Range - the first two guidelines should be standards; Pg. 3-85, the dispersed recreation guideline should be a standard. Cross-country snowmobile travel should not be allowed. The first Trails guideline should be a standard. The ROS guideline should be a standard mandating semi-primitive motorized; Pg. 3-86, The Outfitter Guide guideline should be a standard. The Timber guideline should be a standard.

1365

WILD AND SCENIC RIVERS

RESPONSE: These recommendations were considered, but no changes were made to the standards or guidelines. The direction as written is adequate to protect these streams until suitability studies are completed. Special changes can be made at the time suitability studies are completed, or when the individual river plans are written following designations. AS

COMMENT: Pg. 3-78, Access - No motorized activity should be allowed, regardless of historic use patterns.

1365

RESPONSE: Motorized use is usually allowed at historic levels until designation through legislation or individual river planning determines motorized use is inappropriate. This is not a decision appropriate for a comprehensive plan and is best addressed on a site-specific basis. AS

COMMENTS: Pg. 3-78, Timber - the second standard should include a provision requiring that the danger from fire or some other environmental phenomenon must be imminent in order to justify harvesting trees.

1365

RESPONSE: The guideline says, "will not be allowed except..." The conditions outlined and the specific circumstances at the time of a future decision will control the outcome; therefore, no additional clarification is warranted at this time. AS

COMMENTS: Pg. 3-81, Roads - Modify this standard to mandate the obliteration of roads that are likely to cause or are causing negative resource impacts. Pg. 3-82, Recreation - Modify the standard regarding the construction of trails to mandate the obliteration of roads that are likely to cause or are causing negative resource impacts. The ROS guideline should be a standard.

1365

RESPONSE: Changes to road use are determined by the suitability study and river management plan if the river is designated by Congress. This type of direction is not appropriate for a comprehensive revised plan and is best addressed in site specific analysis. AS

COMMENTS: Page 3-84, Biological Elements - stocking of non-native species should be prohibited.

RESPONSE: The Targhee allows it where it is pre-existing. AS

Site-Specific

COMMENTS: Recommend the following rivers and tributaries for wild and scenic designation: Targhee Creek; South Fork of Snake between Conant Valley and Burns Creek, including Palisades and Burns Creek; Teton Creek (North, South, Roaring Forks); Targhee Creek; Henry's Fork; Bitch Creek; Pine Creek; Darby Creek; Fall River; Trail Creek; Palisades Creek; Big Elk Creek; Bear Creek North Fork; Waterfall Canyon, including upper ends of Big Elk and Palisades; McCoy Creek, Warm River; Robinson Creek; Buffalo River; Little Dam River; Moose Creek; Deadman Creek; West/North Pine Creek; and Rainey Creek. The only

WILD AND SCENIC RIVERS

Wild, Scenic, or Recreational River identified by name in the DEIS is South Fork of the Snake. Clarify if 3M, or any alternative, would protect all other eligible segments.

F-K(4), 276, 282, 448, 631, 632, 643, 655, 662, 664, 695, 726

RESPONSE: The eligibility determination analysis is documented in the Wild and Scenic Rivers Process Papers. Most of these streams are listed as eligible for suitability study and are protected by prescriptions until the suitability studies are completed. All eligible stream segments were listed in the appropriate prescription descriptions in the Final Plan.

Targhee Creek is recommended for classification as wild. The section of the South Fork of the Snake between Conant Valley and Burns Creek is eligible and is recommended in two segments: the upper as scenic, the lower as recreational. No outstanding resource values are determined to exist for Rainey Creek, therefore, it was not included as eligible for study. Burns Creek is recommended for scenic classification. The Forest considered the entire stretch of upper Big Elk, Upper Palisades, and Waterfall Creek. Final suitability studies may adjust the length of these segments. All eligible segments will be protected by their prescription direction so that resource values will be maintained for potential designation if suitability studies so indicate. AS

Specific Comments

COMMENTS: Provide maximum protection to Henry's Fork and South Fork - Snake River, Fall River, Bitch Creek, Trail Creek, Palisades Creek, Big Elk Creek, Bear Creek because they are threatened by hydro electric projects.

664

RESPONSE: All of these streams except Trail Creek were listed as eligible for Wild and Scenic Rivers suitability study. Therefore, they would receive the protection allowed under their proposed classifications, until suitability studies are completed. AS

COMMENTS: Bear Creek and Burns should qualify as a Wild River 2.3 rather than a Scenic River 2.4.

695

RESPONSE: The final determination will be made during the suitability study. AS

COMMENTS: Restore and protection of Yellowstone Cutthroat in Robinson Creek and Fall River.

1258

RESPONSE: Additional standards and guidelines, goals and objectives for cutthroat trout are added to the Revised Plan in order to study and protect them. AS

WILD AND SCENIC RIVERS

Alternatives

COMMENTS: Do not treat all the Wild and Scenic segments the same in all alternatives because the Forest will not commit to the eligibility study. Targhee and Robinson Creeks should be deleted from eligibility classification in Alternative 2 because a decision by the National Marine Fisheries, Environmental Protection Agency, and United States Fish and Wildlife Service direct that not all alternatives need to have a single comprehensive conservation strategy.

413, 767

RESPONSE: If a stream segment is determined eligible, it must be eligible in all alternatives until suitability studies are completed. This is necessary to protect resource values required by the Wild and Scenic Rivers Act. AS

COMMENTS: Support proposal for Bitch Creek and recommend the Forest include Teton and Darby Creeks on Alternative 3M maps as in former DFC Alternative.

RESPONSE: These streams have always been included in the Forest's eligibility table. See the Wild and Scenic Rivers process paper. Some display maps have not shown all segments due to other prescriptions which pre-empted displaying the Wild and Scenic River prescriptions. All eligible streams are now shown on the roadless map in the Final Revised Plan. AS

Access General

COMMENTS: Restrict and regulate motorized use in and around wild and scenic and recreational rivers: prohibit helicopter landing in wild and scenic corridors; exclude jet skiing from South Fork of the Snake River; prohibit motorized use in wild and scenic rivers and but allow in recreational rivers; allow access to wild and scenic rivers as defined in South Fork of the Snake activity plan.

136, 159, 180, 203, 273, 356, 494, 518, 630, 650, 652, 1270, 1388,
1446

RESPONSE: Helicopter landings are rare and are usually allowed only for administration activities such as fire fighting. Cross-country motorized use is prohibited within these prescriptions. Decisions on jet-skiing are made in the legislation, in the river plan after designation, or by County legislation as was done for the Henry's Fork. AS

COMMENTS: Recommend interim management of Robinson Creek, Warm River and Pine Creek that would prohibit motorized boat use unless previously allowed.

477

RESPONSE: The Forest is unaware of any motorized use currently or historically occurring on these streams. The management direction in the various wild and scenic prescriptions should prevent any adverse effects on river values. AS

WILD *AND* SCENIC RIVERS

COMMENTS: Clarify motor bike restriction of OROMTRD 0.0 mi./sq.mile for eligible wild rivers.

1273b

RESPONSE: This means there will be no designated travel routes open to motorized use within the 2.3 prescription area. AS

WILDERNESS

Supports Wilderness Designation

COMMENTS: Support wilderness proposals because wilderness designation limits motorized access and resource extraction in those areas and such activities lead to degradation of riparian areas and wildlife habitat, negative visual impacts, noise and odor from motorized vehicles, water quality impacts, and general loss of ecosystem integrity. If allowed in roadless or wilderness study areas, motorized use becomes historic and sets a precedent for continued use. (CROSS REFERENCE: Access)

F-G-1(475), F-G-P(1), F-H(8), F-J(3), 34, 42, 150, 161, 162, 165, 168, 171, 179, 189, 206, 213, 242, 273, 280, 331, 359, 377, 382, 392, 396, 398, 400, 405, 424, 439, 444, 491, 516, 607, 609, 611, 613, 620, 622, 627, 636, 640, 643, 644, 650, 653, 656, 666, 690, 725, 727, 731, 1185, 1194, 1205, 1266, 1243, 1273b, 1275, 1276, 1327, 1365, 1382, 1395, 1443, 1458.

Support wilderness for wildlife, recreation, future, and economics. Keep options for future uses or future generations; preserve the habitat and opportunity for genetic exchange for various species including TES; keep opportunities for solitude, quiet, aesthetic and intrinsic values in pristine land. Preserve because humans cannot reconstruct the diversity of a land which took thousands of years to evolve in all its complex interrelationships. Politicians and industry have too much influence; revenues lost from resource extraction in wilderness areas will be offset by income from visitors; there are sufficient areas for sustainable logging even with more designated wilderness. (CROSS REFERENCE: Economics, Timber)

F-G-1(475), 73, 136, 137, 156, 157, 158, 168, 173, 174, 175, 176, 178, 180, 181, 189, 196, 201, 252, 276, 293, 318, 321, 328, 339, 340, 354, 356, 357, 359, 373, 379, 382, 405, 453, 491, 527, 610, 613, 620, 627b, 638, 640, 651, 668, 695, 730, 739, 1185, 1197, 1242, 1265, 1270, 1271, 1327, 1330, 1331, 1337, 1348, 1364, 1364, 1367b, 1371, 1381, 1393

RESPONSE: Support and rationale for wilderness recommendation and designation were noted and considered. These concerns were also identified and considered during the issue and desired future condition analysis for the EIS. AS

COMMENTS: Want more wilderness areas than are being proposed, or more than any of the alternatives because the amount of wilderness area proposed is not adequate for wildlife, biodiversity, or refuge. Make all of Targhee National Forest wilderness.

136, 276, 293, 620, 1273b, 1365

RESPONSE: Your comments were noted and considered. Additional analysis of recommended wilderness is documented in the FEIS to more clearly show the basis for recommendations. As a result, a portion of the Diamond Peak roadless area is recommended for wilderness designation in the Revised Plan. Other modifications of alternatives to recommend more wilderness are discussed under responses in the Alternatives comments Section of Appendix A in the FEIS. An additional Alternative 5M with considerably more recommended wilderness is documented in Chapter II of the FEIS. After consideration, it was dismissed from detailed analysis. AS

WILDERNESS

COMMENTS: Support wilderness designations.

F-B(4), F-G-1(475), F-G-P(1), F-G-P(3), F-G-P(4), F-G-P(5), F-H(8), F-J(3), F-K(4), 11, 32, 34, 39, 42, 45, 52, 62, 68, 73, 136, 143, 150, 156, 157, 158, 161, 162, 163, 165, 168, 171, 173, 174, 175, 176, 178, 179, 180, 181, 184, 185, 189, 192, 193, 196, 201, 203, 204, 206, 209, 210, 211, 212, 213, 219, 226, 227, 242, 252, 273, 276, 278, 280, 292, 293, 305, 317, 318, 321, 328, 331, 339, 340, 354, 356, 357, 359, 361, 362, 368, 370, 373, 376, 377, 379, 380, 382, 389, 392, 396, 398, 400, 405, 410, 411, 424, 430, 439, 441, 443, 444, 453, 491, 492, 496, 516, 519, 527, 607, 609, 610, 611, 613, 615, 620, 621, 622, 625a, 627b, 631, 632, 636, 638, 640, 643, 644, 650, 651, 652, 653, 656, 658, 659, 662, 664, 666, 668, 668, 687, 690, 695, 697, 725, 727, 730, 731, 736, 739, 1185, 1194, 1195, 1197, 1202, 1205, 1206, 1241, 1242, 1243, 1257, 1265, 1266, 1269, 1270, 1271, 1273b, 1275, 1276, 1312, 1313, 1314, 1325, 1327, 1328, 1330, 1331, 1337, 1348, 1360, 1361, 1364, 1365, 1367b, 1368, 1371, 1374, 1381, 1382, 1392, 1393, 1395, 1401, 1443, 1458

RESPONSE: These support letters were noted and considered. AS

Supports Wilderness - Alternatives 3M, 4, 5, 6

COMMENTS: Favor amounts of wilderness in Alternative 3M or 4 because it represents a good balance. Favor wilderness proposals in Alternatives 5 or 6 because more wilderness is recommended. Wants more wilderness than any of the alternatives. Support more wilderness because, once lost to development, wilderness can not be recreated; increasing populations place heavier demands on less and less wilderness; more wilderness is necessary to protect biodiversity, wildlife corridors, and habitat; and the American public consistently votes to preserve more wilderness. (CROSS REFERENCE: Alternatives)

F-G-P(4), F-K(4), 11, 32, 39, 52, 62, 143, 211, 227, 293, 305, 331, 354, 356, 359, 389, 496, 609, 610, 625, 664, 668, 695, 1185, 1325, 1348, 1365, 1374, 1395

RESPONSE: Your comments were noted and considered. Additional analysis of recommended wilderness is documented in the FEIS to more clearly show the basis for recommendations. As a result, a portion of the Diamond Peak roadless area is recommended for wilderness designation in the Revised Plan. An additional Alternative 5M with considerably more recommended wilderness is documented in Chapter II of the FEIS. After consideration, it was dismissed from detailed analysis. (For more discussion about modifying alternatives to add more wilderness, see Alternatives.) AS

Alternative 2 - Non Support

COMMENTS: The statement that Targhee National Forest Alternative 2 commodity emphasis on Targhee Creek does not match with the Gallatin National Forest proposal does not consider the opposition, by such as Senator Burns, to making that area of Gallatin into a wilderness designation.

WILDERNESS

RESPONSE: Both ASQ/non-wilderness and non-ASQ/wilderness options were considered in the various alternatives for Targhee Creek. The wilderness recommendation prescription was selected in the Preferred Alternative for reasons documented in the Roadless Process Paper and Appendix A of the FEIS. AS

COMMENTS: If the land use proposal in Alternative 2 is inconsistent with wilderness proposals of the Targhee National Forest and Gallatin National Forest, this indicates Alternative 2 is flawed and the Targhee National Forest is failing to coordinate with surrounding land management agencies.
1365

RESPONSE: Alternative 2 was an alternative considered. It was not selected as the Preferred Alternative. AS

Alternative 3M - Non Support

COMMENTS: Modifying Alternative 3M to further restrict timber harvest and place in "no ASQ" all roadless areas not placed in wilderness, in order to better protect and move ahead to place in wilderness.
643

RESPONSE: This was considered in other alternatives but was not selected. AS

Supports Wilderness - Specific Areas

COMMENTS: Recommend Diamond Peak as wilderness because it: meets the requirements of wilderness; is a scenic area, notable for limestone natural arches and exposed folds of sedimentary rock; provides great wildlife habitat; offers geological, ecological, scientific, educational, and historical interest; and retains its primeval character in spite of livestock grazing.

F-B(4), F-G-P(3), F-H(8), F-J(3), 157, 163, 165, 174, 175, 179, 180, 181, 185, 192, 193, 203, 209, 210, 226, 273, 278, 359, 368, 377, 379, 382, 392, 396, 398, 400, 405, 411, 424, 430, 441, 443, 444, 491, 492, 496, 516, 519, 621, 622, 640, 643, 651, 652, 653, 664, 690, 695, 717, 739, 1194, 1197, 1202, 1241, 1243, 1257, 1275, 1327, 1328, 1330, 1331, 1337, 1368, 1381, 1401, 1443

Recommend all the Centennials because it is a crucial wildlife corridor of the Greater Yellowstone Ecosystem and a scenic, pristine area.

F-G-1(475), F-G-P(1), 136, 165, 174, 178, 179, 180, 193, 204, 209, 212, 226, 362, 496, 613, 621, 644, 653, 695, 725, 1206, 1257, 1270, 1327, 1331, 1392, 1458

Recommend Mount Jefferson in the Centennials because of its beauty and grizzly bear habitat. It was considered for wilderness once before and should be again.

F-B(4), F-GP(2), F-H(8), F-J(13), 19, 136, 143, 157, 163, 165, 174, 179, 180, 181, 185, 192, 193, 209, 210, 226, 273, 278, 359, 368, 377, 379, 382, 396, 398, 400, 405, 411, 424, 430, 441, 443, 444, 491, 492, 496, 516, 621, 622, 640, 643, 651, 652, 653, 690, 695, 727, 739, 1194, 1197, 1206, 1241, 1243, 1275, 1327, 1328, 1330, 1331, 1337, 1368, 1381, 1382, 1395, 1401, 1443

WILDERNESS

Support Garn's Mountain as wilderness because it is a crucial wildlife habitat and represents the main watershed for the Snake River.

F-B(4), F-G-P(3), F-H(8), F-J(3), 136, 157, 163, 165, 174, 179, 180, 181, 185, 192, 193, 209, 210, 226, 273, 278, 359, 368, 377, 379, 382, 396, 398, 400, 405, 411, 424, 430, 441, 443, 444, 491, 492, 496, 516, 621, 622, 640, 643, 651, 652, 653, 690, 695, 722, 739, 1194, 1197, 1206, 1241, 1243, 1275, 1327, 1328, 1330, 1331, 1337, 1368, 1381, 1382, 1395, 1401, 1443

Other areas supported for wilderness designation are: Garfield Mountain, Bell Mountain, Lemhi Mountains, Lionhead, Winegar Hole, Caribou Mt. area, Poker Peak, Bear Creek, Snake River area, west slope of the Tetons, and Jackpine Creek because these areas have outstanding geological, ecological, scientific, educational, and/or historical characteristics; and are important to wildlife.

163, 204, 210, 212, 362, 376, 410, 643, 644, 658, 664, 687, 695, 725, 727, 736, 1185, 1194, 1206, 1270, 1276, 1312, 1330, 1331, 1337, 1361, 1365, 1368, 1395, 1401.

Support for wilderness: Italian Peaks (one of the locations proposed by Alternative 3M as wilderness); all of the Palisades (not just the two-thirds being recommended in alternative 3M); all the areas recommended in the 3M proposal, and the existing Jedediah Smith Wilderness area because these areas are crucial for wildlife and watershed, and the Forest must work to protect the outstanding values.

F-B(4), F-G-P(3), F-H(8), F-J(3), 68, 136, 157, 161, 165, 174, 179, 180, 185, 187, 193, 203, 204, 209, 210, 226, 273, 278, 331, 356, 359, 361, 362, 368, 370, 376, 377, 379, 382, 396, 398, 400, 405, 410, 411, 424, 430, 441, 443, 444, 491, 492, 496, 516, 519, 615, 621, 622, 632, 640, 643, 651, 653, 658, 659, 662, 664, 687, 690, 695, 725, 727, 739, 1185, 1194, 1197, 1202, 1206, 1241, 1243, 1257, 1275, 1312, 1314, 1327, 1328, 1330, 1331, 1337, 1360, 1368, 1381, 1382, 1392, 1395, 1401, 1443.

Support wilderness designation - specific areas.

F-B(4), F-G-1(475), F-G-P(1), F-G-P(2), F-G-P(3), F-G-P(5), F-H(8), F-J(3), 68, 136, 143, 157, 161, 163, 165, 174, 175, 179, 180, 181, 185, 192, 193, 203, 204, 209, 210, 212, 226, 273, 278, 292, 331, 356, 359, 361, 362, 368, 370, 376, 377, 379, 380, 382, 396, 398, 400, 405, 410, 411, 424, 430, 441, 443, 444, 491, 492, 496, 516, 519, 613, 615, 621, 622, 640, 632, 643, 644, 651, 652, 653, 658, 662, 664, 687, 690, 695, 725, 727, 736, 739, 1185, 1194, 1197, 1202, 1206, 1241, 1243, 1257, 1270, 1275, 1276, 1312, 1314, 1327, 1328, 1330, 1331, 1337, 1360, 1365, 1368, 1381, 1382, 1392, 1395, 1401, 1443, 1458

RESPONSE: The Forest considered your comments. After a review and update of the wilderness characteristics in the Roadless Process Paper, the Forest added a large portion of the Diamond Peak area as recommended wilderness in the Preferred Alternative (3M) because this area's high wilderness characteristics rating is similar to the other wilderness areas recommended in the Revised Plan. No other changes were made in recommended wilderness prescription areas. This is because no other areas rated high enough on the updated wilderness characteristics rating except for Garns Mountain which was dedicated to a motorized use prescription rather than to recommended wilderness. AS

WILDERNESS

Prohibit Recreation in Wilderness

COMMENTS: Eliminate/prohibit trailhead facilities from opportunity Class 1 areas (wilderness).

1312

RESPONSE: Trailhead facilities are not included within the Class I areas, and the reference to constructed trailhead facilities was removed from the three wilderness prescriptions since facilities are not allowed within the wilderness. Developed trailheads are in Prescription 4.1. AS

Oppose Wilderness Designation

COMMENTS: Oppose additional wilderness on the Targhee, or the entire concept of designated wilderness areas because: wilderness designation imposes restrictions on access; limits recreational use of motorized vehicles in wilderness (OHVs and snowmobiles); possibly restricts mountain bikes, horses, and numbers of hikers; and restricting access in some areas will increase the demand, impacts, and conflicts on those areas that are unrestricted.

F-C(13), F-I(4), F-O(4), 28, 29, 30, 34, 42, 50, 55, 63, 214, 270, 280, 285, 286, 300, 314, 323, 353, 358, 366, 367, 380, 381, 385, 386, 412, 413, 473, 474, 476, 495, 506, 521, 524, 529, 608, 614, 626, 627, 638, 645, 664, 665, 702, 704, 738, 1183, 1332, 1375, 1385, 1447, 1454

Restricting motorized access discriminates against those who are physically unable to hike or pack in. (CROSSREFERENCE: Access)

46, 488, 1332

RESPONSE: It is true that if the areas recommended for wilderness consideration are designated wilderness by Congress that motorized uses in those areas are displaced to adjacent areas or the users might stop participating. This situation is discussed in the Cumulative Effects Analysis for summer access in Chapter IV of the FEIS. AS

COMMENTS: Wilderness provides no management options.

665

RESPONSE: This is not correct. There are several options for management of range, wildlife, water, recreation, fire, and so forth. AS

Allow Recreation in Wilderness

COMMENTS: Oppose wilderness designations because wilderness imposes limits on recreationists and Forest management efforts. Manage wilderness as recreation areas; designate more land to accommodate recreation pressure in the back country; maintain roadless areas because they are vital to recreation.

643, 665, 1377, 704, 291

RESPONSE: It is true that wilderness designation results in the need for careful management of recreation use to prevent adverse effects on wilderness. However, these areas are sensitive to use impacts and must be managed regardless of the wilderness designation. Therefore there is little loss of recreation opportunity. AS

WILDERNESS

COMMENTS: Snowmobile use is not a major threat in wilderness areas and should be allowed. (CROSS REFERENCE: Snowmobiles)

280, 476

RESPONSE: This would be contrary to the Wilderness Act which prohibits any motorized use. AS

Economic Concerns

COMMENTS: Concerned about loss of economic opportunity due to potential wilderness designation including: limits on uses of timber, minerals, and other such forest resources; impacts on ranchers from grazing reductions; negative impacts on snowmobile and ATV sales and rentals; impacts on hut skiing and heliskiing operations; and revenues lost to local communities. (CROSS REFERENCE: Economics)

F-C(13), F-E(2), 12, 214, 281, 285, 405, 412, 521, 638, 665, 738

RESPONSE: The Forest considered these factors in the estimation of effects on local economies. Some motorized use is permitted in recommended wilderness where it will not impair wilderness character. The Forest acknowledges possible shifts in the types of recreation opportunities and expanded the consequences section of the EIS to reflect this. Overall, recreation on the Forest is expected to remain an important factor in the local economies. DP

COMMENTS: Provide information on how commercial/recreational use (hut skiing operation) fits into future plans for proposed wilderness. (CROSS REFERENCE: Recreation)

191

RESPONSE: Guided skiing operations would be allowed to continue. Facilities such as huts would not be allowed in the wilderness. AS

COMMENTS: Additional wilderness designation creates negative economic impact on heliskiing business already impacted by 1984 Wyoming Wilderness Bill. (CROSS REFERENCE: Recreation)

281

RESPONSE: The Forest has noted this potential in our documentation of consequences of recommended wilderness for the Palisades areas in Chapter IV of the FEIS. AS

Predator Control

COMMENTS: Concerned about predator control for livestock in wilderness.

1354

RESPONSE: According to the direction specified in the 1996 APHIS-ADC environmental assessment for predator damage in southern Idaho, predator control activities will be conducted on the Forest. The 1996 APHIS-ADC environmental assessment incorporates the existing Targhee National Forest direction. WG

WILDERNESS

COMMENTS: Reducing grazing due to wilderness would probably be illegal, according to 1980 "Colorado Grazing Guidelines".

643

RESPONSE: There is no proposal in the Revised Plan or FEIS to reduce grazing because of wilderness recommendations. AS

Already Enough Wilderness

COMMENTS: There is already enough or more than enough wilderness in Idaho or this area of the country; no one can use wilderness; local decisions should be made by and/or for local interests; environmentalists have too much influence.

F-C(13), F-F(6), F-G-2(2), 1, 12, 20, 26, 43, 45, 205, 229, 251, 258, 265, 270, 272, 287, 288, 291, 298, 300, 311, 346, 347, 348, 352, 358, 371, 388, 413, 423, 431, 468, 470, 488, 501, 520, 607, 614, 642, 646, 665, 661, 693, 720, 1200, 1239, 1317, 1332, 1335, 1448, 1454.

RESPONSE: The wilderness recommendations in the Revised Plan are based on a review of wilderness characteristics and public concerns for roadless areas as expressed in the Desired Future Condition (DFC). Final determination of whether these areas are designated is determined by the public through their elected delegations. In the interim, management and recreational opportunities or resource conditions will remain essentially unchanged from existing conditions. AS

Other/Better Management Plan

COMMENTS: Use other management options, such as educating people how not to negatively impact the land. Use local people because they will protect their interests in the land. Control impacts through regulation, not wilderness designation. Oppose preserving areas for grizzly bears. Designating wilderness is pointless because areas are too small for wildlife or ecosystem protection.

22, 32, 33, 34, 49, 51, 52, 53, 54, 55, 248, 272, 277, 285, 298, 315, 319, 324, 358, 363, 369, 375, 420, 432, 472, 512, 627a, 630, 638, 642 665, 1190, 1240, 1261, 1335, 1341, 1378.

RESPONSE: The wilderness recommendations in the Revised Plan are based on a review of wilderness characteristics and public concerns for roadless areas as expressed in the Desired Future Condition (DFC). Final determination of whether these areas are designated is determined by the public through their elected delegations. In the interim, management and recreational opportunities or resource conditions will remain essentially unchanged from existing conditions. AS

COMMENTS: Guarantee wilderness viability for the future, and do not leave a legacy of irreversible damage because we are fortunate, in the U.S., to still have wild lands.

252

RESPONSE: The wilderness plan proposed for the Jedediah Smith Wilderness will adequately protect the wilderness values. AS

COMMENTS: oppose wilderness designations.

F-C(13), F-E(2), F-F(6), F-G(2), F-I(4), F-O(4), 1, 2, 5, 6, 12, 20, 21, 22, 25, 26, 27, 28, 29, 30, 32, 33, 34, 35, 36, 37, 39, 40, 41, 42, 43, 45, 46, 49, 50, 51, 52, 53, 54, 55, 63, 165, 173, 182, 205, 214, 229, 243, 248, 251, 258, 265, 270, 272, 277, 280, 281, 285, 286, 287, 288, 291, 292, 293, 296, 298, 300, 307, 311, 314, 315, 319, 323, 324, 344, 346, 347, 348, 352, 353, 356, 358, 363, 366, 367, 369, 371, 373, 374, 375, 380, 381, 385, 386, 388, 391, 397, 405, 412, 413, 420, 423, 431, 432, 445, 466, 468, 470, 472, 473, 474, 476, 480, 482, 488, 495, 501, 506, 512, 513, 520, 521, 524, 528, 529, 607, 608, 610, 614, 625b, 626, 1183, 630, 638, 642, 643, 645, 646, 648, 652, 653, 661, 664, 665, 687, 693, 702, 704, 720, 738, 1182, 1187, 1190, 1198, 1200, 1239, 1240, 1259, 1260, 1261, 1265, 1316, 1317, 1319, 1321, 1329, 1332, 1335, 1341, 1354, 1363, 1375, 1376, 1377, 1378, 1385, 1447, 1448a, 1448b, 1454, 1456

RESPONSE: These comments were noted and considered. AS

Opposes Wilderness Alternatives 3M, or Supports 1, 2

COMMENTS: Support alternatives which recommend no additional wilderness, such as Alternatives 1 and 2. Favor Alternative 2 because this Alternative is supported, with some revisions, by Citizens for a User Friendly Forest (CUFF). Oppose Alternative 3M because it proposes too much wilderness. Recommend compromises between Alternatives 2 and 3M because such an alternative would allow more access, recommend no more wilderness, contribute more to economic development, and provide a better balance of uses. (CROSS REFERENCE: Alternatives)

1, 21, 22, 24, 25, 26, 27, 29, 30, 34, 35, 36, 37, 38, 40, 41, 42, 43, 46, 47, 48, 49, 51, 53, 54, 55, 165, 288, 292, 293, 296, 319, 352, 358, 373, 375, 413, 445, 506, 610, 638, 648, 652, 653, 687, 737, 1202, 1335

RESPONSE: The Forest reviewed and considered these comments. The Revised Plan reflects a recommendation of areas that display the highest Wilderness characteristics and have the highest potential for consideration by Congress. Garns Mountain, which received a high rating, was not recommended because it was designated to a motorized use prescription. AS

Opposes Wilderness Designation - Specific Areas

COMMENTS: Do not recommend for wilderness: Palisades, the Big Hole Mountains, and Lionhead.

28, 214, 307, 311, 482, 466, 470

RESPONSE: Your comments were noted and considered. No changes were made from the DEIS for any of these three areas. Rationale for wilderness recommendations is displayed in the Roadless Process Paper.

WILDERNESS

Enforcement and Monitorins

COMMENTS: Need monitoring and enforcement in wilderness; correct the lack of funding and personnel; keep motorized vehicles out of wilderness; and provide adequate signage. Use groups to monitor enforcement problems; change language in the Final Plan to ensure adequate enforcement and funding; provide heavy fines for offenders; divert funds from administration to enforcement. Educate people about wilderness use and issues of concern. Address conflicts where there is a shortage of areas for recreation. Revise page V-22 Jedediah Smith Wilderness Monitoring to include the Park. Indicate what level of monitoring should occur in the DEIS and how much TNF spent on monitoring in past 10 years, and how much will occur next 10 years. Give monitoring a higher priority than Group 3 in the Plan; provide a detailed list of monitoring indicators rather than just the six mentioned.

26, 137, 161, 170, 179, 191, 212, 377, 643, 699, 1277, 1312, 1330, 1371, 1395

RESPONSE: The Revised Plan proposes adequate monitoring, enforcement, and funding for those activities to minimize these types of concerns. There are no guarantees but the Limits of Acceptable Change (LAC) process established for the Jedediah Smith Wilderness allows adjustments in management if needed in the future. The detailed indicators in Chapter V - Monitoring are the items developed by the task force. Many of these indicators will be easily observed as routine wilderness patrol and administration occur. These actions are given a Priority 3 for Forest Plan monitoring funding, but may get higher priority based on wilderness management funding. AS

COMMENTS: One popular area for OHV use on the west slope of the Tetons is sandwiched between an area where motorized use is restricted on the Jedediah Smith Wilderness and crucial winter range.

1277

RESPONSE: You are correct. The prescription for this area was modified so that motorized use is restricted to designated routes from October 1 to December 30 and cross-country travel is allowed in the summer only. Although designated routes for snowmobiles will exist through the winter range, no significant adverse effects on wildlife are anticipated and the wilderness will be protected by boundary signing. AS

COMMENTS: Revise Page V-22 Monitoring Item - Jedediah Smith Wilderness Monitoring Item 3 - to include the Park.

699

RESPONSE: The Forest Service does not review National Park Service regulations for appropriateness as stated in this area. Therefore, no change was made. AS

COMMENTS: Explain in the DFPR monitoring plan whether the issues referred to by number are issues described in the environmental assessment.

1277

WILDERNESS

RESPONSE: Yes, they are the same, and we added a note to the Table to indicate this. AS

Recommended Revisions

COMMENTS: Clarify and explain the additions or deletions, or changes to the Revised Plan or the DEIS regarding wilderness. Explain the DEIS or DFPR's basis for recommending some areas and not others; wilderness recommendations appear to be made with no identifiable analysis.

196, 278, 392, 622, 643, 695, 1368

RESPONSE: The Forest added documentation to the Roadless Area Process Paper Update (Appendix B of the FEIS) to display the rationale for why each roadless areas was or was not recommended for wilderness consideration. This documentation includes a text and wilderness characteristics rating table. Not all qualifying roadless areas are recommended for wilderness because the Desired Future Condition (DFC) in the purpose and need section of the EIS does not call for such classifications and because of other desired multiple-use objectives. Only those roadless areas in the group having a rating equal to or higher than the group recommended in the Revised Plan were considered essential to meet the Desired Future Condition.

AS

COMMENTS: Clarify how wilderness can be designated if prior development or extractive uses have occurred; why it appears that managed lands are less likely to suffer forest health problems than unmanaged lands; what the direction is for wilderness ecological or physical elements; and what the Standards and Guidelines are for timber, ecological process, soil, water, etc., in wilderness areas, or designated wilderness areas.

388, 514, 643, 668

RESPONSE: It is possible for minor disturbances (roads, pipelines) to exist in designated wilderness if they are not noticeable, according to the Wilderness Act. Perceptions about managed lands depend on the definition of "forest health." Generally, managed lands (timber) are more resistant to insects, diseases, and fire loss. The standards and guidelines section explains the wilderness direction. AS

COMMENTS: Bar exotic pack animals (llamas) from wilderness. Consider summer residents when making wilderness proposals. Make some definitive decisions on wilderness **so** a book on hiking areas in Idaho will not require costly rewrites. Explain how hut skiing fits into wilderness designations. Explain how wilderness designations are not final because lands can be withdrawn from wilderness.

191, 293, 343, 392, 432

RESPONSE: Wilderness designations do not limit the type of pack animals or backcountry skiing. However, individual wilderness plans may require some restrictions on types of uses to protect the wilderness character. Structures such as huts are generally not allowed in Wilderness. Book writers are dependent on decisions about wilderness designations by Congress and not

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decisions in forest plans. Wilderness designations are final, unless Congress reverses its decision. AS

COMMENTS: Explain why alternatives with increased recommended wilderness have an inverse correlation with ASQ, even though there is more than enough timber to meet the ASQ even with more wilderness recommended. Oppose the reduction in timber harvest to accommodate more wilderness because it is unnecessary to do so.

317, 643, 695

RESPONSE: The recommendation of wilderness in several alternatives results in some reduction in ASQ although there is not a direct, inverse relationship. The EIS does not intend to suggest such a relationship and the Alternative Continuum in Chapter II of the EIS is updated to clarify this. AS

COMMENTS: Give direction for any ecological or physical elements in this management area. Standards and guidelines should be given for timber, ecological processes, soil, water, etc.

1273b

RESPONSE: Wilderness management is conducted through the Limits of Acceptable Change (LAC) process. Standards and guidelines are generally not needed for these because the Wilderness Act controls allowed effects. The Revised Plan contains goals and objectives within each of the three management categories (See Wilderness Process Paper) or in the wilderness prescriptions. The categories shown in the Wilderness Process Paper contain goals for vegetation, soils, aquatics and other resources. These, along with the prescription standards and guidelines, provide the direction for achieving Desired Future Conditions for wilderness resources. AS

COMMENTS: Include buffers around all wilderness areas, all recommended or proposed for wilderness designation, around all Class I areas (Clean Air Act) on and off forest, and around other important habitat.

1365

RESPONSE: The concept of buffering wilderness or recommended wilderness is seldom discussed any longer. However, in most instances, we have tried not to put timber harvest or other significant development areas immediately adjacent to such areas. AS

COMMENTS: Balance the boundaries of alternatives between wilderness and multiple-use.

325, 1277

RESPONSE: The range of alternatives display a variety of "balanced" concepts for activity and resource allocations. The Revised Plan (Alternative 3M) best fits the balance indicated by the desired future conditions and public comments. AS

COMMENTS: Refer to the wilderness management EA or task force in the DFPR (as it is an important document); and provide buffers around all wilderness areas,

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all recommended or proposed wilderness, all Class I (Clean Air Act) areas on and off forest, and around other important habitat.

325, 1277

RESPONSE: The task force is referred to in Chapter IV of the FEIS as the Jedediah Smith Project Team. The text makes it clear that the wilderness prescriptions and management direction in the Revised Plan is a result of this team's efforts. Buffers are not intentionally included in the Revised Plan, but in some places, other prescriptions have a buffer effect on wilderness, roadless and other areas. AS

COMMENTS: Recommend revisions.

FS-4, 191, 196, 293, 317, 325, 341, 343, 354, 388, 389, 392, 410, 432, 496, 514, 625, 632, 643, 695, 699, 727, 1202, 1273b, 1277, 1312, 1365, 1395, 1456

RESPONSE: Your comments are acknowledged. AS

COMMENTS: Close wilderness areas to all traffic including foot traffic; leave it completely alone.

219

RESPONSE: Such a restriction would be contrary to the Wilderness Act and intent of designation. We have not implemented this proposal. AS

COMMENTS: Add to Page 111-57, 1.1.6, Designated Wilderness Opportunity Class I, Goals: "Maintenance of a viable bighorn sheep population in the Jedediah Smith Wilderness area is given highest priority and is dominant over other uses as a wilderness resource and viable population of native vertebrates."

699

RESPONSE: Although bighorn sheep are recognized as an important value, the wilderness plan does not emphasize bighorn sheep over other uses. The Revised Plan provides a variety of uses and resource values while maintaining wilderness values. AS

COMMENTS: Page 111-58, 1.1.6, DREV: The word "great" in Goal 5 should be replaced with the word "significant".

1365

RESPONSE: No change is warranted. The wording was taken directly from the Draft Environmental Assessment for the Jedediah Smith Wilderness. AS.

COMMENTS: Page 111-62, Recreation, DREV 1.1.7: The standards and guidelines for recreation should be identical to those of prescription 1.1.6.

1365

RESPONSE: The differences are because this is a difficult Opportunity Class with different goals and activity levels than Prescription 1.1.6. AS

WILDERNESS

COMMENTS: Correct discrepancies between draft wilderness EA and DFPR in 1.1.6 prescriptions: 1) EA map, wilderness opportunity classes for Alternative 4B (sic) (Alternative 3M Preferred Alternative) shows special restriction zones for several areas for open fires and livestock, which do not appear in DFPR; 2) Overall goals for various ecological, public, and scientific use are in EA but not DFPR; 3) Several mitigations in relation to grizzly and sheep were in EA but not DFPR; 4) Several mitigation measures in relation to public use were in EA but not in DFPR. All constitute a step backward in describing and protecting Jedediah Smith.

1277

RESPONSE: These special restrictions are implemented by a legal order signed by the Forest Supervisor and do not need to be in the Revised Plan. All of the goals and direction contained in the Jedediah Smith EA (Process Paper) which is referred to in the FEIS were included in the three wilderness prescriptions. The riparian goals were not in the Draft Plan prescriptions, but were added to the Final Revised Plan. The mitigation measures were not brought forward into the Revised Plan because it contains mostly broad direction, and not how-to details. The LAC process is an adaptive process that will allow us to implement mitigation as needed on a case-by-case basis when conditions develop which significantly affect wilderness conditions. AS

Effects of Recreation in Wilderness

COMMENTS: Explain the Limits of Acceptable Change (LAC) system and whether it will allow additional recreational use and increase degradation in wilderness areas; include statistical data on the magnitude and trends of recreational activities on wilderness and non wilderness; address recreational impacts on wilderness and non wilderness; clarify how impacts will be mitigated.

325, 699, 1365

RESPONSE: The LAC system is described in the Jedediah Smith Wilderness process paper referred to in the EIS and is part of the Revised Plan. Acceptable change is determined by degree of change in the resource or social factor to be monitored as shown in the monitoring plan. As indicated in the wilderness consequences Section of the EIS, additional use expected to occur within the wilderness should result in, "Little cumulative impact or secondary effects." This is a result of the monitoring process that detects unwanted changes in biological, social or other factors. Mitigation occurs as a result of implementing corrective actions listed in the monitoring Plan in the EIS. AS

COMMENTS: Opportunity Class I, Biological Elements, Fish and Aquatic Resources, (Page III-59); The reference to "Fish stocking for recreational purposes is permitted with species native to wilderness," seems inappropriate because Fish Lake is the only water so managed and has been and will be stocked with brook trout as was "grand-fathered" in the Wyoming Wilderness Act: recommend a change of wording to reflect states' right to stock. (CROSS REFERENCE: Riparian, Fisheries)

389

WILDERNESS

RESPONSE: The Forest Service has the responsibility to coordinate with State fish managers to ensure that fish stocking does not compromise Federal interests (such as compliance with the Endangered Species Act and Wilderness Act). This direction is in accordance with Forest Service Manuals 2640 and 2323.3 and the agreement between Forest Service, Bureau of Land Management, and the International Association of Fish and Wildlife Agencies entitled "Policies and Guidelines for Fish and Wildlife Management in National Forests and Bureau of Land Management Wilderness". DD/AS/MO

COMMENTS: Page III-59, Biological Elements of Wilderness, DFPR 1.1.6; Page 111-64, Wildlife, DFPR 1.1.8: A standard should be included in the fish section prohibiting the stocking of any non-native fish species.

1365

RESPONSE: A standard is not necessary. This direction is contained in manual and handbook policies referenced in Appendix A of the Revised Plan. AS

COMMENTS: Change recommendations for guidelines to standards; be more definitive or use more prescriptive language within the DFPR section on wilderness.

1365

RESPONSE: Refer to Standards and Guidelines Section of the Revised Plan. Only minor clarification and wording adjustments are made to the wilderness standards and guidelines. AS

COMMENTS: Page 111-57, Opportunity Class I Designated Wilderness Goals: Explain how, "Maintenance of the natural diversity of wildlife species" and "No measurable downward trend in plant species composition and plant diversity" are determined. Support these objectives, though it may require more resources and time than Targhee National Forest has. Follow up with clearly stated and publicly known management actions that are realistic to achieve.

1249

RESPONSE: Monitoring management indicator species allows the forest to determine if Goal # 1 - "The maintenance of the natural diversity..." is being met. Goal # 3 - "There is no measurable downward trend in plant species composition..." can also be monitored. The direction in the Targhee National Forest Range Monitoring Protocol requires monitoring of grazing allotments located within and outside wilderness areas. Resources are adequate to accomplish the needed monitoring if continued funding is received from Congress. AS/WG/MO

COMMENTS: Reduce encroachment of ever present ORVs.

165

RESPONSE: This was done extensively with 93% of the Forest now closed to cross-country summer OHV travel.

WILDERNESS

COMMENTS: Management plans for wilderness should include desired conditions and standards for outfitter services, the standards should include outfitter compliance with Greater Yellowstone Area Outfitter Guide Policy,

1312

RESPONSE: The Jedediah Smith Wilderness Plan contains the desired conditions for all users. Operating Plans for outfitter and guides are designed to comply with the direction of the wilderness management plans. The GYAOP direction is applied during the development and administration of all operating plans. AS

Cooperation and Other Agencies

COMMENTS: Cooperate and coordinate with local, state, and other federal agencies, land managers, or political groups. Work with local, state, and federal agencies or leaders in developing adequate wilderness recommendations. Include a goal to restrict air space over Jedediah Smith Wilderness and Grand Teton National Park in cooperation with the park service.

314, 431, 627a, 1240, 1365, 1395

RESPONSE: It is Forest Service policy to cooperate in all planning recommendations. During the public scoping and analysis process, no other agencies indicated concerns about which areas were recommended for future wilderness consideration by Congress. Therefore, the Forest conducted an analysis of wilderness characteristics and included it in the the Roadless Process Paper in the FEIS. As a result of this analysis and the comments on the DEIS, a large portion of the Diamond Peak area is recommended wilderness in the Revised Plan. Other options for more or less recommended wilderness were considered in the various alternatives to reflect public interests. Air space restrictions are the responsibility of the Federal Aviation Administration. The forest may coordinate with local aviation groups to reduce potential impacts to falcon aeries and wilderness. AS

Wilderness Study Areas

COMMENTS: Object to emergency burned area rehabilitation in WSAs as unnecessary; and object to timber cutting for fire, insect, or disease problems.

1369

RESPONSE: Activities in Wilderness Study Areas (WSAs) must not, by regulation, degrade the wilderness character of the study area. All management actions must be planned to accommodate study designation. The Revised Plan does not provide any direction that would result in activities or conditions contrary to the regulations. AS

COMMENT: List all WSAs as actual wilderness.

179

Provide different designations that would protect WSAs from possible logging and mining.

179, 220, 280

WILDERNESS

RESPONSE: Listing all WSAs as wilderness is misleading and inappropriate. Such designation occurs through congressional legislation. AS

COMMENTS: Keep all motorized activity out of WSAs and roadless areas because allowing motorized use will make future wilderness designation difficult. Snowmobile use is a major threat in WSAs. Close all trails to OHV use in Italian Peaks WSA because they are degrading the wilderness characteristics. Close Indian Creek in Palisades to summer OHV use. Increase law enforcement. Provide a joint management strategy with the Beaverhead National Forest for enforcing ORV regulations. What does "already exist" mean in statement: "Roads allowed to the extent they already exist" -- does this mean these are open or closed roads or loop roads? If the roads are sources of sediment, are there plans to obliterate them?

150, 161, 220, 280, 314, 1361

RESPONSE: Motorized use is often allowed in WSAs and roadless areas nationwide. The Forest is directed to prohibit such activity where it would degrade wilderness character. When trails are sufficient to support motorized use without trail or resource damage in WSA and roadless areas, the use is usually allowed to continue. AS

COMMENTS: Change these guidelines to standards: allow no motorized activity; mandate all management for recreation in a primitive classification; allow only existing official and legal roads to remain, and obliterate the rest. Add a provision that requires a reduction in the number of camps if studies or other research/monitoring suggests that reduction would be desirable ecologically or biologically.

1365

RESPONSE: Minor wording changes to the standards and guidelines are made for clarification. Other changes as suggested are unwarranted. Motorized travel is allowed in the Palisades WSA by the 1984 Act. A primitive classification is not required, even in designated wilderness. Management of any roads in the WSA is also directly controlled by the Acts. The Wilderness Act and Forest Service policy (Appendix A) address concerns about possible reduction in number of camps in WSAs if adverse impacts are occurring to potential wilderness character. AS

COMMENTS: Add the entire Palisades WSA to wilderness proposals.

161

RESPONSE: The Roadless Process Paper Update (Appendix B) explains that this was not done because of a decision to allow motorized use to continue in the northwestern part of the area, and because of the difficulty to identify and manage a boundary in that area. AS

COMMENTS: Palisades Wilderness Study Area should be wilderness as habitat for grizzly bear and wolves.

1314

WILDERNESS

RESPONSE: Wilderness designation would not necessarily ignore the habitat for bear and wolf. Severe restrictions on recreation use in that area would be the only action that could improve habitat. AS

Roadless Areas Protect/Designate As Wilderness

COMMENTS: Recommend all roadless areas for wilderness. Protect all roadless areas. Do not manage roadless areas for extractive uses. Keep these areas unroaded for wildlife, watershed protection, social and aesthetic values, future generations, or future wilderness. Roadless areas are crucial for biodiversity as well as human uses. Analysis of roadless areas for wilderness designation was cursory and inadequate; described only four of 16 areas, stating only that others "did not exhibit sufficient wilderness qualities; and violated provisions of NEPA, NFMA (16 USC 1604 (e), 36 CFR 219.17, and 60 Fed. Reg 18931 S219.14(b)). Clarify the process or basis by which certain areas are recommended for wilderness while others are not. The alternative with the highest amount of wilderness recommended has only about 53% of roadless areas.

F-G-1(475), F-G-2(2), F-H(8), F-J(3), 61, 136, 150, 157, 162, 163, 174, 175, 176, 181, 184, 185, 189, 193, 204, 206, 210, 212, 213, 226, 280, 317, 341, 354, 356, 357, 377, 379, 396, 400, 405, 409, 411, 424, 441, 443, 610, 613, 621, 622, 643, 651, 690, 695, 697, 731, 739, 766, 1194, 1241, 1243, 1270, 1273b, 1275, 1327, 1328, 1330, 1365, 1367b, 1368, 1381, 1382, 1383, 1395, 1443

RESPONSE: The Forest considered your comments. Additional analysis of recommended wilderness is documented in the FEIS to show the basis for recommendations. The Forest added documentation to the Roadless Area Process Paper Update (Appendix B of the FEIS) to display the rationale for why each roadless areas was or was not recommended for wilderness consideration. This documentation includes text and a wilderness characteristics rating table. Not all qualifying roadless areas are recommended for wilderness because the Desired Future Condition in the purpose and need section of the EIS does not call for such classifications. Only those roadless areas in the group having a rating equal to or higher than the group recommended in the 1984 Plan are considered essential to meet the DFC. AS

Recommended changes/corrections to DEIS on Roadless Areas

COMMENTS: Move the AMS summary about roadless areas from the Social Component to an Ecological Component.

695

RESPONSE: Roadless and wilderness areas are listed under social component because much of the use in these areas is recreational and designation is often political. Although the Forest recognizes the importance of the ecological component, most management direction involves social activity. AS

COMMENTS: Adopt the language describing roadless characteristics in DFPR Page 11-2, which reads, "Roadless characteristics are preserved in existing roadless areas and proposed wilderness" and include this description in the

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DEIS Page 1-12 and S-4. Change this description to Ecosystem Process/DFC rather than Forest Use and Occupation/DFC.

695

RESPONSE: The Forest adopted your wording suggestion and added a reference to the Roadless Process paper where the characteristics are listed for each roadless area. AS

COMMENTS: Need more discussion, analysis of fact that only Alt 6 in DEIS calls for reduction in groomed trails and OHV access; request additional analysis that wilderness designation reduces winter forage availability.

643, 1368

RESPONSE: The reduction in motorized access is fully analyzed and occurs in Alternatives 3, 3M, 4, 5 and 6. There is no indication in the EIS or Revised Plan that wilderness designation reduces winter forage availability. AS

COMMENTS: Discuss impacts of the DFPR on roadless areas proposed for inclusion in the Northern Rockies Ecosystem Protection Act. No ground disturbing activities should occur in these areas before designation.

1364

RESPONSE: The EIS addresses the potential for ground disturbing activities that impact roadless areas. The areas disturbed would be less than two-tenths of one percent of all roadless areas on the forest. AS

COMMENTS: Provide specific provision for achieving roadless area DFC. Adjust management prescriptions accordingly.

643

RESPONSE: The roadless characteristics will be preserved as suggested in the Desired Future Condition (DFC) of the Revised Plan and biodiversity attributes will not be affected. AS

Roadless - Specific Areas

COMMENTS: Analyze Diamond Peak and Mount Jefferson for wilderness characteristics as both would qualify; roadless character of the Lemhi subsection should be protected; revise Plan to reduce motorized use.

392, 643, 1184, 1185

RESPONSE: The Forest considered your comments. After a review and update of the wilderness characteristics in additional analysis the Forest added a large portion of the Diamond Peak area as recommended wilderness in the Revised Plan because this area's high wilderness characteristics rating is similar to the other wilderness areas recommended in the Revised Plan. No other changes were made in recommended wilderness prescription areas. This is because no other areas rated high enough on the updated wilderness characteristics rating except for Garns Mountain which was dedicated to a motorized use prescription rather than recommended wilderness. AS

WILDERNESS

COMMENTS: Map for Alternative 5 shows Garn's Mountain roadless area as part of recommended wilderness, but discussion does not mention it; and the map for Alternative 6 shows Garn's Mountain, Bear Creek, and Poker Peak as recommended wilderness but discussion doesn't mention them.

695

RESPONSE: The EIS text is corrected to match the map displays by adding reference to all areas mapped as recommended wilderness. AS

Roadless - Numerical Inconsistencies

COMMENTS: Correct inconsistencies in the amount of roadless area listed by different documents. The 1993 inventory shows 873,000 acres, while the DEIS and Executive Summary give 841,000; the Process Paper for roadless areas suggests that 53,700 acres have been lost to road construction since 1983 and four roadless areas have been deleted from inventory; there are 872,000 acres of roadless, not 841,000; the preliminary DEIS reports 879,000 acres, the process paper reports 871,000 acres, the DEIS reports 841,000 acres, and 3M reports protecting 772,000 as roadless.

643, 695, 766, 1368

RESPONSE: The final inventory acreages are added to the rating of the Wilderness Characteristic Factors Table in the Roadless Process Paper. There are fewer acres (841,000) in this table than in the original inventory table of 872,676. This reduction is due to improved accuracy from computer digitizing and represents a 3.5% correction. 3M Alternative roadless acres are less than 841,000 acres total inventoried because management prescriptions in the alternative will not necessarily protect all roadless characteristics. The Forest added text to the FEIS under the roadless heading in Chapters III and IV to address this. AS

COMMENTS: Inventory figure of 93 thousand acres in Bear Creek R.A. is incorrect.

695

RESPONSE: The final computer calculation shows the area to be 97,775 acres. AS

Roadless Area Management

COMMENTS: The Forest proposals seem contradictory to DFC as stated in DEIS, "Roadless characteristics are preserved in existing roadless and those proposed; and that a comprehensive analysis of key indicators of biodiversity would clearly demonstrate critical importance of roadless areas for species sensitive to human disturbance." Do not focus discussion of roadless area management to maintaining roadlessness in opposition to opening them up to motorized and resource extraction; rather focus on values public receives from roadless areas at little or no cost, e.g., clean air, water.

643, 766

WILDERNESS

RESPONSE: Less than two-tenths of one percent of the roadless areas are potentially impacted by ground disturbing activities. Therefore the roadless characteristics are preserved as suggested in the Desired Future Condition of the Revised Plan and biodiversity attributes are not affected. AS

COMMENTS: Since most summer motorized trail recreation occurs in roadless areas, manage recreation facilities as such. The DEIS equates trails with roads (Island Park Plateau), which is wrong.

1202

RESPONSE: Most of the motorized trail opportunities within roadless areas are maintained. AS

COMMENTS: Manage roadless areas as roadless and control usage through regulation, not by designation as wilderness, because multiple use should include areas maintained for all uses; no roadless areas.

285, 627a, 1277

RESPONSE: The Forest acknowledges your comments. AS

COMMENTS: Explain how the Forest can protect/mitigate against fires to maintain DFC, even though DEIS acknowledges that "these ecosystems are susceptible to fires of higher intensity/severity" and such fires result in soil damage.

228

RESPONSE: Ongoing studies mentioned in the Revised Plan will provide additional insight as to how to manage fire and use harvest methods that closely simulate ecosystem patterns of patch size and other natural processes. AS

COMMENTS: Nothing in NFMA, Section 219.17 requires that roadless areas be in a non-interchangeable component (NIC); therefore, in Alternative 2, allow all roadless areas that have a timber harvest prescription to be a part of the suitable timber base. (CROSS REFERENCE: Timber)

413

RESPONSE: The 1995 Draft RPA Assessment requires that the Forest quantify the contribution of Rare II areas to the maximum amount of timber that can be sold in a decade. This amount is identified as a non-interchangeable component (NIC) of the ASQ in the Revised Plan to prevent over harvesting in roaded areas in the event roadless areas cannot be harvested. Site-specific analysis is necessary for entry into roadless areas. In the first round of the Forest Plan, much of the volume in roadless areas could not be harvested. AS/LB/JR

COMMENTS: Provide specific provisions for achieving Roadless Area DFC. Adjust management prescriptions accordingly.

643

RESPONSE: The roadless characteristics will be preserved as suggested in the Desired Future Condition (DFC) of the Revised Plan and biodiversity attributes will not be affected. AS

WILDERNESS

COMMENTS: Comply with RPA program that requires the ASQ for roaded and **RARE** II roadless areas tracked and reported separately in the Forest Plan. (CROSS REFERENCE: Timber)

1368

RESPONSE: It will be tracked in the NIC component. LB/AS

COMMENTS: The number of acres retained as roadless are a better indicator than the number of acres recommended for wilderness in Issue #6.

No Letter Number

RESPONSE: Acres retained as roadless were not used as a key indicator because there is little change between alternatives for this indicator as shown on Table II-1 of the FEIS. The most significant difference in alternative comparison indicators that effect roadless areas is the number of acres recommended as wilderness. This was selected for the comparison, because it provides a significant difference in the level of protection of roadless values.

WILDLIFE - AMPHIBIANS

Spotted Frog Habitat

COMMENTS: The forestwide objective (DFPR 111-15) for spotted frog habitat (maintain riparian vegetation in desired vegetation condition) does not provide clear direction for maintaining habitat for amphibians because DVC is not rigorously defined. Please clarify.

643, 1277, 1369

RESPONSE: The definition for DVC is found in the Glossary of the Revised Plan. Site-specific determination of DVC will be made at the time of specific project proposals. RR

COMMENTS: It is not clear that Alternative 3M will protect the spotted frogs' habitat's key components. Human modifications negatively affect habitat quality for spotted frogs.

1277

RESPONSE: Forestwide Standards and Guidelines--such as, Properly Functioning Condition and Fisheries, Water and Riparian Resources sections, including a spotted frog goal; Aquatic Influence Zone management prescription--provide direction which will protect frog habitat. The effects confirming adequate protection and maintenance of spotted frog habitat are disclosed in Chapter IV of the FEIS. RR

Boreal/Western Toad Habitat

COMMENTS: Support leaving more forest debris to benefit boreal toads because radiotelemetry studies show that some toads use slash piles extensively.

1343

Maintain or protect shrub cover in forested habitat for western toads. Shrub cover is a significant component of toad habitat, especially in dry to normal weather conditions.

1204

RESPONSE: The Revision includes direction to manage for natural levels of shrub cover. This will increase shrub cover in many areas which will benefit a variety of plant and animal species. DD

Protect Amphibian Breeding Sites

COMMENTS: Protect all known amphibian breeding sites from direct or indirect negative impacts of timber, grazing, road-building, mining or recreation.

1277

RESPONSE: While specific breeding sites are not identified in this programmatic analysis, Forestwide Standards and Guidelines--such as, Properly Functioning Condition and Fisheries, Water and Riparian Resources sections, including a spotted frog goal; Aquatic Influence Zone management prescription--provide direction which will protect amphibian habitat. The effects confirming adequate protection and maintenance of habitat are disclosed in Chapter IV of the FEIS. RR

COMMENTS: Do not permit fish kills or pesticides or herbicides at possible amphibian breeding areas and other aquatic habitat that may be used for wintering or foraging.

1277

RESPONSE: State wildlife agencies may make proposals for using pesticides in preparation for restocking watercourses with desirable fish species. These will be evaluated on a case-by-case basis, with coordination between the Forest Service and the agency. All pesticide or herbicide use is subject to compliance with EPA safety, use and disposal requirements, particularly near water bodies. RR

Amphibian Buffer Zones

COMMENTS: Requirements for buffers on all streams and water types will improve riparian area conditions for most amphibians species.

643, 1343

RESPONSE: This is one of the intents of the aquatic influence zone management prescription. DD

COMMENTS: Do not believe this statement on Page IV-91 of DEIS is justifiable: "We doubt there is much of a measurable difference in effect due to different buffer widths."

1277

RESPONSE: At this time we do not know of any scientific study that would change our effects analysis on spotted frogs. MO

Reduce Access to Protect Amuhibians

COMMENTS: Reduce motorized access to decrease anuran (lacking a tail) mortality caused by motorized vehicles; seasonally wet seeps and marshes should not be crossed by roads or trails if alternate routes are possible.

643, 1277, 1343

RESPONSE: The access and aquatic influence zone direction provides adequate protection. RR

COMMENTS: Do not allow stocking of fish in previously fishless waters that are occupied by amphibians.

1277

RESPONSE: The States of Idaho and Wyoming have the legal authority to stock fish in the waters of their state. They consider the protection of native species in their stocking policies. DD

Grazing Imuacts on Amphibians

COMMENTS: DEIS implies grazing is of no concern, but in frog/toad breeding areas, trampled stream banks, degraded riparian vegetation and livestock

WILDLIFE - AMPHIBIANS

congregations in seasonal wetlands and pond edges all have negative effects on frogs or their ability to reproduce and persist in an area.

1277

Prevent sheep grazing in or near critical breeding sites of boreal toads during and soon after the period of metamorphosis.

1343

RESPONSE: Forestwide Standards and Guidelines--such as, Production of Commodity Resources, Properly Functioning Condition, and Fisheries, Water and Riparian Resources sections; and Aquatic Influence Zone management prescription--provide direction which will protect frog and toad habitat. The effects confirming adequate protection and maintenance of frog habitat are disclosed in Chapter IV of the FEIS. RR

COMMENTS: Explain changes in the grazing program that will restore and recover the western boreal toad on the Forest.

1365

Management recommendations for western toads should include the following: Protect riparian habitat, create buffers around riparian areas, keep livestock away from riparian areas and amphibian breeding sites.

1204, 1277

RESPONSE: Changes in specific grazing systems is a site-specific determination during allotment management planning or administration. Forestwide and management prescription direction protecting riparian and aquatic resources is adequate to maintain effective habitat for the boreal toad. RR

Timber Harvest Impacts on Amphibians

COMMENTS: Disagree with claims that timber harvest within AIZs will have, "site-specific, short term impacts on spotted frog populations and habitat" because timber harvesting that alters hydro character, temperature, moisture, and connectivity results in loss of breed sites, winter areas, moist summer forage areas and movement corridors. Do not allow any timber harvesting in riparian influence zones which are spotted frog habitat.

643, 1277, 1365

RESPONSE: The Revised Plan does not permit scheduled timber harvest within the aquatic influence zone. However, small scale timber harvest is permitted only if specifically needed and designed to maintain or improve aquatic or riparian ecosystems. No such timber sales are planned or anticipated. DD

COMMENTS: Expand habitat features beyond the needs of birds and mammals. Address needs of smaller, more sensitive species such as amphibians, for example, how timber harvest affects amphibians (Chen et. al 1993).

1204

RESPONSE: Forestwide Standards and Guidelines--such as, Properly Functioning Condition and Fisheries, Water and Riparian Resources sections, including a spotted frog goal; Aquatic Influence Zone management prescription--provide direction which will protect amphibian habitat. The effects confirming

adequate protection and maintenance of spotted frog habitat are disclosed in Chapter IV of the FEIS. RR

COMMENTS: Logging does not mimic fire as a process and creates a very different ecological situation for amphibians.

643, 1343

RESPONSE: We acknowledge that logging does not replicate all of the ecological effects of natural fire. The Revised Plan includes direction to increase the use of prescribed and natural fire where desirable effects are expected. DD

COMMENTS: Consider that landscape pattern of logging activities has a considerable impact on toad movements and habitat. A clearcut area with no regrowth of trees or shrubs seriously decreases the quality of habitat.

643, 1204, 1343

RESPONSE: Under ecosystem management and properly functioning condition, most harvest activities will be considered in a landscape context, with evaluation of effects on wildlife species. Depending on the objectives, the effects of clearcutting without adequate restocking can create undesirable habitat condition. RR

COMMENTS: Address the findings of researcher Paul Bartelt (1995) that amphibian decline is related to habitat alteration at historic sites through evaporation loss in clearcuts, the movement of sheep through toadlet nursery areas and the destruction of overhead covering where toads locate.

1365

RESPONSE: The Forest's management approach is to maintain, on a landscape basis, quality riparian/wetland and upland habitats that will provide for a variety of species over time. There will be natural and management disturbances but the overall intent is to maintain habitat conditions for all other species. MO

Amphibian Management

COMMENTS: Provide more substantive changes in the management of potential toad habitat in riparian/wetland areas so that the species does not completely disappear from the Forest: write an accountable and enforceable conservation management plan for boreal toad and other amphibians that are in decline.

1343, 1365

RESPONSE: The Revision includes substantive changes in the management of Forest riparian/wetland areas. This will benefit a variety of plant and animal species which use these areas. A conservation management plan is not considered necessary. The Revised Plan allows further action, should new information or changed conditions occur. DD/RR

WILDLIFE - AMPHIBIANS

COMMENTS: Manage for the fact that toad populations decline sharply if a metapopulation structure is lost or fragmented by either natural or man-caused events.

1277

RESPONSE: Forestwide Standards and Guidelines—such as, Properly Functioning Condition and Fisheries, Water and Riparian Resources sections, including a spotted frog goal; and Aquatic Influence Zone management prescription--provide direction which will protect frog habitat. The effects confirming adequate protection and maintenance of frog habitat are disclosed in Chapter IV of the FEIS. RR

COMMENTS: Justify statement: "all alternatives are expected to maintain the current spotted frog distribution on the Forest."

1277

RESPONSE: No data in literature suggests spotted frogs are dependent upon a particular forested condition. The AIZ Management Prescription is used as a coarse filter to maintain aquatic and riparian habitats in properly functioning conditions. This prescription will benefit spotted frogs. MO/AM

Use Scientific Studies

COMMENTS: Forest needs to use the herpetological research already done to assess trends, develop management guidelines and monitoring (Peterson et al. 1992; Groves and Peterson 1993; Clark et al. 1993; Clark and Peterson 1994; Patla and Peterson 1994; Bartelt and Peterson 1994, and in prep; Koch and Peterson 1995). Include the information and analyses from the Upper Columbia River Basin Assessment for amphibians so that you do not neglect an appropriate ecosystem management.

643

The Plan needs to deal with research showing declines on the Forest of the northern leopard frog and the boreal or western toads, especially since the Forest has a few of the remaining known breeding sites for the boreal.

643, 1343

RESPONSE: The Forest used the above cited research in the development of forestwide standards, guidelines and management prescriptions for riparian and wetland habitats. The Forest's approach is to maintain, on a landscape basis, quality riparian wetland and upland habitats that will provide for a variety of species over time. MO

Survey/Monitor Amphibian Sites

COMMENTS: Establish a schedule of amphibian surveys and monitoring of spotted frog breeding sites. Cover representative areas in all subsections across the Forest and extend each year.

1277

RESPONSE: Monitoring of spotted frog habitat is included in Chapter V of the Revised Plan. RR

COMMENTS: The amphibian surveying/monitoring effort is inadequate to determine the status of populations and how they are reacting to management decisions. Resurvey (every 5 years) historical sites for the northern leopard frog and the leopard frog to help understand their declines; survey data does not suggest declines of tiger salamanders or boreal chorus frogs.

1343

Provide needed, critical, long-term monitoring for all amphibians based on available scientific information. ~~Emphasize~~ inventory and monitoring of breeding sites of all amphibians and protection of the few known breeding sites of the rare western boreal toad; use the results of ISU research as a starting point.

643, 1277

Site-specific project analysis should consider the possibility that breeding pools may be isolated or fragmented from other suitable habitat. Analysis projects should include searches for ephemeral pools and intermittent or ephemeral drainages that may not show up on aerial photos or maps. These sites should be protected if suspected of being occupied or used by spotted frogs or western toads.

1277

RESPONSE: Forestwide Standards and Guidelines--such as, Properly Functioning Condition and Fisheries, Water and Riparian Resources sections, including a spotted frog goal; Aquatic Influence Zone management prescription--provide direction which will protect frog habitat. The effects confirming adequate protection and maintenance of Management Indicator Species spotted frog habitat are disclosed in Chapter IV of the FEIS. KR

Amphibians as Management Indicator Species

COMMENTS: The spotted frog is the most common amphibian on the forest and should not be the only species of concern used as a management indicator, because amphibians are especially sensitive to environmental change in aquatic and riparian systems (DEIS 111-31).

643

Incorporate western boreal toads as indicator species. They are more vulnerable to impacts of land management activities because they are affected in both riparian and upland habitats.

206

RESPONSE: The Forest used the spotted frog because it was listed as a regional sensitive species and therefore became a Management Indicator Species. Boreal toads were not listed. As we learn more information about boreal toads, we will include this in site-specific planning. MO

Standards and Guidelines

COMMENTS: Explain why there are no standards and guidelines for the spotted frog.

1369

WILDLIFE - AMPHIBIANS

Page III-15 - Standards and Guidelines - Spotted Frog Habitat.

Objective should read: "Maintain riparian vegetation in late seral or potential natural community condition."

1446

Develop objectives for amphibian habitat protection including the following: pesticides, herbicides, placement of trails and roads, stocking of fish, recreational base, livestock use and timber harvest.

643

RESPONSE: Forestwide Standards and Guidelines--such as, Properly Functioning Condition and Fisheries, Water and Riparian Resources sections, including a spotted frog goal; Aquatic Influence Zone management prescription--provide direction which will protect frog habitat. The effects confirming adequate protection and maintenance of MIS spotted frog habitat are disclosed in Chapter IV of the FEIS. RR

Site specific

COMMENTS: The Lodge Creek spotted frogs' breeding sites are two small pools in Island Park that are spatially separated from permanent streams and are vitally important. The first area is located in lodgepole forest 200 meters from the headwater springs of Lodge Creek. The second has been separated from Lodge Creek by highway construction which has caused negative impacts on this population. The frogs do not migrate in mass, but individually.

1277

Recent surveys show spotted frogs are common/abundant in Island Park but rare/non-existent in Big Holes/Palmsades district.

1277, 1343

RESPONSE: Thank you for this information. These are site-specific concerns and should be addressed during analysis of project proposals. RR

WILDLIFE - ANALYSIS

Environmental Analysis of Wildlife
Impacts is Inadequate

COMMENTS: Environmental analysis of wildlife impacts are grossly inadequate; analysis fails to meet the legal requirements of NEPA or APA, and fails to ensure the viability requirements of NFMA. Analysis of wildlife impacts should include: current science; effects of past impacts of logging/roading on habitat potentials for wildlife; cumulative effects; wildlife standards so the Forest can predict habitat conditions for the next ten years; professionalism and science quality.

1369

RESPONSE: The Analysis of the Management Situation (1992) and Process Paper D contain much of what you request. The DEIS contained a summary of this information and referred to these other documents for more information. The FEIS will contain more information about each management indicator species, but it will still be a summary, and the Analysis of the Management Situation and Process Paper D will still be referenced in the FEIS. The analysis is

based on the best information available, sound science, and fully complies with all laws and regulations. MO

COMMENTS: The Plan should include the following: monitoring and evaluating program, recreational impacts on wildlife, OHV impacts on wildlife, access habitats and populations of indicator species, reasonable frequency of measurements, predetermined degree of change, and interrelated set of impact indicators.

1365

RESPONSE: The Revised Plan has a monitoring item for each management indicator species (MIS). Each monitoring item includes the following parameters: type of monitoring, priority, where applied, the indicator being monitored, the method, expected precision and reliability, tolerance or variability indicating action, frequency of monitoring, lead responsibility and estimated annual cost.

Recreational impacts on wildlife MIS are analyzed as appropriate for each individual MIS. The analysis includes measuring recreational activity in a variety of ways, including motorized use on roads and trails, cross-country OHV use, dispersed recreation activity, campsites, and so forth.

The FEIS provides a summary of known information about the populations of each MIS. MO

COMMENTS: The Plan needs to address public issues: evaluation of habitat fragmentation created by roads and harvest units; no plans to manage wildlife for the above reason; old growth and the species dependent on it; firewood harvest in potential wildlife habitat; management of sensitive species beyond goshawk and owls; forest songbirds, especially those dependent on denser, old forest habitat, at lower elevations.

1369

RESPONSE: The FEIS and Process Paper D contain additional information about fragmentation. Process Paper D contains a review of the effects of timber harvesting on neotropical migratory birds. The Revised Plan contains new management direction for old growth and late successional forests. All sensitive species which occur on the Forest are analyzed in the FEIS. There are numerous forestwide standards and guidelines and management prescriptions which provide for the habitat requirements of wildlife species, but they are not necessarily identified by species name. For example, the forestwide standards and guidelines for old growth and late successional forest, combined with the management prescription standards and guidelines for limiting the amount of forested acres that can be in a nonstocked or seedling stage at point in time provide for the maintenance of late successional and old growth forest for numerous wildlife species. MO

DFPR Fails to Analyze Existina Conditions

COMMENTS: The DFPR is seriously flawed due to the lack of a thorough analysis of Forest conditions (all resources). A principle area lacking in analysis is for wildlife, relating existing conditions and habitat effectiveness to implementation of the DFPR. All appeals over the past decade have been wildlife related. To avoid perpetuating the cycle of

WILDLIFE - ANALYSIS

"planning/appealing/revising" the DFPR should 1) make clear, existing conditions forestwide, 2) identifying causative factors to explain these conditions, (for example, number of roads and degree of fragmentation which resulted from the Forest's departure from sustained yield logging), 3) address habitat needs for a wide variety of species, and 4) make clear that standards, guidelines and prescriptions will accommodate those resources into the future.

643

RESPONSE: 1) The FEIS and Process Paper D describe the existing condition for each MIS, 2) The FEIS and Process Paper D describe the habitat components which are most important and influenced by Forest Service management activities, 3) The Revised Plan and FEIS specifically address the habitat needs of the MIS and the AMS and Process Paper D provide additional information about other wildlife species on the Forest; and 4) Analysis in the FEIS includes the effects of incorporating and implementing all of the forestwide standards and guidelines and the management prescriptions. MO

Surveys/Inventories

COMMENTS: Recommend mandatory surveys for important wildlife and habitats prior to any project or activity; suggest standards and guidelines requiring surveys.

389, 766

RESPONSE: Each project or activity is unique, and the necessary surveys required for each project or activity is unique. Therefore, it is not possible to establish mandatory surveys for projects or activities in the Revised Plan. The necessary surveys will be identified when projects or activities are proposed. MO

COMMENTS: Need a terrestrial biological assessment and a species inventory.

1368

RESPONSE: A list of all wildlife species which potentially occur on or adjacent to the Forest was provided in the Analysis of the Management Situation (completed in 1992) and in Process Paper D. The FEIS provides an assessment of populations and habitat conditions for the terrestrial wildlife species selected as MIS. MO

Standards and Guidelines

COMMENTS: Plan has too many arbitrary standards that have little biological or scientific merit for wildlife.

1369

RESPONSE: Every Standard and Guideline in the Revised Plan was reviewed again. They are based on the best available science and management information. MO

Language

COMMENTS: Define "limited" access, because the word is too ambiguous.

389

RESPONSE: We agree that words like "limited" are ambiguous. That is why access information is displayed in tables and figures in quantitative terms, like miles of roads and trails and density of roads and trails. MO

COMMENTS: Require the Plan to more strongly guarantee the integrity of wildlife.

252

RESPONSE: Compared to the existing condition, the Revised Plan reduces motorized access, reduces the amount of timber harvesting, maintains or improves riparian habitats, provides for more late successional and old growth forests in every watershed, provides better direction for important habitat components such as snags and downed woody debris, provides improved winter range conditions for deer and elk, and provides more protection for important site-specific areas, such as nest sites for all of the endangered and threatened and sensitive bird species. Analysis in the FEIS for the MIS demonstrates that suitable habitat will be maintained for viable populations of wildlife, and this habitat will be well-distributed across the Forest. MO

Monitoring

COMMENTS: Monitor biodiversity before treatments, not just after treatments, so that you can have proactive planning.

1368

RESPONSE: Biological diversity can be defined as the diversity of genes, species, communities, ecosystems, and the interactions of all of these. It is not possible to monitor everything that fits under the term biodiversity. Therefore, the Revised Plan identifies the important monitoring items which are to be done when the Forest Plan is implemented. Each monitoring item includes the following parameters: type of monitoring, priority, where applied, the indicator being monitored, the method, expected precision and reliability, tolerance or variability indicating action, frequency of monitoring, lead responsibility, and estimated annual cost. MO

COMMENTS: Add this statement to the plan: Develop monitoring partnerships with state wildlife agencies, state recreation agencies, possibly recreation user-groups, and Grand Teton National Park.

699

RESPONSE: Cooperating with other agencies and user groups has become a standard way of doing business for the Targhee and the other agencies and user groups. The Forest Service has numerous Memorandum of Understanding with other agencies and user groups to facilitate partnerships and cooperative relations. Therefore, it is not necessary to add such a statement to the Revised Plan. MO

WILDLIFE - ANALYSIS

COMMENTS: Revise the Jedediah Smith Monitoring Plan to include monitoring of winter survival of yearlings of bighorn sheep populations in the Teton Mountain Range and include the Grand Teton National Park.

699

RESPONSE: Monitoring wildlife populations, especially those that are hunted, is the primary responsibility of the State Fish and Game Departments. In this case, that is the Wyoming Game and Fish Department. In the past, the Targhee cooperated with the Wyoming Game and Fish Department and Grand Teton National Park on research and monitoring of the bighorn sheep population in the Teton Mountain Range. We will continue to work with these agencies. MO

COMMENTS: "Important habitat or ecological values" are broad terms, and the commenter does not define them. For monitoring to be effective, items need to be well defined. Therefore, these recommended changes were not made in the Revised Plan.

1365

RESPONSE: Add the words "and in areas with important habitat or ecological values" to the monitoring item for conflicts between all forms of recreation and wildlife. MO

Education

COMMENTS: Regain public support for Fish and Game, hunting, fishing and outdoor recreation activities.

250

RESPONSE: Your comments are acknowledged. We continually seek to involve the public in project planning and foster support for management activities.

MO/RR

COMMENTS: Regarding Developed Recreation Sites: Support watchable wildlife provisions in objectives because informing public of areas to enjoy wildlife

in native habitats encourages public support for habitat needs.

(CROSS REFERENCE: Recreation)

1446

RESPONSE: One of several national wildlife program emphasis areas is "watchable wildlife." It is not necessary to restate the goals and objectives of these national programs in the Revised Plan. MO

WILDLIFE - BIGHORN SHEEP

Needs More Protection

COMMENTS: The few management guidelines the Forest has for bighorn sheep are untimely and madequate to ensure future populations. The Forest needs to follow agencies like Wyoming Game and Fish, and the Grand Teton National Park and give bighorn sheep more consideration.

699, 1247

Protection efforts are needed, because bighorn populations lost lower elevation and winter range due to development, poaching, plant successional and fire suppression, and recreation; there is genetic isolation and inbreeding (especially in the Teton Range).

25, 389, 699, 1247, 1381

The Forest Plan does not meet NFMA/FS regulations for maintaining populations of native vertebrate species, especially bighorn sheep, which is required by NSP (1988, 5.5) and is a goal of Wyoming Game and Fish with their objectives of 125 animals.

699

RESPONSE: The public raised four main issues related to bighorn sheep. These four issues and the response are:

1. Loss or abandonment of former low-elevation winter range due to human disturbance (e.g., developments, poaching, recreational activities) and vegetation succession from alteration of the natural fire regime.

There is no argument that former low elevation winter ranges are not being used for a variety of factors. However, The Forest knows of no analysis/evaluation about the feasibility of restoring use to former low elevation winter ranges.

Some of the winter ranges are probably permanently lost due to permanent developments.

Historical bighorn range in the Palisades and Big Hole Mountains areas is now occupied by mountain goats (the result of transplants conducted by the Idaho Department of Fish and Game). It is our understanding that mountain goats use the same habitats, are more aggressive, and will out compete bighorn sheep.

The Forest knows of no analysis or evaluation of the burning conditions which would be necessary to restore appropriate vegetation conditions. The Teton bighorn sheep working group documented that "natural fire regimes" were often the result of native Americans and early trappers. It is unlikely these fire regimes can be restored today. The Teton Basin Ranger District has tried since the mid-1980s to do a spring prescribed burn in Darby Creek. They have tried slashing the brush to create more dry fuel; they have put a cat line around it to allow for more severe burning conditions; and they have used both diesel fuel and a helitorch to burn the area, but with no success.

In the Revised Plan, the Targhee added an objective as follows: By the year 2007, complete a fire management plan for the entire west slope of the Tetons which would include opportunities for improving bighorn sheep habitat.

Bighorn sheep occupy traditional use areas, and often do not disperse into suitable unused habitat. Even to get bighorns to use new areas that are in proximity to each other usually requires transplanting them.

2. Potential disease transmission from, and competition with, domestic sheep.

The Forest has already implemented protection measures to reduce the transmission of disease between domestic sheep and bighorn sheep. In addition, the Revised Plan provides some new management direction. The following summarizes what the Forest has already done, plus the new management direction in the Revised Plan.

What the Forest has already done:

WILDLIFE - BIGHORN SHEEP

On the west slope of the Tetons, 45,700 acres of bighorn sheep habitat do not have domestic sheep grazing at this time. These 45,700 acres include all of the areas currently used by bighorn sheep. Domestic sheep are not grazed on the west slope during the seasons when "nose-to-nose" contact with bighorn sheep is likely to occur. Therefore, the potential for disease transfer is very low, there is no forage competition, and there is no displacement.

In the Lionhead area, there is no domestic sheep grazing. Therefore, the potential for disease transfer is zero, there is no forage competition, and there is no displacement.

In the Medicine Lodge area, there is no domestic sheep grazing in the area currently occupied by bighorn sheep. There are some winter and summer domestic sheep allotments currently in use in areas adjacent to the currently occupied bighorn sheep areas. Therefore, the potential for disease transfer is very low, there is no forage competition, and there is no displacement.

New management direction contained in the Revised Plan is: Phase out domestic sheep grazing on the west slope of the Tetons on an opportunity basis; phase out winter domestic sheep grazing in the Medicine Lodge Subsection; evaluate additional opportunities for adjusting domestic sheep grazing while the phase out program is in progress; and allow no conversions from cattle allotments to domestic sheep allotments within bighorn sheep habitat.

3. Likely genetic isolation and related consequences of inbreeding.

This issue was raised primarily for the bighorn sheep population on the west slope of the Tetons. The Teton Range bighorn sheep population is among a small number of bighorn sheep populations that are endemic and have not been augmented with animals from other bighorn sheep populations. However, genetic research on this population indicates the Teton Range bighorn sheep had the lowest heterozygosity of 12 herds in Wyoming which were analyzed for genetic variability. Additional genetic analysis is currently being done.

The concern for genetic isolation and related consequences of inbreeding appears to be diametrically opposed to the scientific value of an endemic population. At this time, the Forest does not know what will be needed to resolve this dilemma.

4. Displacement from seasonal ranges due to recreational activities.

Bighorn sheep habitat on the Forest is within designated wilderness, proposed wilderness and semi-primitive backcountry areas. These areas already have limited access. There are some concerns about potential adverse effects of recreation activity, but none of the concerns have substantive documentation to support the claim that recreation activity is adversely affecting bighorn sheep populations. The Revised Plan has an added objective to work with the Intermountain Research Station to establish a credible research project on the effects of recreation on bighorn sheep on the west slope of the Tetons.

Recreational activities are evaluated and coordinated between all agencies. This includes the permitting of hunting by the Wyoming Game and Fish Department. MO

COMMENTS: Plan does not describe the environmental consequences of any of the alternatives relative to bighorn sheep which is required by NEPA, Forest Service Handbook, Forest Service Manual 1950 and 2602 plus NFMA and USFS regulations (36 CFR 219),

699

RESPONSE: Laws and regulations and policy for Forest planning require the selection of management indicator species (MIS). It is neither required, nor is it possible to select every wildlife species as a MIS. The Forest conducted several workshops to identify and select the MIS for the Revised Plan. Bighorn sheep were not selected as a MIS because they have not responded to management efforts in the past and populations and habitat conditions would be the same in all alternatives. The Forest is not violating any laws, regulations or policy by not selecting bighorn sheep as a MIS. MO

Protection Measures

COMMENTS: Limit access to bighorn sheep habitat by restricting recreation and prohibiting new trails and campsites in bighorn sheep habitat; develop standards for travel constraints in bighorn sheep habitat; develop goals and objectives for maintaining a viable sheep population.

389, 699, 1247, 1347

RESPONSE: Bighorn sheep habitat on the Forest is within designated wilderness, proposed wilderness and semi-primitive backcountry areas. These areas already have limited access. Concerns about possible or potential adverse effects of recreation activity have not provided substantive documentation to support the claim that recreation activity is adversely affecting bighorn sheep populations. The Revised Plan has an added objective to work with the Intermountain Research Station to establish a credible research project on the effects of recreation on bighorn sheep on the west slope of the Tetons.

Habitat currently exists and will continue to exist in the future to sustain a viable population of bighorn sheep. However, there are other factors outside the management authority of the Forest Service which may affect population viability, such as traditional bighorn sheep behavioral traits which have some populations wintering on high elevation winter ranges with limited carrying capacity and severe wintering conditions. There are also concerns about genetic inbreeding, which may require some population manipulation which is outside the authority of the Forest Service. MO

COMMENTS: Support management strategies outlined by Suminski (1991). Emphasize implementation of management strategies 1, 2, 3, 4, 5, 7, 8, 10.

389

RESPONSE: These management strategies deal with concerns about grazing domestic sheep within or close to bighorn sheep habitat. The concerns include potential for disease transfer, competition for forage and displacement. What the Forest has already done:

On the west slope of the Tetons, 45,700 acres of bighorn sheep habitat do not have domestic sheep grazing at this time. These 45,700 acres include all of the areas currently used by bighorn sheep. Domestic sheep are

WILDLIFE - BIGHORN SHEEP

not grazed on the west slope during the seasons when "nose-to-nose" contact with bighorn sheep is likely to occur. Therefore, the potential for disease transfer is low, there is no forage competition and there is no displacement.

In the Lionhead area, there is no domestic sheep grazing. Therefore, the potential for disease transfer is zero, there is no forage competition and there is no displacement.

In the Medicine Lodge area, there is no domestic sheep grazing in the area currently occupied by bighorn sheep. There are some winter and summer domestic sheep allotments currently in use in areas adjacent to the currently occupied bighorn sheep areas. Therefore, the potential for disease transfer is very low, there is no forage competition and there is no displacement.

New management direction contained in the Revised Plan is: Phase out domestic sheep grazing on the west slope of the Tetons; Phase out winter domestic sheep grazing in the Medicine Lodge Subsection; evaluate additional opportunities for adjusting domestic sheep grazing while the phase out program is in progress; and allow no conversions from cattle allotments to domestic sheep allotments within bighorn sheep habitat. MO

COMMENTS: Consider bighorn sheep as an indicator species.

389

RESPONSE: Laws and regulations and policy for Forest planning require the selection of management indicator species (MIS). It is neither required, nor is it possible to have every wildlife species selected as a MIS. The Forest conducted several workshops to identify and select the MIS for the Revised Plan. Bighorn sheep were not selected as a MIS for the Revised Plan because they have not responded to management efforts in the past and populations and habitat conditions would be the same in all alternatives. The Forest did not violate any laws or regulations or policy by not selecting bighorn sheep as a MIS. MO

COMMENTS: Include bighorn sheep during scoping or grazing allotment reviews.

1247

RESPONSE: This was done in the past, and will be done in the future, on grazing allotments that have bighorn sheep concerns. The Revised Plan provides the following management direction related to domestic sheep grazing and bighorn sheep habitat: Phase out domestic sheep grazing on the west slope of the Tetons; phase out winter sheep grazing in the Medicine Lodge Subsection; evaluate additional opportunities for adjusting domestic sheep grazing while the phase out program is in progress; and allow no conversions from cattle to domestic sheep within bighorn sheep habitat. MO

Protection Measure - Winter

COMMENTS: Add management goals to protect bighorn sheep habitat in winter. Restrict recreation (including travel, new campsites and outfitter and guide special use permits) in bighorn sheep winter range and other key habitat; make a forestwide standard protecting crucial bighorn sheep winter range that includes recreation and travel restraints.

FS-9, F-G-1(475), 389, 1247, 1249, 1312

RESPONSE: Bighorn sheep habitat on the Forest is within designated wilderness, proposed wilderness, and semi-primitive backcountry areas. These areas already have limited access. There are concerns about possible adverse effects of recreation activity, but none of the concerns have substantive documentation to support the claim that recreation activity is adversely affecting bighorn sheep populations. The Revised Plan has an added objective to work with the Intermountain Research Station to establish a credible research project on the effects of recreation on bighorn sheep on the west slope of the Tetons. MO

COMMENTS: Reference Wyoming Game and Fish license approach to bighorn sheep as premier big game animals, recognize their bighorn sheep plans, and coordinate with them to include all winter range.

1247

RESPONSE: The Targhee has, and will continue in the future, to coordinate with the Wyoming Game and Fish Department in the management of bighorn sheep. MO

COMMENTS: Provide a guideline to assist State agencies for transplant into historic winter ranges, especially after domestic sheep are removed from an area.

1247

RESPONSE: It is Forest Service policy to coordinate with the State Fish and Game Departments on proposed transplants for all wildlife species. Since this is policy, the Targhee will not create a guideline specific for bighorn sheep transplants for the Revised Plan. MO

Non-Support Protection Measures

COMMENTS: "Bighorn sheep winter range should be closed to all human activities between December 1 and April 30" as should elk and deer winter range and also apply to MP 2,7(a-b). This should be added and made a Standard.

699

RESPONSE: Bighorn sheep winter ranges are distributed in several areas of the Forest, including the Jedediah Smith Wilderness Area, the Lionhead Proposed Wilderness Area, in the Medicine Lodge area and the Lemhi Mountains, a portion of which is proposed wilderness. At the present time, human use in these areas is limited or non-existent. However, because of concerns about recreation impacts on bighorn sheep, an objective is added to the Revised Plan to work with the Intermountain Research Station on a research project to assess the existing and potential impacts from recreation use on bighorn sheep. MO

COMMENTS: Bighorn sheep is not a threatened and endangered species. It is a big game animal whose numbers are on the increase across the west.

1363

WILDLIFE - BIGHORN SHEEP

RESPONSE: You are correct that bighorn sheep are not a threatened or endangered species. The Targhee is unfamiliar with the population numbers throughout the west, but the bighorn sheep population on the Forest is estimated to be 225 animals, and there has been no population increase for the past 15 years. MO

Interaction with Domestic Sheep

COMMENTS: Separate domestic sheep from bighorn sheep. Specific sites of conflict include the headwaters of Game and Moose Creeks, Mail Cabin Creek, Fox Creek Divide, Fred's Mountain, Rendezvous Mountain, Jedediah Smith Wilderness, and the Teton Range. Domestic sheep transmit disease to bighorn sheep which is the most serious threat to bighorn sheep survival. The two species compete for forage. Develop buffer strips between domestic and bighorn sheep populations with suggested widths ranging from 2 to 3 to 9 miles; and separate domestic from bighorn sheep in a standard.

FS-9, 212, 293, 389, 690, 699, 1247, 1277, 1312, 1331, 1381, 1387

Reflect ecosystem management emphasis with regards to the impacts of domestic sheep grazing on bighorn sheep populations (especially in the Teton Range) because numerous studies cite this is a concern (cites Citizens Task Force Work Group and memorandum from Wyoming Game and Fish to the Targhee National Forest, 1989, 1994, 1995).

699

Research has established that bighorn sheep carry their own strain of pasteurilla and are capable of die-offs without contact with domestic sheep (e.g. bighorn sheep die-off in Hells Canyon past winter); oppose Targhee's radical proposal to reduce sheep grazing by 20% AUMs (especially in Districts 2 and 3) in order to "improve" grizzly bear and bighorn sheep habitat.

1363

RESPONSE: These comments deal with concerns about grazing domestic sheep within or close to bighorn sheep habitat. The following documents what the Forest has already done about these concerns and new management direction contained in the Revised Plan. What the Forest has already done:

On the west slope of the Tetons, 45,700 acres of bighorn sheep habitat do not have domestic sheep grazing at this time. These 45,700 acres include all of the areas currently used by bighorn sheep. Domestic sheep are not grazed on the west slope during the seasons when "nose-to-nose" contact with bighorn sheep is likely to occur. Therefore, the potential for disease transfer is low, there is no forage competition and there is no displacement.

In the Lionhead area, there is no domestic sheep grazing. Therefore, the potential for disease transfer is zero, there is no forage competition and there is no displacement.

In the Medicine Lodge area, there is no domestic sheep grazing in the area currently occupied by bighorn sheep. There are some winter and summer domestic sheep allotments currently in use in areas adjacent to the currently occupied bighorn sheep areas. Therefore, the potential for disease transfer is very low, there is no forage competition and there is no displacement. There is no need for a 3 to 9 mile buffer between domestic and bighorn sheep at this time.

New management direction contained in the Forest Plan is: Phase out domestic sheep grazing on the west slope of the Tetons; phase out winter

domestic sheep grazing in the Medicine Lodge Subsection; evaluate additional opportunities for adjusting domestic sheep grazing while the phase out program is in progress; and allow no conversions from cattle allotments to domestic sheep allotments within bighorn sheep habitat. MO

Standards and Guidelines

COMMENTS: Incorporate bighorn sheep management into forestwide goals, objectives, standards and guidelines. Recommend the following changes to DFPR, Chapter 3, Standards and Guidelines:

Introduction, 6th paragraph If an effort is being made to make standards and guidelines specific to the Targhee, recognize bighorn sheep as a species of special concern that requires special management attention on the Targhee.

New Information Mention the new information regarding the precarious status of bighorn sheep in the Teton Range which is summarized in the Strategic Plan.

Wildlife Goals Maintain viable populations of native wildlife species, as is required by the National Forest Management Act of 1976 (16 USC 1600) and USFS regulations for implementing this act (36 CFR 219).

Wildlife Section Include forestwide standards for protecting crucial bighorn sheep winter habitat from use by domestic sheep and cattle and include constraints on human activities on bighorn sheep winter range between December 1 and April 30.

Standards and Guidelines - Winter Recreation Include a forestwide standard that seasonally prohibits all human activities on crucial bighorn sheep between December 1 and April 30.

Production of Natural Resources. Ranse, Goal 2 Expand this goal to include eliminating potential disease transmission between domestic sheep and bighorn sheep populations on the Targhee.

Teton Ranse Subsection, Standards and Guidelines Add a specific section for wildlife which includes a standard to implement the Teton Range Bighorn Sheep Working Group's Strategic Plan.

699

RESPONSE: For the Revised Plan, the Targhee added the following management direction for bighorn sheep habitat: 1) phase out domestic sheep grazing on the west slope of the Tetons; 2) phase out winter sheep grazing in the Medicine Lodge Subsection; 3) work with the Intermountain Research Station to establish a credible research project on the effects of recreation on bighorn sheep on the west slope of the Tetons; 4) evaluate additional opportunities for adjusting domestic sheep grazing while the phase out program is in progress; 5) complete a fire management plan by the year 2007 for the entire west slope of the Tetons which would include opportunities for improving bighorn sheep habitat; 6) and allow no conversions from cattle allotments to domestic sheep allotments within bighorn sheep habitat. MO

Monitoring

COMMENTS: Chapter IV Implementation Schedule for the Jedediah Smith

WILDLIFE - BIGHORN SHEEP

Wilderness Area Revise monitoring item to: Develop (or continue) monitoring plan with the Wyoming Game and Fish Department and Grand Teton National Park.
699

RESPONSE: A monitoring item is added for bighorn sheep to the Revised Plan.
MO

COMMENTS: Chapter V Monitorins Item - Amount of authorized motorized use includingo uermitted same retrieval on closed roads and trails. to determine if a route or area is effectively open Under "Where Applies", here and on pages V-23 and V-25, "elk and deer habitat values" should be changed to "big game habitat values"

No Letter #

RESPONSE: Thank you. The wording is changed as you suggested. MO

Changes to DEIS

COMMENTS: Address bighorn sheep protection more strongly in the DEIS.
Chapter 2 - Alternative: Add Issue Indicators That Are The Same Or That Vary Slightly In All Alternatives Add bighorn sheep as a species of special concern, since sustaining the viability of the population should be management direction under all the alternatives proposed and analyzed in the DEIS.

Chapter 3 - Affected Environment Fire - Scale: Veaetative Community and Subsection, 2nd Paragraph Mention here that changes in vegetation due to alteration of the natural fire regime may have reduced the amount of winter habitat for bighorn sheep in the Teton Range sufficiently to adversely effect the population.

Wildlife Associated with Terrestrial Habitats Include Bighorn sheep in the Teton Range in the species discussed here and list them in Table 111-12 under either "General Forested and Non-forested Habitats" or "Special and Unique Habitats," with inclusion of a footnote that specifies the bighorn sheep population in the Teton Range. Discuss this population at the same level of detail for the other species and briefly summarize the precarious status of the population and the probable reasons for this; describe the environmental consequences of bighorn sheep in the Teton Range in this section.

699

RESPONSE: Due to requests for more information on bighorn sheep, the Targhee added a summary about bighorn sheep to the FEIS. However, bighorn sheep are not designated a Management Indicator Species. MO

COMMENTS: Elk and Deer Winter Range - Scale: Forestwide Refer to "Big Game Winter Range", use "elk and deer" only when these species are specifically referred to.

699

RESPONSE: The analysis in both the DEIS and the FEIS is specific to elk and deer winter, not all big game winter range. Therefore, making the change to big game winter range would not be correct. MO

COMMENTS: Livestock Grazing: The DEIS should have pointed out that historic and continuing use of bighorn sheep habitats in the Teton Range by domestic sheep may adversely impact the bighorn sheep population due to transmission of diseases and parasites and competition for forage.

699

RESPONSE: On the west slope of the Tetons, 45,700 acres of bighorn sheep habitat do not have domestic sheep grazing at this time. These 45,700 acres include all of the areas currently used by bighorn sheep. Domestic sheep are not grazed on the west slope during the seasons when "nose-to-nose" contact with bighorn sheep is likely to occur. Therefore, the potential for disease transfer is low, there is no forage competition and there is no displacement.
MO

COMMENTS: Chapter 4 - Environmental Consequences Fire Discuss in this section the environmental consequences of the effect on vegetation patterns and bighorn sheep habitat in the Teton Range due to the differences among the alternatives in the proposed use of prescribed fire. One goal of fire management in the Teton Range Subsection should be to restore bighorn sheep habitat, particularly winter habitat, that has been degraded due to alteration of the natural fire regime.

699

RESPONSE: There is virtually no difference between the alternatives in the proposed use of prescribed fire in the Teton Range. The Targhee added an objective to, by the year 2007, complete a fire management plan for the entire west slope of the Tetons which would include opportunities for improving bighorn sheep habitat. MO

COMMENTS: Elk and Deer Winter Range: Address the consequences for bighorn sheep winter range in the Teton Range.

699

RESPONSE: The Targhee added a brief summary of bighorn sheep information to the FEIS. MO

Designated Wilderness Prescription 1.1.6, 1.1.7, 1.1.8

COMMENTS: Bighorn sheep require more emphasis in the Designated Wilderness Management Prescriptions. Include bighorn sheep as one of the species in all opportunity classes and give them priority over all other wilderness uses.

FS-9, 389

Include a goal and expand upon the objective to maintain habitat for a viable bighorn sheep population; and allow no displacement of bighorn sheep.

FS-9, 389, 1247

Management Prescriptions for Designated Wilderness The 1985 Plan states, "Regulate recreation use in key bighorn sheep areas. Close key areas to camping" in the management direction for the Jedediah Smith Wilderness Area (1985 Plan, Page 415, item E, under Element C - Wildlife and Fish). This direction is not included in the Draft Plan Revision. In all likelihood, the potential conflict between recreational users and bighorn sheep has not

WILDLIFE - BIGHORN SHEEP

lessened and may have increased. In addition, if key bighorn sheep areas were to be closed to camping to counter impacts from recreationists, as directed in the 1985 Plan, these key areas should be closed to domestic sheep grazing, which has a greater potential for adversely affecting the size and viability of the bighorn sheep population than does recreational use.

1.1.6 Designated Wilderness - Opportunity Class I, Goals Add the following goal: Maintenance of a viable bighorn sheep population in the Jedediah Smith Wilderness Area is given highest priority and is dominant over other uses. The rationale is that the bighorn sheep population is a wilderness resource which the Targhee is mandated to maintain according to the Wilderness Act of 1964 (PL 88-577) (FSM 2323.31) and further, the Targhee is required to maintain viable populations of native vertebrate species according to the National Forest Management Act (16 USC 1600) and USFS regulation for implementing the Act (36 CFR 219).

1.1.7 Designated Wilderness - Opportunity Class II, Goals Add the following goals to your Plan: In the Jedediah Smith Wilderness Area, maintenance of a viable bighorn sheep population is given highest priority and is dominant over other uses. The rationale is as described for MP 1.1.6.

1.1.8 Designated Wilderness - Opportunity Class III, Goals, 1st Sentence This needs to be revised to state: The maintenance of the natural diversity of wildlife species is given high priority but does not dominate other uses except where measures are needed to recover Threatened and Endangered species and to sustain a viable population of bighorn sheep.

1.1.8 Designated Wilderness - Opportunity Class III, Goals In the Jedediah Smith Wilderness Area, maintenance of a viable bighorn sheep population is given highest priority and is dominant over other uses. This should be made a goal and the rationale is as described above for MP 1.1.6.

699

RESPONSE: All of the above comments refer to the wilderness management prescriptions used in the Jedediah Smith Wilderness in Alternative 3M. The following summarizes what the Forest has already done for bighorn sheep in the Jedediah Smith Wilderness, and new management direction contained in the Revised Plan for bighorn sheep in the Jedediah Smith Wilderness.

What the Forest has already done in the Jedediah Smith Wilderness: Forty-five thousand, seven hundred acres of bighorn sheep habitat do not have domestic sheep grazing at this time. These 45,700 acres include all of the areas currently used by bighorn sheep. Domestic sheep are not grazed in the Wilderness during the seasons when "nose-to-nose" contact with bighorn sheep is likely to occur (the bighorn sheep breeding season and the spring green up season). Therefore, the potential for disease transfer is low, there is no forage competition and there is no displacement.

New management direction contained in the Revised Plan for the Jedediah Smith Wilderness: Phase out domestic sheep grazing on the entire west slope of the Tetons, which includes all of the Jedediah Smith Wilderness; evaluate additional opportunities for adjusting domestic sheep grazing while the phase out program is in progress; and allow no conversions from cattle allotments to domestic sheep allotments within bighorn sheep habitat.

By the year 2007, complete a fire management plan for the entire west slope of the Tetons which would include opportunities for improving bighorn sheep habitat.

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An objective is added to the Revised Plan to work with the Intermountain Research Station to establish a credible research project on the effects of recreation on bighorn sheep on the west slope of the Tetons.

A goal for Prescription 1.1.6 is added to the Revised Plan and states: "The maintenance of the natural diversity of wildlife species is given the highest priority and is dominant over other uses. There is no great alteration of wildlife behavior or use of crucial habitat by wildlife as a result of human activities." (This goal includes bighorn sheep and all other wildlife species.)

An objective for Prescription 1.1.6 is added to the Revised Plan and states: "Coordinate with Grand Teton National Park and Wyoming Game and Fish Department in the management of the bighorn sheep population and habitat."

A goal for Prescription 1.1.7 is added to the Revised Plan and states: "The maintenance of the natural diversity of wildlife species is given high priority. There is no displacement of wildlife during critical periods (winter and birthing), and only temporary displacement during noncritical periods." (This goal includes bighorn sheep and all other wildlife species.)

An objective for Prescription 1.1.7 is added to the Revised Plan and states: "Coordinate with Grand Teton National Park and Wyoming Game and Fish Department in the management of the bighorn sheep population and habitat."

A goal for Prescription 1.1.8 is added to the Revised Plan and states: "The maintenance of the natural diversity of wildlife species is given high priority but does not dominate other uses except where measures are needed to recover threatened and endangered (T&E) species. Temporary displacement of non-T&E species may occur except on crucial ranges but there is no permanent displacement. Some habituation of species may be evident." (This goal includes bighorn sheep and all other wildlife species).

An objective for Prescription 1.1.8 is added to the Revised Plan and states: "Coordinate with Grand Teton National Park and Wyoming Game and Fish Department in the management of the bighorn sheep population and habitat."

This management direction provides habitat conditions necessary to sustain a viable population of bighorn sheep. There are many other factors affecting the viability of bighorn sheep in the Jedediah Smith Wilderness, such as genetic inbreeding and behavioral traits of using traditional limited wintering areas and not pioneering to other suitable areas. The Forest will continue to work with other agencies to solve these problems for this bighorn sheep population. MO

COMMENTS: Give bighorn sheep their own management prescription; show historical range.

FS-9, 389, 1247

RESPONSE: Suitable bighorn sheep habitat is provided by numerous management prescriptions; therefore they do not need their own management prescription.

Information on historical range is provided in Process Paper D. MO

COMMENTS: 1.1.6 Designated Wilderness - Opportunity Class I - Objective 3
Monitor lamb survival by surveying for yearlings (indicating lamb survival

after first winter). Objective 5 in the DFPR contradicts Page 111-47 which is described as an opportunity; Page 58 is stated more definitely.

1249

RESPONSE: Population management and monitoring are primarily responsibilities of the State Fish and Game departments. Therefore, the Forest did not incorporate details of population monitoring in the Revised Plan. The Forest will continue to cooperate with the State Fish and Game agencies in their management and monitoring of populations.

Thank you for showing us the discrepancy between Objective 5 and Page 111-47 of the Draft Plan. This discrepancy is corrected. MO

Elk and Deer Range Prescriptions

COMMENTS: 2.7(a-b) Elk and Deer Winter Range. Description Revise the title for this management prescription to "Big Game Winter Range", or "ungulate winter range" and bighorn sheep as well as elk, deer, moose, and antelope should be referred to in the description.

2.7(a-b) Elk and Deer Winter Range, Goal Change this to "Provide quality big game winter range." Throughout this management prescription, "big game" should be used instead of "elk and deer." Critical bighorn sheep winter range is in Teton, Darby, Fox, and Phillips Canyons, on Rendezvous Mountain, in the Bitch Creek drainage, and along the Targhee/Park divide north to Survey Peak.

699

RESPONSE: This prescription is specific to elk and deer winter ranges on the Forest. Moose winter almost everywhere on the Forest, from sagebrush desert to alpine forest and everything in between. Suitable winter habitat conditions for moose are provided in all management prescriptions. Bighorn sheep winter on high elevation ridges in the Jedediah Smith Wilderness, and therefore these areas are within the wilderness management prescriptions. Antelope winter ranges are almost entirely off the Targhee National Forest. MO

COMMENTS: 5.4(a,b,c,) Elk and Deer Summer Range Change the title to "Big Game Summer Range", especially since the term "big game" is used elsewhere throughout the management prescription.

699

RESPONSE: This management prescription is developed primarily for elk security while also allowing for other multiple uses. The habitat conditions provided by this prescription are suitable for a variety of other wildlife species, including other big game animals like moose and deer. MO

Site Specific

D-1 Copper Mountain

COMMENTS: Address bighorn sheep population in the DFPR and EIS; include an objective to sustain the viability of this population.

699

RESPONSE: Copper Mountain is in the Medicine Lodge Subsection. The Targhee added information about bighorn sheep in the Medicine Lodge Subsection to the FEIS. The Revised Plan also contains goals and objectives for bighorn sheep habitat. The goals and objectives in the Revised Plan provide suitable habitat to sustain a viable population of bighorn sheep. MO

D-2 Lionhead

COMMENTS: Address bighorn sheep population in the DFPR.

699

RESPONSE: Information is added about bighorn sheep in the Lionhead area to the FEIS. The Revised Plan also contains goals and objectives for bighorn sheep habitat. MO

D-5

COMMENTS: Do not allow domestic sheep and protect the bighorn sheep habitat in Fox Creek Divide, Game Creek, Moose Creek, Mail Cabin Creek, Fred's Mountain, Jedediah Smith Wilderness, and Teton Range.

293, 699, 1331, 1381, 1387

Do not allow domestic sheep on the Teton Range because of the potential threat of disease to the Teton Range population.

699, 1381

Develop a standard which eliminates the potential for overlap between domestic and bighorn sheep on the Teton Range.

699

Cooperate and coordinate with the USFS, the Grand Teton National Park and Wyoming Game and Fish to manage the problem of domestic sheep grazing on bighorn sheep population in the Teton Range.

699

Establish a 3 mile buffer zone in the Teton Range because it would eliminate all domestic sheep allotments from the entire Subsection (other areas may require anywhere from 3-20 mile buffers).

699

Regarding Chapter 3, Standards and Guidelines, Range The Draft Plan as originally distributed included #2 Guidelines which required elimination of domestic sheep grazing in the entire Teton Range Subsection. This was appropriate. However, in a memorandum of March 20, 1996, the Targhee deleted both of these guidelines as subsectionwide guidelines and transferred and weakened management direction for dealing with the issue of domestic sheep grazing in the Teton Range Subsection to only some of the specific MP's (1.1.6, 1.1.7, 1.1.8, 2.6.5, and 5.3.5), which cover about 73% of the Teton Range Subsection.

699

The Final Plan should include an aggressive strategy to eliminate domestic sheep use of these areas and should include the following strengthened standards--not just guidelines--as a Teton Range Subsection-wide standard. An alternative is to include the standard in each of the MP's that occur in the Teton Range Subsection and specify that the standard applies only to the Teton Range Subsection: By the end of 1998 eliminate sheep use and trailing on currently occupied, historic, and potential bighorn sheep habitat

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and within a buffer zone of these habitats which is at least 3 miles wide and, depending on local conditions and management options, up to 20 miles wide. (S)

699

Develop protocol for monitoring and evaluating the elimination of domestic sheep grazing on currently occupied, historic, and potential bighorn sheep habitats in the Teton Range Subsection. Should be added to section Monitoring and Evaluating Strategy for Range.

699

RESPONSE: The above comments deal with the concern about domestic sheep grazing in the Teton Range Subsection. The Forest has already implemented protection measures to reduce the transmission of disease between domestic sheep and bighorn sheep in the Teton Range Subsection. In addition, the Revised Plan provides some new management direction. The following summarizes what the Forest has already done, plus the new management direction in the Revised Plan.

What the Forest has already done: On the west slope of the Tetons, 45,700 acres of bighorn sheep habitat do not have domestic sheep grazing at this time. These 45,700 acres include all of the areas currently used by bighorn sheep. Domestic sheep are not grazed on the west slope during the seasons when "nose-to-nose" contact with bighorn sheep is likely to occur (the breeding season and the spring green up season). Therefore, the potential for disease transfer is very low, there is no forage competition and there is no displacement.

New management direction contained in the Forest Plan for the west slope of the Tetons is as follows: Phase out domestic sheep grazing on the entire west slope of the Tetons; evaluate additional opportunities for adjusting domestic sheep grazing while the phase out program is in progress; and allow no conversions from cattle allotments to domestic sheep allotments within bighorn sheep habitat. By the year 2007, complete a fire management plan for the entire west slope of the Tetons which would include opportunities for improving bighorn sheep habitat.

The Revised Plan has an added objective to work with the Intermountain Research Station to establish a credible research project on the effects of recreation on bighorn sheep on the west slope of the Tetons.

A goal for Prescription 1.1.6 in the Revised Plan states: "The maintenance of the natural diversity of wildlife species is given the highest priority and is dominant over other uses. There is no great alteration of wildlife behavior or use of crucial habitat by wildlife as a result of human activities." (This goal includes bighorn sheep and all other wildlife species.)

An objective for Prescription 1.1.6 in the Revised Plan states: "Coordinate with Grand Teton National Park and Wyoming Game and Fish Department in the management of the bighorn sheep population and habitat."

A goal for Prescription 1.1.7 in the Revised Plan states: "The maintenance of the natural diversity of wildlife species is given high priority. There is no displacement of wildlife during critical periods (winter and birthing), and only temporary displacement during noncritical periods." (This goal includes bighorn sheep and all other wildlife species.)

An objective for Prescription 1.1.7 in the Revised Plan states: "Coordinate with Grand Teton National Park and Wyoming Game and Fish Department in the management of the bighorn sheep population and habitat."

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A goal for Prescription 1.1.8 in the Revised Plan states: "The maintenance of the natural diversity of wildlife species is given high priority but does not dominate other uses except where measures are needed to recover threatened and endangered species. Temporary displacement of non-threatened and endangered species may occur except on crucial ranges but there is no permanent displacement. Some habituation of species may be evident." (This goal includes bighorn sheep and all other wildlife species).

An objective for Prescription 1.1.8 in the Revised Plan states: "Coordinate with Grand Teton National Park and Wyoming Game and Fish Department in the management of the bighorn sheep population and habitat."

This management direction provides habitat conditions necessary to sustain a viable population of bighorn sheep. There are many other factors affecting the viability of bighorn sheep on the west slope of the Tetons, such as genetic inbreeding and behavioral traits of using traditional limited wintering areas and not pioneering to other suitable areas. The Forest will continue to work with other agencies to solve these problems for this bighorn sheep population. MO

Teton Canyon

COMMENTS: Address historic bighorn sheep winter range recreation, and travel constraints in Fox Canyon, Darby Canyon, Phillips Canyon, Bitch Creek and Rendezvous Mountain.

389, 699, 1247

RESPONSE: There is no argument that former low elevation winter ranges are not being used for a variety of factors. However, the Forest knows of no analysis/evaluation about the feasibility of restoring use to these former low elevation winter ranges. Some of the winter ranges are probably permanently lost due to permanent developments. Bighorn sheep use traditional use areas, and often do not disperse into suitable unused habitat. Even to get bighorns to use new areas that are in proximity to each other usually requires transplanting them.

Most of the currently occupied bighorn sheep habitat on the west slope of the Tetons is within designated wilderness. There is no motorized access allowed in designated wilderness. Some historical bighorn sheep habitat occurs at lower elevations outside of the wilderness. There are seven principal watersheds on the west slope of the Tetons, and the Revised Plan reduces the OROMTRD in six of these watersheds. The OROMTRD in all watersheds is less than .5 miles per square mile with the Revised Plan. None of the concerns about possible or potential adverse effects of recreation activity, have substantive documentation to support the claim that recreation activity is adversely affecting bighorn sheep populations. The Revised Plan has an objective to work with the Intermountain Research Station to establish a credible research project on the effects of recreation on bighorn sheep on the west slope of the Tetons. Recreational activities are evaluated and coordinated between all of the agencies. This includes the current permitting of hunting by the Wyoming Game and Fish Department. MO

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Teton Range Population - Protect

COMMENTS: The population group of bighorn sheep on the Teton Range Subsection deserves attention because of its scientific value; it has not been augmented with animals from other bighorn sheep populations.

699

RESPONSE: The Teton Range bighorn sheep population is among a small number of bighorn sheep populations that are endemic and have not been augmented with animals from other bighorn sheep populations. If their genetics are unique from other bighorn populations, then there may be some scientific value.

However, genetic research on this population indicates the Teton Range bighorn sheep had the lowest heterozygosity of 12 herds in Wyoming which were analyzed for genetic variability. Additional genetic analysis is currently being done. This low genetic heterozygosity may be the result of or result in inbreeding problems within the population.

The scientific value of an endemic population appears to be diametrically opposed to the potential problems associated with inbreeding. At this time, the Forest does not know what is needed to resolve this dilemma.

Teton Range Population - Interaction with Mountain Goats

COMMENTS: Monitor the status of mountain goats in Teton Range.

699

RESPONSE: Monitoring animal populations is primarily the responsibility of the State Fish and Game departments. In the past, the Targhee cooperated with the State agencies on reporting mountain goats in the Teton Range, and we will continue to do this. Since this is not one of the Forest's primary responsibilities, it is not added as a monitoring item in the Revised Plan.
MO

COMMENTS: Synthesize and evaluate information on the interrelationships between bighorn sheep and mountain goats as they pertain to ecological conditions on the Teton Range. Based on this information, determine alternative actions and a preferred course of action for dealing with the possibility that mountain goats may be established in the Teton Range.

699

RESPONSE: Mountain goats are not native to the Teton Range and the adjacent Big Hole and Palisades mountains. Mountain goats were introduced into the Big Hole and Palisades areas of the Forest by the Idaho Department of Fish and Game. The introductions have been successful, and the mountain goats have been expanding from their original release sites. A few years ago, several mountain goats were reported in the Teton Range, but the Targhee knows of no recent sightings. Mountain goats use the same habitats, are more aggressive, and out compete bighorn sheep. State Fish and Game departments are responsible for managing wildlife populations. Therefore, any course of action for dealing with mountain goats on National Forest in the Teton Range would be the responsibility of the State agencies. MO

Teton Range Population - Monitor

COMMENTS: Increase monitoring of the sex and age structure and trend of the population; its seasonal distribution; and the availability, condition, and use of its currently occupied, historic and potential habitat. Determine the population's seasonal distribution, movements and causes of mortality by means of coordinated ground and aerial surveys and radio-telemetry monitoring.

699

RESPONSE: Monitoring animal populations is primarily the responsibility of the State Fish and Game departments. In the past, the Targhee cooperated with the State agencies on population monitoring in the Teton Range and will continue to do so. Since this is not one of the Forest's primary responsibilities, it is not added as a monitoring item in the Revised Plan. The Revised Plan does contain goals and objectives for managing bighorn sheep habitat. MO

WILDLIFE - CORRIDORS

General

COMMENTS: Secure and protect wildlife migration corridors to give wildlife including grizzly bear, moose, elk and riparian species a chance for survival. (CROSS REFERENCE: Grizzly Bear; Centennials)

F-G1(475), 150, 162, 174, 175, 189, 203, 206, 280, 325, 622, 690, 1348

Delineate wildlife corridors to link the Greater Yellowstone Ecosystem and other large ecosystems in central Idaho and northern Montana to prevent loss and fragmentation of habitat which is important to many species, especially grizzly bear. (CROSS REFERENCE: Grizzly Bear; Centennials)

175, 278, 280, 622, 1273b, 1348

Clarify how core areas and buffers will remain connected to the Park and to areas west along the Continental Divide.

1273b

Include the Targhee as an important linkage area in the Greater Yellowstone Ecosystem to ensure that Yellowstone is not an "island" geographically isolated from other areas in the Northern Rockies; make the Targhee a buffer in order to protect Grand Teton ecosystems.

167, 1273b, 1396

Develop standards and guidelines and objectives for wildlife corridor management areas; develop standards and guidelines for wildlife protection.

1273b

Reconsider references to "connectivity" because this "connectivity habitat block" management scenario is a popularized notion designed to establish millions of acres of wilderness and is not reputable.

1202

Provide corridors for secure travel within the Forest and for genetic interchange.

175, 1273b, 1348

RESPONSE: Our response to these comments will address each species mentioned, and a broad overview of wildlife corridors in general.

WILDLIFE - CORRIDORS

Grizzly Bear: The 1993 Grizzly Bear Recovery Plan identified the need to assess the potential of linkage zones (corridors) between the different grizzly bear recovery areas. At this time, little is known about the potential for linkage zones. For the Targhee, the linkage zone assessment for the Centennial Mountains has not been done. While the assessments are being done, the Recovery Plan suggests the following management considerations:

"Future land management activities within these areas may be critical to maintaining their utility as linkage zones. It is essential that existing options for carnivore movement between existing ecosystems be maintained while the evaluation of linkage zones is underway. Management strategies that limit human-induced mortality and address access management will facilitate the maintenance of the potential of these zones during the five-year evaluation period. On public lands, management prescriptions similar to big game summer range prescriptions that address access management would likely conserve any existing potential of these areas for linkage until completion of the 5-year evaluation process."

Connectivity between the Yellowstone Grizzly Bear Ecosystem and other grizzly ecosystems is not likely to be realized in the near future because of the distance to other ecosystems and the intervening human development and alteration of landscape. Therefore, the recovery plan recommends that one grizzly be placed into the ecosystem from an outside population every 10 years as an effort to maintain the genetic health of the population."

The Revised Plan incorporates these management considerations by reducing motorized access throughout the Centennial Mountains, and using management prescriptions which improve or maintain big game habitat.

Moose and Elk: These two big game species are "habitat generalists," which means they use a wide variety of habitats throughout the year. They migrate from summer ranges to winter ranges, crossing a wide variety of vegetation types from mature forest to sagebrush desert. They cross a variety of roads, from backcountry gravel roads to state and federal highways. Therefore specific corridor requirements are not needed for these species. The Revised Plan improves habitat conditions throughout the Forest for these species by: reducing the number of miles of open roads and open motorized trails; closing 93% of the forest to summer cross-country motorized travel; reducing timber harvesting from what has occurred in the past which results in more hiding cover in the future. These improved habitat conditions will continue to allow for the distribution and migration of these species throughout the Forest.

Riparian Species: The Aquatic Influence Zone Management Prescription (2.8.3) provides a high level of aquatic protection and maintains ecological functions and processes necessary for the restoration and maintenance of habitat for aquatic and riparian dependent organisms. This management prescription provides continuous suitable riparian habitat for the distribution and movement of riparian dependent species.

Wildlife Corridors in General: Generally corridors are used to maintain connectivity among formerly contiguous wildlands, not to connect naturally isolated units. On the Targhee, all of the ecological subsections are still contiguous with adjacent areas. Therefore, the intent of the Revised Plan is to maintain or improve the existing connectivity between contiguous ecological subsections by management actions such as: reducing

motorized access on roads and trails and cross-country; maintaining old growth and late successional forests distributed throughout the Forest; limiting the amount of nonstocked and seedling forest successional stages which can exist at any point in time; providing for snags and downed woody debris distributed throughout the Forest; maintaining nonforested habitats (such as sagebrush/grasslands) in properly functioning conditions; maintaining riparian habitats with the aquatic influence zone management prescription; maintaining or restoring fire dependent habitats by allowing prescribed fire; and disallowing timber harvest for one to three decades in areas of the forest where the previous lodgepole pine salvage program occurred, thereby allowing cover to increase as trees in previously harvested areas grow to sapling and pole successional stages. MO

Effects of Timber Harvest on Corridors

COMMENTS: Make roadless wildlife corridors free from logging.

212, 280, 325, 396, 398, 400, 405, 409, 411, 424, 441, 489, 519, 621, 650, 697, 1348, 1382

Show how timber harvest disrupts species ability to move between habitat blocks and how this affects populations.

228

RESPONSE: Different wildlife species respond differently to timber harvesting activities. Therefore, effects of timber harvesting on corridors needs to be species specific. For many wildlife species, corridors do not always need to be free from logging or other vegetation changes (due to natural disturbances such as fire). What is important is that the overall habitat conditions are suitable for specific wildlife species to reside in or move through. Corridors should have limited motorized access, and the amount and distribution of forest successional stages that provide suitable habitat for wildlife species. MO

Site Specific - D-3

Ashton - Flagg Ranch Road

COMMENTS: Ashton - Flagg Ranch Road may have a major effect on landscape connectivity for large and small animals.

643

RESPONSE: This is a gravel surface road which has been in existence for several decades. All big game animals easily cross the road. Grizzly bear research shows that grizzly bears have crossed the road. Small mammals are often seen running across the road, particularly at night. Bird species easily fly across the road. The Forest is unaware of this road creating any landscape connectivity problems. MO

Site Specific - D-5

Teton Pass

WILDLIFE - CORRIDORS

COMMENTS: Teton Pass road may have a major effect on landscape connectivity for large and small animals.

643

RESPONSE: This road is a State Highway. The Forest has no data about the effects of this highway on landscape connectivity for large and small animals, and the Forest does not have management authority for this highway. MO

Jackpine LOOP and Leigh Creek

COMMENTS: It is unlikely connectivity exists at levels greater than historical levels at lower elevations because of intensive timber harvest in the Jackpine Loop and Leigh Creek area; shrub slopes adjacent to houses, road and activities; and roads/trails in almost all of the drainages in the Tetons.

643

RESPONSE: We agree that connectivity levels are not greater than historical levels. The Revised Plan will improve connectivity in this area by reducing open road and open trail route densities along the entire west slope of the Tetons. Also, previously harvested areas will continue to improve in cover as trees grow to sapling and pole sizes. MO

WILDLIFE - ECOSYSTEM MANAGEMENT

support

This subcategory addresses Ecosystem Management issues from a wildlife perspective. For more information cross-reference the Ecosystem Management category.

COMMENTS: Pases 111-123 and 131, Objectives: Add the following as Objective 5 on Page 123 and Objective 7 on Page 131: "Maintain or enhance inherent habitat values associated with fish, wildlife and vegetation of the area." This will assist the Forest Service in obtaining the goals and desired future conditions proffered in ecosystem management objectives being implemented on the Forest.

1446

RESPONSE: This recommendation is for the following two Management Prescriptions: 5.1 - Timber Management and 5.2.2 - Visual Quality Maintenance. Forestwide goals, objectives, standards and guidelines apply to these management prescriptions, and these include ecosystem management goals, objectives and standards and guidelines. Also, the Aquatic Influence Zone Management Prescription (2.8.3) applies within these two management prescriptions. Therefore, the Forest did not use this recommendation. MO

Non Support

COMMENTS: Your Alternative 3M has some scary long-term surprises for biodiversity such as smaller patches, reduced seral stages, older age classes

and those impacts on wildlife such as the great gray owl that feed on gophers in clearcuts.

413

RESPONSE: The limits on patch sizes for vegetation treatments is based on the guidelines developed for specific wildlife species based on current knowledge. Patch size limitations are purposefully made "guidelines" to accommodate future analysis which will occur when specific projects are proposed. Any deviation from the guidelines must be fully justified and documented.

The amount of future seral stages and older age classes is based on the standards and guidelines developed for specific wildlife species based on current knowledge. Future analysis will occur when specific projects are proposed. **Any** deviation from a standard will require a Forest Plan amendment. **Any** deviation from a guideline must be fully justified and documented.

We agree that great gray owls feed on gophers in clearcuts. However, they are also present in forested areas which have no clearcuts. MO

Toxicants

COMMENTS: Using toxicants to kill wildlife contradicts ecosystem approach of land management. Restrict the use of toxicants (including M-44s).

389

RESPONSE: M-44s and other toxicants to kill wildlife are not allowed on the Targhee. MO

Monitoring

COMMENTS: Move the biodiversity item (DFPR V-13) concerning biodiversity assessment to Priority Group 1 with a time line included in the Implementation Schedule of Chapter IV. **Also** provide additional descriptions of components, methodologies, and where and when monitoring will occur.

643

RESPONSE: Many monitoring items in Chapter V of the Revised Plan are components of biodiversity. The monitoring items identified as priority 1 will have the greatest effect on maintaining or improving biodiversity on the Forest. The above biodiversity monitoring item deals more with mathematical modeling and theory and therefore is not given a priority 1 rating. MO

Use Better Science

COMMENTS: Recommend ecosystem management either be fully disclosed and justified by scientific evidence or delete it from the Plan until sufficient information is provided for wildlife needs.

766

RESPONSE: It is impossible to fully disclose everything about ecosystem management because not everything is known about ecosystem management. However, ecosystem management is Forest Service Policy, as quoted from Chief

WILDLIFE " ECOSYSTEM MANAGEMENT

F. Dale Robertson (1992): "The Forest Service is committed to using an ecological approach in the future management of the National Forests and Grasslands.....By ecosystem management, we mean an ecological approach will be used to achieve the multiple use management of our National Forests and Grasslands. It means that we must blend the needs of people and environmental values in such a way that the National Forest and Grasslands represent diverse, healthy, productive and sustainable ecosystems." MO

COMMENTS: The reference to "unscheduled" timber harvests to achieve ecosystem management goals is alarming. No habitat manipulations (such as logging in riparian areas or aspen stands, or sagebrush burning) under the rubric of ecosystem management should be carried out unless or until reliable data is available to predict results; acquire more information pertaining to historical landscape level patterns.

643

RESPONSE: The FEIS and Revised Plan specify how much unscheduled timber harvests will be permitted. Forestwide goals, objectives, standards and guidelines provide the management direction for future unscheduled timber harvests and any other habitat manipulations. Additional site-specific analysis will occur prior to implementing any timber harvesting or other habitat manipulations. MO

COMMENTS: The Revised Plan should provide detailed strategies for collecting and analyzing a broader range of species and communities because the Forest should complete biodiversity assessments at all hierarchical levels. The Forest mistakenly assumes that by attending to ungulates, TES species, and management indicators other species will be "captured" as well.

643

RESPONSE: The forestwide, subsection, and management prescription goals, objectives, standards and guidelines include management direction for many habitats not specifically covered by the MIS. The following are a few examples: sagebrush/grassland, dead and downed woody habitat, old growth and late forested successional stages, and plant species diversity.

Selection of MIS followed National Forest Management Act Regulations. MIS may or may not represent other species, but were never intended to represent all species.

Assessments being done for the Upper Columbia River Basin Assessment will provide additional information at larger landscape scales than covered by the analysis in the Targhee Forest Plan. MO

COMMENTS: Wildlife analysis work paper was flawed because it had no evaluation of habitat conditions for the vast majority of species endemic to TNF and creates problems for rare, sensitive and locally endemic species not listed under ESA but which might be adversely affected by management activities. Add some species management guides or other coarse filter approaches such as patch size thresholds for assessing likelihood of maintaining viable, well distributed populations of native species. (CROSS REFERENCE: Wildlife, Analysis Process)

1368

RESPONSE: Selection of MIS followed National Forest Management Act Regulations. All of the MIS are endemic species to the Targhee National Forest. MIS may or may not represent other species, but were never intended to represent all species.

The forestwide, subsection, and management prescription goals, objectives, standards and guidelines include management direction for many habitats not specifically covered by the MIS. The following are a few examples: sagebrush/grassland, dead and downed woody habitat, old growth and late forested successional stages, and plant species diversity.

Due to public comments, the FEIS contains additional information about bighorn sheep and neotropical migratory birds.

Assessments for the Upper Columbia River Basin Assessment will provide additional information at larger landscape scales than covered by the analysis in the Targhee Forest Plan. MO

Patch Size

COMMENTS: Note that animal species and populations evolved, like vegetation, as a result of very large vegetation patches.

228

RESPONSE: The limits on patch sizes for vegetation treatments is based on the guidelines developed for specific wildlife species based on current knowledge. Patch size limitations are purposefully made "guidelines" to accommodate future analysis which will occur when specific projects are proposed. Any deviation from the guidelines must be fully justified and documented. MO

COMMENTS: Patch size as an indicator is not sufficient to ensure representation of all habitat types in ages and distributions that approximate the range of natural variability and fails to address population declines of some species (Indicator for Key Issue 1 in **DEIS**).

643

RESPONSE: We agree that patch size is not the only indicator that should be evaluated. The FEIS is changed to clarify that patch size is not the only indicator that will be evaluated for future vegetation management projects. MO

COMMENTS: Specify the desired mosaic of age classes, including what constitutes an age class (dbh & age), canopy closure needs, desired combination, how desired condition is based on wildlife needs and current science and the desired patch size of each age class within the mosaic.

1369

RESPONSE: The desired mosaic of age classes is specified in different management prescriptions (such as 5.1.4 and 5.4), and also specific forestwide standards and guidelines, such as for the goshawk.

What constitutes an age class is defined in the vegetation database developed for the Revised Plan, and in the forestwide standards and guidelines for old growth and late successional forest.

Canopy closure needs are met by achieving the minimum stocking requirements established in the forestwide standards and guidelines.

Desired patch sizes are specified in different management prescriptions and also specific forestwide standards and guidelines.

The FEIS and Process Paper D provide a listing of the scientific literature used to develop the Revised Plan. MO

Predators of Insect Pests

COMMENTS: Management techniques intended to control fire (salvage, thinning, and logging) which removes dead wood may exacerbate insect problems by removing predators or habitat for predators (insect-eating birds and predatory or parasitic insect species). Sources: (Torgerson 1994; Bull 1994; Perry 1988). (CROSS REFERENCE: Timber; Insects and Disease)

643

RESPONSE: Forestwide standards and guidelines and management prescription standards and guidelines provide direction for maintaining snag habitat capability and downed and dead woody habitat for insect-eating birds and other predatory or parasitic insect species. MO

Sustainability

COMMENTS: Sustain habitat and conditions necessary for free movement of wildlife because it is vital to the survival of all.

173

RESPONSE: The Revised Plan reduces the amount of motorized access, reduces the amount of timber harvesting from what occurred in the past, allows hiding cover to increase in previously harvested areas, maintains and improves riparian habitats, maintains old growth and late successional forests well-distributed throughout the Forest, all of which maintains or improves wildlife habitat and allows free movement of wildlife. MO

COMMENTS: Concentrate on ensuring sustainable levels of wildlife, fish, recreation, and forest products.

174

RESPONSE: The DEIS and FEIS analysis documents that suitable habitat will sustain wildlife and fish populations. Recreation use is expected to continue to increase. The level of forest products to be harvested in the future is calculated as a long-term sustained yield. MO

Viable Populations

COMMENTS: Add information about the current status of wildlife and demonstrate how you currently, or in the future, maintain viable populations of native species; support a healthy wildlife population.

1369, 1459

WILDLIFE - ECOSYSTEM MANAGEMENT

RESPONSE: The FEIS provides additional information about populations of the MIS. The FEIS analysis displays a sustainable habitat across the Forest that maintains well-distributed, viable populations. **MO**

COMMENTS: Since wildlife viability is ensured by maintaining the RNV - but currently we cannot define RNV - explain how you will ensure viability of all native species.

1369

RESPONSE: The concept of the Range of Natural Variability (RNV) includes the fact that there was a range in the quantity, quality and distribution of habitats over time. Although the Targhee does not have the information (and may never have the information) to know the full RNV across the Forest, the Targhee has the ability to maintain all of the habitat components well distributed across the Forest, and to avoid going to extremes in any one direction. The FEIS provides additional information about populations of the MIS. The analysis in the FEIS displays a sustainable habitat across the Forest that maintains well-distributed viable populations. **MO**

COMMENTS: Population objectives for wildlife for the respective states should become forestwide goals.

389

RESPONSE: The Revised Plan has a goal which states: "Provide habitat to support the wildlife and hunting goals of the States of Idaho and Wyoming." The Forest Service has the primary responsibility to provide suitable habitat conditions for wildlife species. The States have the primary responsibility to manage wildlife populations. The goal as written in the Revised Plan accurately states the Forest's responsibilities. **MO**

WILDLIFE - GAME RETRIEVAL

All substantive comments received on this issue receive the same response, so the comments are lumped together.

COMMENTS: Support proposal to allow hunters to retrieve their game using a motorized vehicle. Allow hunters to retrieve game at any time, any season, to use any existing roads and not have to wait for a ranger or leave guns behind. Allow motorized game retrieval between the hours on noon - 5:00 p.m.

272, 646, 1202, 1239, 1247

Oppose motorized game retrieval for reasons of economics, fairness and access. The Forest defeats the purpose and success of closures and restrictions when it allows motorized game retrieval in areas where roads are closed and cross-country travel is prohibited the rest of the year. Motorized game retrieval encourages the creation of non system roads and off-road vehicles in roadless areas. It is neither reasonable to permit individual access behind closures that effectively restrict the general public, nor is it reasonable to distribute keys to everyone.

F-H(8), F-K(4), FS-4, FS-5, FS-9, FS-10, 143, 153, 157, 167, 170, 174, 178, 181, 209, 215, 226, 250, 252, 274, 278, 280, 293, 314, 356, 376, 377, 379, 389, 392, 396, 400, 438, 441, 444, 491, 621, 622, 632, 634, 637, 643, 644, 651, 652, 655, 656, 658, 666, 667, 669, 680, 690, 695,

WILDLIFE - GAME RETRIEVAL

719, 731, 766, 1194, 1243, 1247, 1273b, 1275, 1333, 1365, 1381, 1387, 1388, 1392, 1393, 1395, 1401, 1446

Encountering motorized vehicles off-road destroys the hunting experience and creates conflicts with those hunters who prefer the "old fashioned way" eighty-five percent of the 3,300 Idaho elk and deer hunters surveyed agree that off-road vehicles are the main factor affecting hunting quality (McLaughlin 1989). (CROSS REFERENCE: Wildlife, Elk; Hunting)

FS-9, FS-10, 143, 179, 215, 356, 392, 396, 645a, 669, 690, 731, 766, 333, 1387, 1393

Object to motorized game retrieval because of the difficulty imposed on the Forest Service and Idaho Fish and Game personnel to enforce, administer, monitor and fund the program; causes public relations problems.

FS-9, FS-10, 143, 167, 174, 176, 280, 376, 392, 438, 444, 622, 634, 637, 645a, 669, 680, 690, 695, 719, 731, 766, 1312, 1333, 1337, 1387, 1393, 1395, 1446

Object to motorized game retrieval because of impacts to big game, elk security and to habitat including winter range; prohibit motorized game retrieval in Management Prescriptions 2.7(a-b) and 5.4(a-c).

170, 215, 280, 389, 444, 643, 645a, 658, 669, 690, 695, 731, 1247, 1273b, 1333, 1337, 1365, 1393, 1427, 1446

Explain if there is any way to track unauthorized use, how elk effectiveness lost by game retrieval will be monitored and what monitoring will indicate.

1273b

Oppose this issue because it causes undesirable impacts to the resource (especially in or near riparian areas) such as damaging vegetation, **soils** and water through erosion and litter.

FS-4, 293, 1395

Game retrieval is a significant variable in predicting elk vulnerability and this provision is not included in the study that formed the foundation of the elk vulnerability model.

643, 766

Game retrieval was not developed by the interagency/tribal elk work group during the past 4 years which violates the Targhee National Forest agreement that analysis and proposals for elk habitat management would be jointly developed.

766

The Plan may need to be amended because game retrieval is included in it.

FS-5

If game retrieval is allowed, it is imperative to allow for an equivalent amount of road closure in areas not open to retrieval to keep the OROMTRD/TWARD within management Standards; authorized use should be put into a formula for use on "temporarily" open roads.

1273b, 1361

Try motorized game retrieval on a trial basis, possibly for 2 years, and monitor damage to the resource, vegetation loss from new routes and the effect on elk vulnerability and security; discontinue motorized game retrieval if negative impacts are discovered.

FS-3, FS-5, FS-9, 643, 766, 1312

WILDLIFE " GAME RETRIEVAL.

If game retrieval is allowed, reduce the amount of open area, restrict it to designated routes, and do not allow hill climbing over 40-50% slopes.

FS-3, 644, 645a

Require hunters to get advance passes with retrieval rules before hunting season.

FS-3

RESPONSE: The Final Revised Plan no longer includes the game retrieval provision. Game retrieval was dropped after considering the above comments and for reasons such as difficulties in enforcement, administration and monitoring; potential decrease in elk security; the appearance of special treatment for hunters with All Terrain Vehicles; and potential damage to resources such as soil, water and fisheries. CC

WILDLIFE " GOSHAWK

General

COMMENTS: Plan properly reflects the needs of the big four ESA species as well as the more sensitive, non-listed species: cutthroat trout and goshawks.

314

RESPONSE: Thank you for your support. DD

COMMENTS: Provide greater habitat protection for northern goshawks.

697

RESPONSE: The Revision provides adequate protection for this species. If new information gathered through monitoring or research suggests greater protection is necessary, a change in management will be initiated. Monitoring and research will continue to assess this changed management. DD

COMMENTS: The Forest has got to pull its weight and not become a sanctuary for grizzlies and goshawks. (CROSS REFERENCE: Grizzly Bear)

1202

RESPONSE: The Revision provides for sustainable ecosystems and a reasonable level of use while protecting threatened, endangered, and sensitive species. DD

Improve Analysis

COMMENTS: Include goshawk as a key issue since Standard and Guidelines and change in patch size are a major factor in the significant change from the historic range of variability.

228

RESPONSE: There were over 70 issues and concerns identified during the planning process. These were grouped into seven key issues to simplify analysis. Generally, concerns over goshawk habitat, patterns (patch size is a measure of pattern), and historic range of variability are addressed in Key

Issue 1: Sustainability, Fire and Natural Disturbances and Key Issue 7: Timber Management. In addition, goshawks were selected as a management indicator species during development of the Revision, and Forestwide standards and guidelines for all goshawk territories are included in the Revised Plan. DD

COMMENTS: Consider neighboring goshawk populations in Yellowstone National Park and discuss effects of massive fires in 1988 on goshawks and their nest sites.

275

RESPONSE: During this analysis, the Forest contacted all adjacent Parks and National Forests to see if they had territories adjacent to the Targhee. These are documented in Process Paper D. The FEIS discusses territories on adjacent lands. Personal communication with Yellowstone National Park biologists indicated that they are not monitoring goshawks and no reports or accounts have been published. There are no published accounts of effects of the 1988 fires on goshawks and their nests. This information is not essential for analysis of effects nor to a reasoned choice among the alternatives. Our intent is to maintain goshawk territories on the Targhee to allow interchange by goshawks with habitat on adjacent lands. RR/MO

COMMENTS: Explain why you incorporated only a few specifics from the SW Guidelines and not others. It appears the Forest has been arbitrary, opportunistic and without scientific merit.

643, 1369, 1370

RESPONSE: We incorporated those portions of the SW Guidelines that are relevant to habitat conditions on the Targhee. Some portions were derived from research conducted on the Forest or in areas with similar ecosystems. DD

COMMENTS: Discuss current status of goshawks on the Forest. Disclose the number of historic goshawk territories still occupied and their nesting status and reproductive success; discuss how proposed standards and guidelines will address goshawk trends and define the various age classes and habitat types the Forest plans to maintain.

1369

RESPONSE: Goshawk habitat requirements and productivity are discussed in Chapter III of the FEIS. The effects of implementing the standards and guidelines are discussed in Chapter IV of the FEIS. DD

COMMENTS: Cite scientific basis for the assumption that goshawk habitat will remain at existing levels with the implementation of guidelines. Guidelines are not enforceable, there is no evidence they are adequate, and current population numbers are unknown; disclose if current goshawk population has been severely reduced by harvest activities, in that populations may only be marginally viable or remain viable with recruitment from other habitats.

1369

RESPONSE: The literature and analysis used in developing the forestwide goshawk standards and guidelines are presented in Process Paper D. Some of the goshawk management direction are standards, and some are guidelines.

Guidelines are preferred or advisable courses of action that are generally expected to be carried out. Any deviation in guidelines must be documented. Guidelines allow some flexibility to respond to changing site conditions or changed management circumstances. We agree that total goshawk population numbers are unknown, and we would add that they will never be known. What we need to know over time is the trend in goshawk populations. In a recent review of northern goshawk and forest management, the Wildlife Society stated there was no evidence to indicate that northern goshawk populations are declining, threatened or endangered anywhere within its range, and there was no evidence of a long-term decline in goshawk breeding populations. The management direction in the Revised Plan is to maintain suitable habitat conditions in all documented historic territories, existing territories, and any new territories found in the future. MO

COMMENTS: Use science acquired from the Targhee or similar lodgepole forests when making decisions on goshawks.

1267

RESPONSE: All available scientific information from the Targhee and similar ecosystems were considered. The Forest will continue to monitor and sponsor research on the effects of forest management activities on goshawks and make adjustments, if necessary. DD

COMMENTS: Conduct goshawk surveys for any activity which may disturb species to better protect goshawks and their nesting areas.

389

RESPONSE: This is standard procedure. The potential effects to goshawks, and other sensitive species present in the area, are then documented in a Biological Evaluation. DD

Improve Monitorins for Goshawk

COMMENTS: Make goshawk, bald eagle, and peregrine falcon a high priority for monitoring.

58

RESPONSE: These species are a high priority for monitoring in the Revision. DD

COMMENTS: Include data and observations on nest abandonment during timber harvest activities and return rate to next area after timber harvest. Monitor productivity of goshawks and productivity variations between managed and unmanaged lands.

No Letter #

RESPONSE: This type of information is lacking on the Forest. We currently sponsor research aimed at documenting this and other relationships to timber harvest activities. DD

Specifically Define Goshawk Habitat

COMMENTS: Specifically identify (using appropriate data on cover type, canopy cover, elevation and aspect from unknown nesting areas [AGNH]) what portion of non-suitable forest land contains suitable nesting habitat for goshawk and calculate a potential population based on these calculations.

1370

RESPONSE: Goshawks are a habitat generalist; they occupy most forest types in North America; and they use a variety of stand and landscape conditions. Analysis as you suggest would simply indicate that most of the forested landscapes on the Forest contain suitable nesting habitat. A calculation of potential population does not provide any useful information for management. What we need to know over time is the trend in goshawk populations. In a recent review of northern goshawk and forest management, the Wildlife Society stated there was no evidence to indicate that northern goshawk populations are declining, threatened or endangered anywhere within its range, and there was no evidence of a long-term decline in goshawk breeding populations. The management direction in the Revised Plan is to maintain suitable habitat conditions in all documented historic territories, existing territories, and any new territories found in the future. MO

COMMENTS: Discuss long-term changes to goshawk habitat if dead lodgepole pine stands are not managed. Short-term habitat may be okay, but long-term habitat changes will continue to occur naturally.

283

RESPONSE: We acknowledge that goshawk use within the lodgepole pine ecosystem varies over time as the character of the stands change in response to tree age, insect attack, and fire. See Chapter IV of the FEIS for a discussion of the effects of implementing various alternatives, including the selected alternative. DD

COMMENTS: Include canopy closure criteria for FA categories.

1369

RESPONSE: The foraging area (FA) is about 5,400 acres in size, and will contain a variety of forested successional stages with a wide range of canopy closures. The mature to old growth component will consist of natural stands within the range or natural stocking levels and associated canopy closure. The natural stocking levels and associated canopy closure is suitable for the goshawk within the foraging area. MO

COMMENTS: Identify and define existing goshawk territories clearly and unequivocally so public can monitor forest management.

1369

RESPONSE: Site-specific information for threatened, endangered and sensitive species is considered sensitive information and is not made available to the general public. MO

Address the Impacts of Habitat Constraints on Other Resources

COMMENTS: Re-examine the prominence you have given to habitat constraints. All alternatives include an extensive network of goshawk habitat that constrains other activities; analyze the effects of restraints on social and economic conditions.

393, 432, 1389

RESPONSE: The effects of managing for a specified amount of goshawk habitat is described in Chapter IV of the FEIS. The goshawk standards and guidelines in Chapter 111-Part 1 of the Revision will be monitored over time and adjusted as necessary. DD

COMMENTS: Re-evaluate habitat constraints related to sensitive species. Only four Idaho species remain on the ESA Candidate List and the goshawk is not one of them; this species has never been listed as a threatened and endangered species. Goshawks are doing quite well on the Targhee National Forest.

432, 1339, 1389

RESPONSE: The goshawk standards and guidelines in Chapter 111-Part 1 of the Revision will be monitored over time and adjusted as necessary. The intent of protecting sensitive species is to prevent the need for Federal listing. DD

COMMENTS: Reconsider objective to manage for all active historic nesting territories. Standards and guidelines to meet this objective restrict timber management and there is no evidence that conditions described in the standards and guidelines existed historically or that these conditions are necessary to maintain this sensitive species.

393

RESPONSE: This objective reflects agency policy for goshawk management. The goshawk standards and guidelines in Chapter 111-Part 1 of the Revision will be monitored over time and adjusted as necessary. DD

Protect New Goshawk Territories

COMMENTS: Discuss how new territories will be protected under the proposed standards and guidelines, specifically how the forest will complete adequate surveys within proposed Timber Sale Areas and how prime nesting habitat will be protected even if no surveys can be completed.

643

RESPONSE: The Revision sets management direction to protect all active and historic nesting territories. The details of how this will be implemented on the ground will be determined at a later date. DD

COMMENTS: Manage current and new territories using SW Guidelines until at least 50-60 consistently used territories have been identified.

643

WILDLIFE - GOSHAWK

RESPONSE: The selected method is to protect all active and historic nesting habitats. The goshawk standards and guidelines in Chapter 111-Part 1 of the Revision will be monitored over time and adjusted as necessary. DD

COMMENTS: Incorporate contingency plans which allow for modification of a sale area if a raptor nest is located during or after harvest.

No Letter #

RESPONSE: We will follow our policy and regulations pertaining to modifying timber sale contracts and other types of contracts when necessary to protect threatened, endangered, or sensitive species. MO

COMMENTS: Consider innovative timber sale layout to provide better protection for goshawk.

No Letter #

RESPONSE: We are doing **so**. We are also considering ways to adjust the timing of timber sale activities to reduce disturbance to nesting goshawks. DD

COMMENTS: Apply standards and guidelines to all new territories that are found during the next planning period. Please state this clearly.

1370

RESPONSE: The Revision states "manage for all active and historic nesting territories". DD

COMMENTS: Re-examine plans to limit goshawk management to identified historic and existing nests. This represents only 16% of the Forest. Explain rationale for why the Forest only needs to manage 16% of the Forest to maintain this species.

1369

RESPONSE: It is Region 4 policy to conduct goshawk surveys prior to timber harvesting activities. Therefore, as new territories are found, they will be added to the area of the Forest where goshawk standards and guidelines apply. In addition, all of the forested acres within the following management prescriptions will contribute to suitable habitat for goshawks: 1.1.6, 1.1.7, 1.1.8, 1.2, 1.3, 2.2, 2.3, 2.4, 2.5, 2.6.1a, 2.6.2, 2.6.5, 2.8.3, 3.1.1, 3.1.2, 3.2. MO

Reserve Patches of Mature Trees

COMMENTS: Reserve remaining large patches of mature trees (200-600 acres) in post harvest areas with more than 50% mature trees already harvested. Locate these reserves in Island Park, Jackpine Loop and west side of Big Hole Mountains.

643

RESPONSE: The Revision calls for "reserving" at least 20% of the forested acres within each principle watershed as old growth and late seral stages. Patch size should be at least 300 acres. DD

COMMENTS: Drop the following Territories listed in Table 9.1 from managed territories: D03-02, D03-03, D03-04, D03-05, D04-03, D05-01, D05-02, D05-05, 005-06, D05-08. Instead create reserves in the Island Park, Jackpine Loop and Big Hole Mountains in the remaining larger, unfragmented, high canopy cover, intact stands of timber.

1370

RESPONSE: These are historic territories that once supported goshawks, and we desire to return them to habitat conditions to again support goshawks. If the reserve areas that you request contain goshawk territories, then the goshawk standards and guidelines in the Revised Plan will apply to them to maintain suitable goshawk habitat. MO

COMMENTS: Incorporate reserves across unsurveyed areas of the forest where no nests have been identified, but where new timber harvests have been proposed. Base these reserves on SW guidelines in potential habitat in lower elevation mature forests in a systematic way across the landscape.

643

RESPONSE: It is Region 4 policy to conduct goshawk surveys prior to timber harvesting activities. Therefore, as new territories are found, they will be added to the area of the Forest where goshawk standards and guidelines apply. In addition, all of the forested acres within the following management prescriptions will contribute to suitable habitat for goshawks: 1.1.6, 1.1.7, 1.1.8, 1.2, 1.3, 2.2, 2.3, 2.4, 2.5, 2.6.1a, 2.6.2, 2.6.5, 2.8.3, 3.1.1, 3.1.2, 3.2. MO

COMMENTS: Leave large secure patches of good nesting habitat at known sites and plan for such patches throughout the forest to ensure long-term viability and reduce potential nest abandonment.

1370

RESPONSE: The goshawk standards and guidelines in Chapter 111-Part 1 of the Revision adequately protect known nesting habitat. Other management direction involving non-timber emphasis areas; guidelines for snags, dead and down trees; livestock grazing; and vegetation in the Revised Plan allow for suitable habitat conditions for goshawk across the Forest. DD

COMMENTS: Various studies (Patla & Trost 1996) have shown that the goshawk is highly dependent upon older forest stands with high basal area. Logging will impact goshawks through loss of nesting and foraging habitat, and increase habitat fragmentation, which will cause the goshawk to quit breeding in areas. The DEIS failed to analyze cumulative effects of logging of mature forests within foraging areas of goshawks.

1273b

RESPONSE: We are sponsoring research on the Forest by Patla and Trost to determine the effects (positive and negative) of logging within nesting and foraging habitat. This and similar research can provide the basis for monitoring and amending, if necessary, Forestwide goshawk standards and guidelines in the future. DD

Manage for Older Age Class Stands

COMMENTS: Manage for older age class stands if you are sincere about conserving goshawk habitat. Data indicate goshawk select for taller, denser stands of mature trees set farther back from the forest's edge. The goshawk is a "mature" forest "specialist" in terms of nesting habitat preference.

643

RESPONSE: The Revised Plan requires that 200 acres of mature to old growth forest be maintained for goshawk nesting areas in every identified goshawk territory. Around these 200 acres, there is to be an additional 400 acre post-fledging family area managed for specific habitat conditions suitable for the goshawk. Around the post-fledging family area, there is a 5,400 acre foraging area managed for specific habitat conditions suitable for the goshawk. This management direction will maintain suitable goshawk habitat.
MO

COMMENTS: Consider a moratorium on cutting any old-growth trees greater than 30" dbh within PFAs. These trees provide lookout/communication perches and replacement may take generations.

1370

RESPONSE: The goshawk standards and guidelines require that 40 percent of the PFA be maintained in mature to old growth status. This 40 percent is adequate to provide lookout/communication perches. MO

COMMENTS: Strengthen goshawk guidelines so that goshawk habitat is protected in such a way to maintain well functioning mature forest ecosystems. Data collected and analyzed on the Forest make it appear that certain age classes are over represented and the Forest lacks biodiversity. Extending rotation ages and making much smaller openings is the only way timber management could possibly increase diversity in a way that would benefit native forest species and keep ecosystem processes intact.

1370

RESPONSE: This is a broad comment that does not define biodiversity, rotation ages, and opening sizes; therefore, it is difficult to know exactly what is being suggested. The natural biodiversity of the lodgepole pine forests includes large natural disturbances (large patch sizes) from a combination of insects and fires. These large natural disturbances in lodgepole pine also resulted in large fluctuations in the abundance and distribution of some species over time. Aspen has significantly declined in many portions of the Forest because conifers are replacing aspen. If aspen is an important component of biodiversity, then there needs to be more frequent fire and/or shorter rotation ages. The natural biodiversity of Douglas-fir forests may have included more frequent understory fires and smaller openings. At the present time, 79 percent of the forested acres are classified as being mature to old growth. There are more mature and old growth acres than existed 100 years ago. The Revised Plan proposes to harvest only 2.5 percent of the existing mature to old growth acres during the next 10 years. Timber harvesting will meet all of the standards and guidelines in the Revised Plan, including standards and guidelines for goshawks. Mature to old growth forests

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are going to exist in all watersheds under the Revised Plan. This will provide suitable goshawk habitat. MO

Increase Nest Areas

COMMENTS: Manage for nest areas of 180 acres minimum as well as equally sized replacement nest areas, since the goshawk nests on the Forest are found within large contiguous stands of maturring forests, not isolated small patches of trees. Consider established goshawk territories with highest occupancy rates as nest clusters, not just a single nest.

643

RESPONSE: The Forestwide goshawk standards and guidelines require maintaining nest areas that are at least 200 acres in size in all goshawk territories. These 200 acres include suitable alternate nest sites. MO

COMMENTS: Strengthen guideline language for managing nesting areas as contiguous areas. Studies show traditional goshawk nest areas contain a number of alternate host trees within a large patch of mature forest.

1370

Conduct studies on whether 30-acre nest area is adequate.

No Letter #

RESPONSE: We are sponsoring research on the Forest by Patla and Trost to determine the effects (positive and negative) of logging within nesting and foraging habitat. This and similar research can provide the basis for monitoring and amending, if necessary, Forestwide goshawk standards and guidelines in the future. DD

COMMENTS: Provide a 300-foot buffer as a minimum along first and second order streams to allow for adequate goshawk foraging and nesting opportunities in riparian areas.

1370

RESPONSE: The Forestwide goshawk standards and guidelines, combined with the aquatic influence zone prescription, should provide adequate foraging and nesting opportunities for goshawks in riparian areas. DD

Reduce Nest Areas

COMMENTS: Consider reducing the size of nest acres from 30 to 20 acres. Studies indicate 20 acres is sufficient.

283

RESPONSE: Goshawk monitoring on the Forest shows that highest occupancy rates occur in large mature to late successional forest stands. Therefore, the goshawk standards and guidelines require at least a 200 acre nest area to be maintained in goshawk territories. MO

COMMENTS: Reduce buffer size to 30 acres around nest sites until evidence indicates goshawk habitat is being destroyed in Idaho.

275

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RESPONSE: We have used the results of goshawk monitoring on the Forest, plus a review of scientific literature on the goshawk, to develop goshawk standards and guidelines which will maintain suitable goshawk habitat. A 30 acre buffer around nest sites is inadequate. MO

Increase Maximum Created Openings

COMMENTS: Discuss the effects of limiting patch size to less than 40 acres to meet goshawk needs on other planned resources activities like prescribed fire.

283

RESPONSE: The 40 acre limit only applies to prescribed fire within goshawk territories. If prescribed fire in a goshawk territory is a stand replacing fire which creates an opening, it should be less than 40 acres in size. If the prescribed fire in a goshawk territory is an understory burn that does not create an opening, it can be larger. MO

COMMENTS: Consider patches larger than 1/2 to 40 acres for standard. Proposed standard flies in the face of historic patterns. Goshawk guidelines should not be more important than overall ecosystem condition.

283, 413

RESPONSE: We acknowledge that in some forest types, especially lodgepole pine forests, historic natural disturbances resulted in larger patch sizes than 40 acres. We do not know of any scientific documentation of how goshawk populations responded to those large natural disturbances. Since the goshawk is currently listed as a sensitive species, we have selected smaller patch sizes to maintain suitable goshawk habitat until more credible information is obtained. MO

Reduce Maximum Created Opening Acres

COMMENTS: Reduce 40-acre openings to 1-2 acres in size. 40-acre PFAs decrease prey abundance and allow for open country raptors to move closer to nest sites.

1370

RESPONSE: There is currently a lot of debate about what size of created openings are acceptable for maintaining suitable goshawk habitat. We know that in some forest types, especially lodgepole pine forests, historic natural disturbances resulted in larger patch sizes than 40 acres. We do not know of any scientific documentation of how goshawk populations responded to those large natural disturbances. There is scientific literature which documents goshawks using forested landscapes with larger created openings than just 1-2 acres in size. For the Revised Plan, we selected a guideline that creates openings less than or equal to 40 acres. Monitoring and new research may help us refine this management direction in the future. MO

Increase Size Class Distribution Percentage

COMMENTS: Increase PFA and FA forested acres to 60-80% mature/overmature cover with 80% considered highest quality for goshawk breeding pairs. SW

guidelines call for 60% mature with specified canopy cover minimums. Minimum standard of 40% is below the minimum needed to maintain goshawk breeding pairs.

643

RESPONSE: The Southwest Guidelines call for 20% mature and 20% old forest, for a total of 40%. We have reviewed the ages of different forest types on the Forest, and we have looked at some historical vegetation patterns in several watersheds. Eased on this analysis the Revised Plan standards and guidelines provide suitable goshawk habitat. MO

COMMENTS: Cite reference to justify patch sizes in Table on Page 111-14. A 40-acre opening makes no sense and contradicts research that indicates canopy cover should range from 50-90% in the PFA. The PFA should remain unmanaged and undisturbed.

643, 1369

RESPONSE: Responses to comments on patch sizes are given in previous responses. Review of scientific literature does not suggest that the PFA needs to be undisturbed. Canopy cover in the mature to old growth portions of the PFA will be the natural levels that exist in mature and old growth forests, which should be what the goshawk has been using. MO

COMMENTS: Increase minimum mature cover to 60% for FAs and 70% for PFAs. The 40% minimum cover left in a post-harvest area would most often be of lower quality. The best nesting foraging habitat is usually harvested forest (stands with high basal area and canopy cover on moderate slopes.)

1370

RESPONSE: Review of scientific literature does not support the need to have 60% mature forest for FA's and 70% for PFA's. If we increased mature cover to 60% and 70% as you suggest, we would be striving to maintain older aged forests which, according to our data, have not existed naturally on the Targhee for the last 100+ years. Our data does not suggest that this is needed to maintain suitable goshawk habitat on the Forest. MO

Decrease Size Class Distribution Percentase

COMMENTS: Change goshawk constraint to the total of non-stocked seedling and saplings shall be less than 45% of the forested area; the area of mature/overmature shall be no more than 30%. SW guidelines do not indicate that goshawk are dependent upon non-stocked seedling and saplings for survival. If 30% or more of a forested area is always in a mature or overmature condition, the species should be provided for. This will also give allocation model more flexibility.

413

Consider no more than 45% of analysis area may be in a non-stocked seedling/sapling condition; at least 30% must be in a mature/old growth class.

767

RESPONSE: Our review of literature suggests that goshawks will use non-stocked, seedling and sapling areas for foraging habitat. The important

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management consideration over time is to maintain a constant supply of forest successional stages. Our analysis shows that the percent distribution of successional stages in the goshawk standards and guidelines will provide for the constant supply of successional stages for suitable goshawk habitat. MO

RESPONSE: Same as previous comment and response. MO

Increase FA Acres

COMMENTS: Consider increasing buffer zone patches to 3,000 to 10,000 acres over 20/30 years. Historically fires created patches this size and larger and the goshawk survived. Larger patches will reduce "cookie cutter" effect on the rest of the Forest.

413

RESPONSE: In the lodgepole pine forests, natural disturbances created larger patch sizes. We do not know of any scientific literature that documents how goshawk populations responded to these large disturbances. Until monitoring or research provides us with more information, we are using the best available information for the sizes of goshawk territories. MO

Reduce FA Acres

COMMENTS: Protect goshawks where they are known to be in trouble. Setting aside 6,000 acres per nest in Idaho cannot be justified until it is shown their population is declining here; consider negative effects of 6,000 acre buffer on biodiversity, food sources for goshawks when you eliminate small clearcuts that maximize biodiversity.

275

RESPONSE: Until monitoring or research provides us with more information, we are using what we consider is the best available information for the sizes of goshawk territories. MO

Address Rotation Ages

COMMENTS: Change suggested rotation ages in PFAs and FAs from 60 to 240 years to 140 years for lodgepole pine, and 240 years for Douglas-fir.

643

Consider minimum rotation ages within PFAs of 120 years for lodgepole pine and 180 years for Douglas-fir to insure adequate number of mature nesting and roosting trees.

1370

RESPONSE: Aspen is an important component of many goshawk territories. To maintain aspen forests so they are not replaced with conifers, rotation ages of 60 years are needed. Data from permanent forest inventory plots shows that lodgepole pine forests seldom reach 140 years of age on the Targhee, and most of the Douglas-fir forests are less than 240 years of age. The goshawk standards and guidelines are applicable to the forest conditions on the Targhee. MO

WILDLIFE - GOSHAWK

COMMENTS: Adopt forestwide rotation ages so that at least two thirds of the lower elevations forest (below 8000 feet) remains in a mature/old growth condition over time. This would be easier to manage than numerous individual nests and ensure viability of other species. Individual nests should be protected until such a system is well established.

1370

RESPONSE: It is Region 4 policy to conduct goshawk surveys prior to timber harvesting activities. Therefore, as new territories are found, they will be added to the area of the Forest where goshawk standards and guidelines apply. In addition, all of the forested acres within the following management prescriptions contribute to suitable habitat for goshawks: 1.1.6, 1.1.7, 1.1.8, 1.2, 1.3, 2.2, 2.3, 2.4, 2.5, 2.6.1a, 2.6.2, 2.6.5, 2.8.3, 3.1.1, 3.1.2, 3.2. Also, the total amount of timber harvesting proposed in the Revised Plan amounts to 2.5% of the total forested acres for the 1st decade; therefore, about 77% of the total forested acres will still be in mature to old growth age classes at the end of the 1st decade. MO

Address Management Activity/Management Season

COMMENTS: Prohibit management activities within the nest areas without a thorough review by a District biologist.

643

RESPONSE: Management activities in the 200 acre nest area will require site specific analysis and will include the involvement of appropriate professional Staff. MO

COMMENTS: Restrict thinning activities in PFAs and FAS unless objectives are clearly stated.

1370

RESPONSE: Thinning activities will be evaluated on a site specific basis, and must occur during the season allowed in the goshawk S&G's. MO

COMMENTS: Consider time of year of management activities, especially during nesting periods.

No Letter #

RESPONSE: The goshawk Standards and Guidelines state the time of year when management activities can occur. MO

COMMENTS: Define what you mean by a management season from October to February.

9

RESPONSE: This is the time of year when management activities, such as timber harvesting or thinning can occur. MO

COMMENTS: Consider no management season within goshawk areas and change Standards and Guidelines that allow "non-uniform" thinning. High canopy cover is one of the most important features of goshawk habitat, and there is no data

to indicate thinning or other types of management improve the quality of nest area habitat.

643

RESPONSE: Scientific literature shows that management activities can occur within goshawk territories. Management activities, including thinning, will require site-specific analysis and will involve appropriate professional staff. MO

Open Road Density Should Be Zero in PFAs

COMMENTS: Maintain open road density at zero, except for clearly defined situations, i.e., road existed prior to discovery of goshawk territory; allow no new roads in PFAs unless a thorough review is made by a biologist.

1370

Change prescription in DFPR Chapter 3 from: "Where possible, open road density should be zero in the nest areas and post-fledging family areas" to following wording: "Will be zero in the nest areas and post-fledging family areas."

1273b

Prohibit construction of new roads and obliterate roads that cause detrimental impacts to goshawks and other sensitive, threatened and endangered, and management indicator species.

1365

RESPONSE: There is no scientific literature documenting adverse effects of roads on goshawk populations. Active goshawk territories contain roads. The road guidelines for goshawks are based on this information. MO

Standards and Guidelines

COMMENTS: Explain why the number of goshawk territories and the management season are listed as standards in Table 9.4 and all other categories are defined as guidelines. All guidelines should be changed to standards for consistent management.

1370

RESPONSE: Guidelines are preferred or advisable courses of action that are generally expected to be carried out. Any deviation in guidelines must be documented. Guidelines allow some flexibility to respond to changing site conditions or changed management circumstances. MO

COMMENTS: Change goshawk open road density guidelines to standards.

695

RESPONSE: There is no scientific literature documenting adverse effects of roads on goshawk populations. Active goshawk territories contain roads. We developed the road guidelines for goshawks based on this information. Guidelines are preferred or advisable courses of action that are generally expected to be carried out. Any deviation in guidelines must be documented. Guidelines allow some flexibility to respond to changing site conditions or changed management circumstances. MO

WILDLIFE - GOSHAWK

COMMENTS: Apply guidelines to intact areas where mature forested stands have not yet been fragmented even if goshawk nests are not found. The intent is to prevent excessive habitat loss and fragmentation that occurred in the past in mature forests. This will not only protect goshawks but also most other forest dependent species.

1370

RESPONSE: The scientific literature shows that suitable goshawk habitat can be provided in managed forests when consideration is given to maintaining the necessary amounts of forest successional stages and other habitat conditions necessary for goshawks. The goshawk standards and guidelines in the Revised Plan will provide suitable habitat in all goshawk territories. MO

WILDLIFE - HABITAT

Protect Habitat

COMMENTS: Protect/preserve wildlife habitat; protecting wildlife and habitat will help the economy because many visitors come here for wildlife viewing or hunting. Protect wildlife from hunting and from machines and poachers. Protecting wildlife habitat will also protect wilderness and riparian areas or will provide a healthy ecosystem. Concerned about fragmentation of wildlife habitat and biological or migration corridors.

F-G2(2), 21, 37, 136, 157, 158, 165, 168, 173, 178, 180, 192, 195, 203, 206, 215, 226, **252**, 271, 280, 318, 325, 328, 360, 379, 438, 519, 527, 621, 631, 638, 640, 643, 650, 662, 667, 730, 1273b, 1328, 1383, 1393

RESPONSE: The Revised Plan places special emphasis on managing ecosystems in properly functioning condition, conserving biodiversity, and protecting threatened, endangered, and sensitive species and their habitats. Standards and guidelines provide the basis for accomplishing this direction. The Revised Plan provides for a reasonable level of resource use while sustaining healthy ecosystems. DD

COMMENTS: Make the Targhee a reserve for fish, wildlife, and plant species; restrict hunting, logging, roads, OHVs and/or snowmobiles to protect habitat and use controlled burning to improve habitat. Conduct adequate research and monitoring of current management activities to establish baseline information, then develop appropriate objectives, standards and guidelines. Proposed management activities must be fully discussed, monitored for effectiveness, based in sound science, and science must be adequately cited.

F-G-1(475), F-H(8), 179, 280, 328, 357, 396, 620, 640, 643, 651, 652, 665, 697, 1369, 1383, 1446

RESPONSE: The Revised Plan provides for a reasonable level of resource use while sustaining healthy ecosystems. It places special emphasis on increasing the amount of prescribed and natural fire allowed in managing ecosystems. It contains an extensive monitoring plan which allows management activities to be rapidly adjusted to achieve desired results. The Forest will continue to collaborate with research scientists to improve management of ecosystems. DD

WILDLIFE - HABITAT

COMMENTS: Support Idaho Department of Fish and Game's proposals for wildlife protection. Certain guidelines for wildlife security should be standards. Support ecosystem management to protect habitat. Security areas should be at least 250 acres, retained for no less than 10 years and distributed so they function as a network rather than isolated islands.

FS-9, 157, 168, 179, 201, 209, 280, 360, 659, 690, 766, 1195, 1365, 1388, 1392, 1401, 1446

RESPONSE: The Revised Plan places special emphasis on managing ecosystems in properly functioning condition, conserving biodiversity, and protecting threatened, endangered, and sensitive species and their habitats. It includes goals to reduce elk vulnerability and increase grizzly bear security. Direction also includes provision for big game security areas. Historic patch sizes and vegetation patterns are considered in all vegetation management activities to address the effects of fragmentation. The Forest added a section to the FEIS on neotropical birds. This section summarizes what is known about fragmentation in the Rocky Mountains. RR/DD/MO.

Access

COMMENTS: Roads and access are critical concerns for wildlife. Recommend providing more cover near roads and trails, developing noise buffers and designing and controlling road and trail systems to make noise sources predictable. The road density of <3.0 ml/sq.ml. in timber management areas is too high for wildlife needs. Do not present road management as a wildlife issue because this strategy creates public animosity toward those species you want to protect. Clarify why road density is the basis for nearly all wildlife management, and present rationale and references to show how guidelines will provide optimum management for wildlife and habitat. Address habitat fragmentation.

1249, 1273b, 1361, 1365, 1368, 1369

RESPONSE: Your recommendations for increasing cover near roads can best be evaluated on a site-specific basis. For example, in some cases, increased cover near roads has increased vehicle/wildlife collisions. Road density standards were established to reduce disturbance and mortality to wildlife; to protect fisheries, water quality, and soils while allowing for timber management, livestock management, access to private lands, and recreational use. The Revised Plan contains direction to manage ecosystems in properly functioning condition. This includes striving to maintain natural landscape patterns of connectivity. Management activities which fragment the natural connectivity of the landscape would be used sparingly and only to create specific conditions, such as a fire break. DD

COMMENTS: Support road closures and restrictions for sensitive areas, big game summer and winter range and on cross-country and/or OHV travel for wildlife protection. Restore habitat degraded by logging and roading. Restrict ORVs during hunting season or year-round because restricting access will help other hunters as well as wildlife security. ORV use should be banned in sensitive habitats, wetland and riparian areas, old growth, alpine areas above timberline, and degraded rangeland, and remote areas because these areas are important for wildlife and our own peace of mind.

WILDLIFE - HABITAT

F-F(6), F-G1(475), F-H(8), F-J(3), 37, 150, 157, 162, 165, 168, 174, 179, 180, 181, 187, 190, 201, 203, 206, 215, 226, 252, 277, 278, 280, 305, 325, 328, 357, 360, 389, 396, 400, 405, 611, 620, 621, 622, 640, 643, 644, 650, 651, 652, 656, 665, 666, 690, 739, 1183, 1195, 1247, 1275, 1313, 1327, 1388, 1448, 1458

RESPONSE: The Revised Plan substantially reduces road densities to: protect threatened, endangered, and sensitive species and their habitats; reduce elk vulnerability; increase grizzly bear security; protect and restore degraded soils and habitats; protect ecologically unique habitats; and allow for a non-motorized recreational experience. Summer cross-country motorized access is reduced from 93% to 7% of the Forest. Each management prescription includes access standards designed to meet goals. DD/MO

COMMENTS: ORVs impact wildlife: they destroy vegetation which negatively affect food and cover, resulting in decreased populations; destroy structural variability and reduce small mammal populations; reduce reptile numbers, diversity, biodiversity and species richness; destroys migratory bird and game populations through loss of food and cover, nesting and bedding areas and harassment; causes noise impacts to rodents; increases air pollution; creates haze and emission effects on insects and birds; negatively impacts feeding, spatial use patterns and leads to decreased reproduction.

1365

RESPONSE: These impacts, and others, were considered in the development of the travel and access management portion of the Revised Plan. The Revised Plan allows for a reasonable level of access while minimizing adverse impacts to wildlife and other resources. DD

COMMENTS: Provide a specific definition for "limited access" in big game security areas.

389

RESPONSE: Specific access standards are defined in each individual management prescription and displayed on detailed access tables. MO

COMMENTS: Make a comprehensive scientific review of environmental and user impacts over the past 10 years, and based on the findings, develop monitoring and evaluation for OHVs. Defer any management decision that could negatively impact wildlife until such a study is completed. Provide funding for flora and fauna inventory and assessment of OHV impacts. Establish baseline data. Prohibit OHVs in the following areas: roadless areas; wilderness study areas; wilderness; crucial seasonal habitat; areas noted as important habitat by any state Natural Heritage Program, areas for threatened, endangered, or sensitive species; riparian areas except where designated; and areas where noise impacts are likely to be significant. Expand objective on page III-13 to minimize OHV impacts on riparian, aquatic, critical and crucial habitat. Impose and enforce speed limits, party size, length of stay and minimum distances for approaching wildlife. (CROSS REFERENCE: Access)

1365

WILDLIFE - HABITAT

RESPONSE: The Revised Plan addresses all of your concerns. The Revised Plan analysis identified much of this during the Analysis of the Management situation and Affected Environment. Deferring management actions is not necessary. Enough information exists to make prudent decisions about suitable management practices and environmental protection and a reasoned choice among alternatives, in compliance with all laws, regulations, Executive Orders, and agency policy and guidance. The Access Standards and Guidelines of the Revised Plan provide for effective protection of wildlife habitat, riparian areas, TES habitat, and roadless areas. As to some of the particulars in your comments, the Forest Service doesn't enforce speed limits; the Plan does not repeat manual directions about group sizes (other than the limits placed in the Jedediah Smith Wilderness) or length of stay requirements. The Revised Plan did not add minimal distances for approaching wildlife or noise impacts. Additional restrictions may be appropriate if identified during site-specific analysis of project proposals. RR

Oppose Access Restrictions

COMMENTS: Oppose access restrictions for wildlife protection. Allow Prescription road densities in bird post-fledging areas because once birds are able to fly, they can avoid road activity. Prove that road density is a significant factor in carnivore habitat management. There is no scientific evidence to equate the impact of single-track trails on wildlife with roads; it is extrapolation only. The notion that motorized use negatively affects wildlife is merely an excuse to deprive the public of legitimate use of their lands. Trail bikers care for the land and wildlife. With the exception of grizzly bears, open road densities have little or no effect on wildlife.

(CROSS REFERENCE: Access)

270, 288, 291, 306, 313, 344, 367, 371, 381, 386, 389, 413, 528, 1179, 1375, 1369, 1449

RESPONSE: The negative impacts of motorized use on wildlife are well established in the scientific research. The Revised Plan is a balanced attempt at protecting critical wildlife habitat, reducing elk vulnerability, and still providing public access to the Forest. RR

Specific Species

COMMENTS: Provide greater protection of grizzly and elk habitat, elk migration corridors and calving areas, and all wildlife species including mule deer, wolves, goshawk, eagles, moose, mountain goats, bighorn sheep and mountain lions. Road density impacts should be evaluated for all wildlife including neotropical migrants/songbirds, wolverine, marten and lynx. (CROSS REFERENCE: Wildlife, Specific Species)

25, 203, 206, 280, 387, 643, 697, 698, 766, 1367, 1368, 1369

RESPONSE: The Revised Plan greatly improves protection of grizzly bear and elk habitat, elk migration corridors and calving areas, and other wildlife habitats. Impacts to all wildlife species, soils, water quality, fisheries, and other resources were considered along with public demand for a reasonable level of access during development of the Revision. DD

WILDLIFE - HABITAT

Recreation Impacts

COMMENTS: Expand OHV recreation objectives to minimize impacts on riparian, aquatic, critical, crucial and important seasonal wildlife habitat. Complete the following management activities: establish minimum approach distances to wildlife for recreational users; maintain natural vegetation and habitat structure in campgrounds; rehabilitate and revegetate abandoned campgrounds; maintain a buffer around developed recreation sites; close areas, seasonally or permanently, to small aircraft, glider planes and hang gliders; do not promote recreational use of caves and protect cave ecosystems; and restrict boating because boating can cause displacement, nest failures and feeding disruptions. (CROSS REFERENCE: Recreation)

1365, 1446

RESPONSE: Your comments were considered but not all were adopted. Some of these items are already part of the Revised Plan direction. The Revised Plan "Access" and wildlife, Properly Functioning Condition, and Aquatic Influence Zone (AIZ) standards and guidelines provide for effective protection of wildlife habitat, riparian areas, cave ecosystems, and TES habitat. Restricting non-agency aircraft is outside the scope and authority of the Forest Service. The Forest Service manages campgrounds for public safety and visitor use and other resources and considerations are secondary to this management emphasis. The Forest has no abandoned developed campgrounds and dispersed campgrounds will be rehabilitated where resource needs dictate. Additional restrictions may be considered if identified during site-specific analysis of project proposals. RR/MO

Request Explanation/Clarification

COMMENTS: Request scientific evidence to support this statement in the DEIS: "optimum habitat exists when 50-60% of a watershed is in hiding cover." Classify all habitat structures per cover and forage. Explain which cover category pertains to open stands. Clarify which scientific reference defines thermal cover as 45% canopy cover. In order to comply with IGBC standards, road density standards must be implemented within 1 year and completed within 3 years. Waiting 10 years would throw project into next plan revision.

228, 1369, 1446

RESPONSE: Process Paper D provides detailed analysis and scientific references for hiding and thermal cover. The Revised Plan has an objective to achieve all the road density standards in the **BMUs** within 3 years. MO

COMMENTS: Provide more direct and scientific supported measurement of species diversity in sagebrush/grasslands, on management standards for willow in riparian areas, and for birds and mammals dependent on sagebrush.

643, 1369

RESPONSE: The Revised Plan has Forestwide standards and guidelines for sagebrush/grassland ecosystems. Process Paper D provides the scientific support for the Forestwide standards and guidelines. Riparian standards and guidelines and Prescription 2.8.3 provide for sustaining healthy willow habitats. MO

WILDLIFE - HABITAT

COMMENTS: Question management to preserve "open" areas for species requiring early successional habitats. (CROSS REFERENCE: EM, General; EM, RNV; Timber, Old Growth)

643

RESPONSE: The overall intent of the Revised Plan is to manage landscapes for Properly Functioning Condition, including maintenance of open areas. MO

WILDLIFE - MISCELLANEOUS

Protect Wildlife

COMMENTS: Protect wildlife for future generations and restore degraded fish and wildlife habitats.

201, 391, 424, 615

RESPONSE: The Revision is intended to achieve these goals, as well as goals involving resource use. DD

Management Decision

COMMENTS: Use science to guide management and support biologists to manage our resources since they know better than John Q. Public; stick to science and carry out mandated projects to protect wildlife, even if it reduces access.

250, 643

RESPONSE: We used the best science available to us in development of the Revision. Overall, access was greatly reduced across the forest to improve conditions for wildlife, water quality, fisheries, soils, and scenic beauty. DD

COMMENTS: Use "common sense" and listen to the public when managing wildlife because Fish and Wildlife poisoned 3,000 seagulls to save nests for plovers, but allowed beach to be open to ORV users who destroyed nests anyway.

640

RESPONSE: Public input played a vital role in development of the Revised Plan. We feel it represents a balanced approach to resource management. DD

COMMENTS: Consider impacts of wildlife management decisions upon summer home residents because these people help ensure that wildlife are not molested.

343

RESPONSE: We listened to summer home residents, as well as residents along the urban interface, and accommodated their needs (such as for maintenance of visual quality, protection from wildfire, access, and so on) where practical. DD

COMMENTS: Disagree that human use negatively impacts wildlife because we have more elk, moose, deer and bear than we did 30-40 years ago and grizzly bear are not afraid of humans.

1200

WILDLIFE - MISCELLANEOUS

RESPONSE: Some types of human activities may be harmful to some species of wildlife, while other types of use may benefit other species of wildlife. Many of these relationships are described in the FEIS. The number of elk, moose, deer, and bear are greatly controlled by habitat motorized access, and the amount of and type of hunting mortality. DD

Economics

COMMENTS: Maintain a rich variety of habitat for wildlife and birds to help support Idaho tourism, largest industries and the economy.
185, 318, 527

RESPONSE: A primary wildlife goal of the Revised Plan, as stated in Chapter 111-Part 1, is to maintain or enhance wildlife biodiversity by managing for a diverse array of habitats and distribution of plant communities. DD

COMMENTS: Develop management for environmental assessments and analyze the effect on people and the economy.

314

RESPONSE: Forest activities are subject to the National Environmental Policy Act when the Forest analyzes the possible effects of management actions on the resource. Normally these analyses include social and economic effects. DP

COMMENTS: Big game hunting is a valuable resource.
766

RESPONSE: Big game hunting is valuable on a social and economic level. People look forward to hunting with family and friends on an annual basis. For many it is their single defining social event, or even a reason for locating into a certain area. It also brings money into the local economies, not just through the recreational activity itself, but by serving as a means to attract people to the area, which in turn can lead to the purchase of property. DP

WILDLIFE - STANDARDS & GUIDELINES/LAWS/REGULATIONS

Should Address More Issues

COMMENTS: Include and enforce all the standards that address the concerns of ours regarding wildlife.
1365

RESPONSE: We reviewed all the concerns stated in your comments, in the context of all public comments received. Some recommendations were adopted. Others are adequately addressed by the standards which were initially proposed in the Draft Revised Plan. Still others were not adopted because the direction in the Plan was adequate, or the concern expressed was not sufficient to warrant specific Plan direction. RR

COMMENTS: Change 5.4 a-c guidelmes to standards.
1365

WILDLIFE - STANDARDS & GUIDELINES/LAWS/REGULATIONS

RESPONSE: Standards were identified and adopted where a specific practice or condition was viewed as necessary to fully meet the intent of environmental protection and cannot be effective except by the specified course of action. Other direction was established as guidelines where a certain course is advisable but where alternative courses of action may be permissible and still meet the intent of the prescription emphasis. Establishing all direction as standards is not necessary and could actually be detrimental to achieving desired outcomes because broad programmatic direction at the Plan level often is not sensitive to the inevitable variations, nuances, and complexity at the site-specific project level. RR

COMMENTS: Include standards and guidelines for thermal cover, corridors, opening sizes and elk habitat effectiveness (EHE) parameters to ensure adequate protection.

1273b

RESPONSE: Standards and guidelines were incorporated into the Revised Plan for opening size and open road density. These parameters are part of EHE determination. Research does not indicate that thermal cover is critical for winter range because elk winter in various cover conditions--in areas with dense thermal cover--such as timber, and with virtually no thermal cover, such as sagebrush. Research has not shown that travel corridors for elk are essential because elk migrate across a broad range of cover conditions. RR

COMMENTS: Develop more specific, measurable objectives for species selected in forestwide standards and guidelines test, and monitor some of the numerous management practices even from other regions.

1249

RESPONSE: The objectives and the methods identified in the Revised Plan are sufficient to meet resource management needs. Management practices from this and other regions are reviewed which may have value to improving management on the Targhee. RR

COMMENTS: Regarding standards and guidelines about wildlife goals (DFPR, Chapter 111): explain how the "natural occurrence and distribution of plant communities" is determined.

1249

RESPONSE: Historical maps and inventory data are used to identify natural ranges of plant community occurrence. Current inventory, habitat type, land type association, ecological unit inventory data may be used. State and other agency, research and academic sources or records, and scientific literature provide information. Professional judgement and understanding of ecological and successional processes provide insight into occurrence and distribution. Personal anecdotal and field observation, and occurrence of relic individuals of seral species play a role. Other sources are used as available. RR

All Species

COMMENTS: Establish comprehensive wildlife standards and guidelines for all species including carnivores and their habitat. Explain why some species were presented in forestwide standards and guidelines and others were not.

1249, 1361, 1365, 1446

RESPONSE: Establishing comprehensive standards and guidelines (S&Gs) for all species is not necessary to maintain viable populations or effective habitat. The Revised Plan uses an ecological approach to managing forest landscapes which can capture most requirements for habitat generalists. Some species are listed as threatened or endangered and require more specific protection and maintenance of individuals or habitat. The grizzly bear, peregrine falcon, and bald eagle have very specific and extensive standards and guidelines to ensure the Targhee management practices support recovery objectives. Other unlisted species may be classified as sensitive within Region 4 and have specific standards and guidelines that will foster their stabilization and recovery. Still others are identified as Management Indicator Species (MIS) which represents other species which depend on the same habitat type. RR

COMMENTS: Retain standards to use indicator species to assess habitat and species diversity because without standards, habitat management will become inconsistent.

389

RESPONSE: These were retained. RR

Strengthen Standards and Guidelines

COMMENTS: Make changes in wording to make the protection language stronger or more precise.

1365

RESPONSE: Some parts of the Revised Plan were modified to provide more explicit protection, such as for native trout. Overall, the language adopted in the Revised Plan is sufficient to meet needs for protection or mitigation.

RR

COMMENTS: In many cases the Plan erroneously lists as "guidelines" those binding, measurable guides; and lists as "standards" general, non-binding directions. Measuring and monitoring of fish and wildlife resources depends on detailed, accurate standards.

1446

RESPONSE: We tried to clean up any ambiguity which may lead to confusion. The key is - if the language, however broad, is a standard (S), then the direction must be followed. Deviations require a Plan amendment. Guidelines (G) may permit deviation and the rationale must be documented. Some direction for certain practices does not lend itself to simple, explicit descriptions with no nuance. RR

Compliance with Laws

COMMENTS: Targhee National Forest must comply with the National Forest Management Act and guidance supplied by the Forest Service Manual as well as the Endangered Species Act, in protecting fish and wildlife, and should be included in reasons for revising the Plan.

1446

RESPONSE: We agree. RR

COMMENTS: Both the ESA and NFMA are flexible as long as concern and appropriate management of endangered species are included in the Plan, thus the word "stringent" should be deleted from DEIS Page I-9, Issue 4, and after the words "Endangered Species Act" add "and NFMA."

1446

RESPONSE: This change was adopted. RR

Re-Write Management Prescription 5.1.3(a-b)

COMMENTS: Revise Management Prescription 5.1.3(a-b): Timber Management (no clearcutting, urban interface, wildlife and recreation protection, limited fuels management) as follows:

Description: The purpose of this prescription is to: Protect wildlife habitat especially habitat for threatened and endangered listed species, forestwide sensitive species and big game species including moose and mountain goats: Protect valuable recreation resources: Provide limited timber management with no clearcutting and to: Educate the public on the danger of wildfire and its consequences when choosing to live in or adjacent to wildlands. Fuels management is allowed if it does not impact the above mentioned wildlife values.

Goal: Protect valuable wildlife and recreation values while allowing some timber harvest that may help minimize fuel risks.

Standards and Guidelines: Forestwide Standards and Guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes: Fire/Fuels Same as 5.1(a-b) except prescribed fire may not be used for any purpose. **(S)** Insects and Disease Insects and disease are allowed to play their natural role in ecosystem processes. (S)

Biological Elements: Wildlife Wildlife habitat, especially habitat for T&E listed species, forestwide sensitive species and big game species including moose and mountain goats will be protected. Wildlife habitat will exist/evolve with natural ecological processes. No wildlife habitat improvements will be allowed. **(S)** Maintain snag habitat at 260% of the biological potential for all cavity nesters. (S)

Forest Use and Occupation: Access **(S)** The same as 5.1 except no cross-country snowmachine travel is permitted.

Recreation: Trails - No new motorized trails will be allowed. (S)
ROS - Recreation is managed to provide a combination of semi-primitive nonmotorized to roaded natural opportunities. (G) VQO - Retention **(S)**.

WILDLIFE - STANDARDS & GUIDELINES/LAWS/REGULATIONS

Production of Natural Resources: Timber No clearcutting, snag retention, protection of trees for wildlife and scenic purposes.

643

RESPONSE: This proposal was not adopted. The Forestwide Standards and Guidelines apply to this prescription and provide adequate protection of Threatened, Endangered and Sensitive species. The emphasis is to provide fuels hazard reduction in areas of human development and activity within and adjacent to the Forest, principally around Island Park and along the South Fork Snake River and Palisades Reservoir. Harvest would be done with consideration of visual effects and human activity in the area, therefore there would be no clearcutting. Your proposed alternative wording does not meet this intent nor does it recognize the amount of current human development already affecting wildlife resources or natural ecological processes. RR

WILDLIFE - SITE-SPECIFIC

Italian Peaks

COMMENTS: Use the elk and deer prescription wherever there is winter range. Italian Peaks, Bear Creek and the central part of Garfield Mountain have the wrong prescription; it is a range prescription rather than elk and deer and is detrimental to wildlife.

695

RESPONSE: The winter range prescription was applied to all areas identified by the Idaho Fish and Game as "crucial". Because these areas are most important during the winter, the winter range prescription was applied instead of the elk summer range prescription. The goal of the elk summer range prescription 5.4 is to "provide elk security areas" and to "use silvicultural techniques which prevent...insect and disease epidemics..." This is not the best approach to an area used by animals for winter range.

The Italian Peaks proposed wilderness is in the 1.3 prescription for "Recommended/Proposed Wilderness". The area east and south of Italian Peaks is in the range prescription because management of the rangeland vegetation is the primary concern, not providing elk security areas. A part of the Medicine Lodge area is in the elk and deer winter range prescription. CP

COMMENTS: Do not allow cross-country motorized travel or game retrieval in 5.4 a-c.

1365

RESPONSE: The game retrieval proposal was dropped for all areas. Cross-country motorized travel is not allowed on the Dubois Ranger District in the Revised Plan. CP

Mount Jefferson

COMMENTS: Protect Mount Jefferson as wilderness so that in the future, great grandchildren can enjoy wildlife in the area.

613

WILDLIFE - SITE-SPECIFIC

RESPONSE: Mount Jefferson was not recommended for wilderness. This area was analyzed for wilderness potential in the FEIS along with all the roadless areas. The area did not score high enough to be recommended for wilderness. Furthermore, the area was not recommended by the 1990 BLM EIS. This analysis is documented in the Roadless Areas Appendix. In the Revised Plan, the management prescription for the Mount Jefferson area is nonmotorized with an emphasis on semi-primitive nonmotorized recreation use. This prescription provides protection to wildlife habitat. AS/Ak

Henry's Lake Mountains

COMMENTS: Upgrade to a prescription that provides better habitat security for grizzly bear and other wildlife. Suggest non-motorized, grizzly bear habitat (Sit.2) or grizzly bear habitat (no ASQ, cross-country, or sheep). (CROSS REFERENCE: Grizzly Bear)

1185, 1348

RESPONSE: Henry's Lake Mountains are geographically located between Targhee Creek basin and the Moose Creek Plateau on the Targhee National Forest. In the Revised Plan, the prescriptions for this area are 1.3 Recommended/Proposed Wilderness in the Targhee Creek Basin, 2.6.1 (a) Grizzly Bear Habitat (No ASQ, No Cross-country, No Sheep) in the vicinity of Mt. Two Top and 5.3.5 Grizzly Bear Habitat (NIC for ASQ, No Cross-country, Phase Out Sheep) between Mt. Two Top and the Moose Creek Plateau. AK

COMMENTS: Prescription needs to address winter use by non-motorized and motorized recreation in high elevation areas like this because of impacts on wolverine ecology and natal dens (see Copeland's research).

1348

RESPONSE: The Revised Plan has an objective to analyze the potential wolverine sites and field check for actual wolverine use. Idaho Fish and Game wants identified boulder sites closed. This concern would be addressed in a site-specific analysis. AK

Bootjack Pass/Sawtall/Jefferson

COMMENTS: Do not allow timber cutting in Bootjack Pass to Red Rock Pass and on north side of Sawtall, Jefferson Peaks, and adjoining mountains because this area is a narrow strip that harbors Idaho's small elk herd as well as other big game animals and such activities do not sustain habitat or free movement for wildlife on a narrow strip; these and other activities in the summer cabin area are disruptive to the environment.

1457

RESPONSE: In the Revised Plan, one prescription for this area is 3.1.2, nonmotorized, which is not in the suitable timber base and does not contribute toward the ASQ. The other prescription is 5.3.5 Grizzly Bear Habitat and is included in the suitable timber base, but these lands are considered a Non-Interchangeable Component (NIC). Timber harvest proposals would have to meet standards and guidelines that promote the enhancement of grizzly bear and other wildlife habitat in the area. AX

Jackpine Creek - Bitch Creek

COMMENTS: Support the roadless area east of Jackpine Creek and south of Bitch Creek. Keep the 2.6.5 Prescription to protect its high quality habitat for bears, elk, and mature forest species (marten, forest accipiters).

1277

RESPONSE: The management for this area in the Revised Plan satisfies your concern. AK

Snake River and Palisades

COMMENTS: Protect the South Fork Snake River/Palisades Reservoir from timber harvest and any road construction to protect valuable wildlife habitat.

766

Keep the same prescriptions as in the current plan in Palisades Reservoir. Limit timber harvest to 100 acres and only allow temporary roads. Keep wording, "treated acres must either be beneficial or neutral to wildlife habitat." Give priority to wildlife in these areas.

FS-11

RESPONSE: Wildlife is a priority in most of the area. The Revised Plan identifies lands which are suitable for timber harvest and these lands are placed in a timber prescription. Harvesting timber outside of the timber prescriptions can only be done to benefit other resources values including wildlife habitat. The South Fork of the Snake River (within at least one-fourth mile) and the Palisades Backcountry are not within a timber prescription. Forestwide and individual prescription standards and guidelines for the South Fork and Palisades Backcountry protect wildlife values. Values for the river corridor are maintained so that it remains eligible for wild and scenic river status.

Timber harvest is planned in the urban interface prescriptions along the east and southwest shores of Palisades Reservoir to reduce fuel loading near homes on private lands, which are increasing in the area, as well as near summer homes permitted on National Forest land at Calamity, Alpine and Hoffman.

Because these areas also have important tree habitat for eagles and other wildlife, a new guideline was added to emphasize management of old growth Douglas-fir, spruce and cottonwood within one mile of the reservoir or river.

Road construction of permanent roads for timber harvest or any purpose would only be allowed up to a limit of 3 miles per square mile in the urban interface prescription areas (5.1.3.b), up to 2 miles per square mile in the big game winter range prescription (2.7.a), and up to 1 mile per square mile in the semi-primitive motorized (3.2.d) along the river and reservoir.

BP/BA

COMMENTS: Protect winter moose habitat along the South Fork Snake River and adjacent to Palisades Reservoir.

766

=

WILDLIFE - SITE-SPECIFIC

RESPONSE: No specific standards, guidelines or prescriptions were identified for protecting winter moose habitat only because moose do not congregate in one area and are spread out throughout the Forest. However, many moose winter within identified big game winter range of elk and deer. The Revised Plan now includes winter range protection along Palisades Reservoir and the South Fork of the Snake River below the dam, providing the same protections for wintering moose. The changes that expanded big game winter range protections were done in cooperation with the Idaho and Wyoming Game and Fish Departments. These protections are shown on the Forest Travel map. BA

COMMENTS: Protect crucial deer habitat along the South Fork Snake River and adjacent to Palisades Reservoir.

766

Snake River Canyon to the state line needs to be recognized as big game winter range.

389

RESPONSE: The area along the South Fork of the Snake River is in the big game winter range prescription (2.7.a) downstream from Swan Valley, providing a great amount of protection during the snow season from human activity except on designated routes. For Palisades Reservoir and the river below the dam in Swan Valley, additional protections were added to the winter range, in cooperation with the Idaho and Wyoming Game and Fish Departments. These protections are shown on the Forest Travel map. BA

COMMENTS: Support your biodiversity effort to regenerate cottonwood along the South Fork Snake River.

695

RESPONSE: Thank you for your support recognizing the importance of the cottonwoods along the South Fork. The plan has standards and goals for cottonwood regeneration. We are continuing to use the BLM/FS South Fork Activities and Operation Plan of 1991 as the management direction for the South Fork of the Snake River in the Revised Plan. BA

COMMENTS: Recognize the area from the Snake River Canyon to the state line as big game winter range.

389

Alternative 3M does not adequately protect "crucial" elk winter range areas along the South Fork Snake River and adjacent to Palisades Reservoir.

766

RESPONSE: Working with the Wyoming Game and Fish Department, the Forest added this area as winter range in the Revised Plan. The area has designated routes for over-the-snow vehicles and other human activities. BA

Alpine

COMMENTS: Recognize elk winter range from Alpine northward to Swan Valley per Wyoming Game and Fish. The area needs winter range protection.

FS-10

WILDLIFE - SITE-SPECIFIC

RESPONSE: The Revised Plan added big game winter range protection during the snow season from human activity to the area in Idaho and Wyoming from Alpine to Swan Valley, in cooperation with the Idaho and Wyoming Game and Fish Departments. These protections are shown on the Forest travel map. BP/BA

COMMENTS: Antelope drainage is not winter range and was shown as one whereas Alpine is winter range (and is not shown as one).

FS-1

RESPONSE: The Antelope drainage was removed from the winter range prescription and replaced with a range management prescription (6.1.b). In cooperation with the Wyoming Game and Fish Department, protection to the Alpine big game winter range was added. Designated routes for human activity are allowed. These routes and protections are shown on the Forest travel map. BA

COMMENTS: The area in Wyoming needs a comprehensive cumulative impacts analysis that evaluates impacts to old growth and wildlife, and especially to winter big game species (with emphasis on crucial areas). Palisades standards and guidelines need to protect crucial mule deer and elk winter ranges.

389

RESPONSE: In cooperation with the Wyoming Game and Fish Department, the Forest added protections to the winter range here. These protections are shown on the Forest travel map. Some designated routes are identified for human activity. A comprehensive cumulative impacts analysis is not needed for travel in this winter range.

The future impacts that might occur to old growth and wildlife in the Wyoming prescription areas are small or localized. The prescriptions are: Wilderness Study Area (1.2), Eligible Wild River (2.3), Semi-primitive Motorized (3.2.d, 3.2.g), Timber Management/Urban Interface Fuels (5.1.3.b), and Visual Quality Maintenance (5.2.2).

Of these, the 3.2 and 5.1.3 prescriptions have the most potential to change habitat and they represent a localized acreage near Alpine. In the Final Revised Plan, a new guideline was added to emphasize old growth Douglas-fir, spruce and cottonwood trees within one mile of the Palisades Reservoir or the Snake River. This protection overlaps two prescription areas. The summer time motorized trail density standards for these areas are: 3 miles per square mile in 5.1.3.b and 1 mile per square mile in area 3.2.d. Additional roads or motorized trails in road construction of permanent roads for timber harvest or any purpose would only be allowed up to a limit of 3 miles per square mile in the urban interface prescription areas (5.1.3.b), up to 2 miles per square miles in the big game winter range prescription (2.7.a), up to 1 mile per square mile in the semi-primitive motorized (3.2.d), and 1.25 miles per square miles in the elk summer range ASQ prescription standard would be on a temporary basis. Any cumulative effects from logging, vegetation manipulation or roading activity would be analyzed in a site-specific environmental assessment. BA/BP

WILDLIFE - SITE-SPECIFIC

Bald Mountain Roadless Area (near Bear Mountain in Caribou Section)

COMMENTS: Support the area for elk and deer winter range.
695

RESPONSE: The Bald Mountain roadless area is administered by the Soda springs Ranger District on the Caribou National Forest and is not covered by the Targhee's Revised Plan. All winter range for deer and elk is protected on the Targhee. BP

Big Holes

COMMENTS: Deer are not bothered in Big Holes by motorcycle use; deer do not stop grazing and look when bikes stop unless we leave the bikes.
97

RESPONSE: Research has shown that wildlife can be disturbed by motorized travel. Semi-primitive motorized access prescription 3.2 (g) assigns a portion of the Big Holes to provide motorized use on designated roads and trails. This provides wildlife with large areas free from disturbance by summer cross-country motorized human activities. M05

COMMENTS: Temporarily close some trails in the area where heavy use is causing erosion, let it rejuvenate and then reopen the area. There is no need for permanent closures.
97

RESPONSE: The Forest is closing some trails permanently where resource damage is due to poor trail design and location. Trails that have erosion or resource problems but are being kept in the trail system will be rehabilitated or have sections rerouted to eliminate resource damage or potential damage.
RS

COMMENTS: Regulate OHV travel in the Big Holes so that elk populations might increase.
215

RESPONSE: Semi-primitive motorized access prescription 3.2 (g) provides motorized use on designated roads and trails. This provides wildlife with large areas free from disturbance by cross-country motorized human activities.
M05

COMMENTS: Close roads in the Big Holes for elk security.
356

Do not close roads in Big Hole Mountains to provide elk security.
311

Big Holes look to be an ideal elk natural habitat area.
215

RESPONSE: The Big Holes do contain ideal elk habitat. Roads in the Big Holes were designated open or restricted in the Revised Plan to provide access opportunities for the public, allow resource management planning, and provide

security areas for wildlife, including elk. Travel routes and restrictions are reflected on the Travel Plan Map in the Record of Decision. M05

COMMENTS: Do not harvest timber along Big Hole Mountains corridor because it would affect moose and elk.

325

RESPONSE: The eastern edge of the Big Holes in the FEIS was changed from prescription 7.1 to prescription 5.1.3. The emphasis of prescription 5.1.3 is management of fuels to minimize fire hazard to urban facilities by thinning forested stands and removal of deadwood. No clearcutting is allowed. Impacts to big game from future project proposals will be evaluated through a site-specific analysis during the NEPA process. Identified big game winter ranges are managed to provide quality habitat for elk and deer. Prescribed fire may be used to improve and increase wildlife habitat. M05

COMMENTS: Grizzlies are doing quite well here; there are too many grizzly bears and mountain lions.

307, 311

RESPONSE: Grizzly bears are expanding their range in the Greater Yellowstone Ecosystem. No grizzly bears are known to exist in the Big Holes. Mountain lion sightings occur on the Forest. Mountain Lion populations are managed by the States of Idaho and Wyoming. M05

COMMENTS: Address the possibility of fire in residential areas adjacent or within forested areas, especially Big Holes.

325

RESPONSE: The Revised Plan allows fuels management along the east face of the Big Holes, under Timber Management prescription 5.1.3 (b). This prescription does not allow clearcutting. Vegetation will be managed to minimize fire risk around urban facilities by thinning forested stands and deadwood removal. RS

Teton Range Subsection

COMMENTS: Include and protect moose winter range in the following areas: From Wyoming State Highway **22** north to Teton Canyon in Management Prescription 3.2; from north and south Leigh Creek to Badger Creek in Management Prescription 5.4, and north of Badger Creek in Management Prescription 5.3.5. Include a wildlife objective, standards and guidelines to improve moose winter range in the Teton Range Subsection. Moose winter ranges have been overlooked in Teton Subsection (Page, 111-47); include standards and guidelines.

389

RESPONSE: Unlike deer and elk, moose are less restricted elevationally by snow depth and are widely scattered over the winter landscape. Prescriptions, standards and guidelines were not developed specifically for wintering moose. The Forest will adaptively manage moose across its range by adhering to upland and riparian browse utilization standards, prescribed fire and selective vegetative management techniques. M05

WILDLIFE - SITE-SPECIFIC

Jedediah Smith Wilderness

COMMENTS: Restore degraded fish and wildlife habitats.

195

RESPONSE: Forestwide Goals for Fisheries, Water and Riparian Resources, Wildlife and Vegetation emphasize maintaining diverse ecosystems and habitats, and restoration of degraded areas to a properly functioning condition. These goals are supported by an array of standards and guidelines. In addition, standards and guidelines for the Jedediah Smith Wilderness under prescriptions 1.16, 1.17 and 1.18 identify the amount of degradation allowed from no measurable (1.1.6) to no measurable degradation cumulatively over 3 years (1.1.8). If these thresholds are reached within each prescription area, restoration and area management will change. RS

Mill Creek Area

COMMENTS: Avoid any activity which might degrade the vegetation, soils and critical winter range habitat for deer and elk in Mill Creek Area (near Targhee Ski Hill).

329

RESPONSE: The Mill Creek area is within Prescription 2.7 that emphasizes resource conditions that provide quality elk and deer winter habitat. Management activities are at levels that are compatible with maintaining or improving winter range and do not contribute to degradation of the prescription area. Recreation, cattle grazing, vegetation management (Non-ASQ timber and fire) and wildlife habitat improvement are planned activities within the Prescription. Activities are subject to Prescription 2.7 standards and guidelines, and Forestwide standards and guidelines for: Biological Elements (Fisheries, Water, Riparian Resources, Vegetation, Wildlife), Physical Elements (Soils), Forest Use and Occupation (Recreation), Production of Commodity Resources (Range upland and riparian forage utilization), and Timber Management. RS

WILDLIFE - SMALL MAMMALS

Manage Non-Game Species

COMMENTS: Need to include management for non-game species such as bats (especially as they relate to insects, snag and cave management -- some bats were recently added to the Fish and Wildlife sensitive species list); flying squirrels; bird habitat; fisher and wolverine; rodentia in general, since they are important parts of the food pyramids of medium sized birds and mammals.

384, 389, 643, 731

RESPONSE: The Revision includes direction to maintain or enhance biodiversity and to manage ecosystems in properly functioning condition. This requires managing for an array of habitat conditions across the Forest. Many standards and guidelines were developed which provide for the habitat needs of all non-game species. Specifically, the Revision has direction to develop management plans for any caves, mine shafts, or other suitable habitats where

spotted and Western big-eared bats are found. It also stipulates the amount of snags and logs needed to provide wildlife habitat and for site productivity. DD

COMMENTS: Determine population data for non-game species including the types of species, their location and health. Without this data it's difficult, if not impossible, to assess potential impacts, biodiversity, gradient diversity and variability across the landscape.

1368

RESPONSE: It is not possible to determine population levels, location, and health of all non-game species inhabiting the Forest. However, we do collaborate with researchers and other interested publics to monitor the population trend and distribution of many species of non-game wildlife. Most of our effort is focussed on those species which are threatened, endangered, or sensitive to management activities. DD

COMMENTS: Targhee National Forest does not meet NFMA, Forest Service regulations (36 CFR 219) requirement to maintain viable populations of native vertebrate species.

645, 699

RESPONSE: Various analyses, literature reviews, and consultations with other agencies has led us to the conclusion that the Revision will maintain and promote viable populations of these species. Summaries of those findings are contained in the various wildlife segments of the FEIS. DP

COMMENTS: Analyze existing/planned habitat conditions for small mammals, especially where associated with range or old growth; create standards for small mammal habitat on grazing allotments.

384, 389, 1369

RESPONSE: Habitat conditions for small mammals were analyzed during the planning process. Many standards and guidelines were developed which provide for the habitat needs of small mammals inhabiting all areas of the Forest, including grazing allotments and areas of old growth forest. DD

COMMENTS: Consult with coordinating agencies and reintroduce extirpated species. Make this a guideline.

1365

RESPONSE: The Forest often coordinates with other agencies to recover dwindling or extirpated species. The policy direction and legal authority to enter into these conservation efforts is already in place. Therefore, a guideline is not necessary. DD

COMMENTS: DEIS must address habitat needs and conditions for old growth dependent species so that it can assess habitat conditions for carnivores; need to consider roads, elevation and vegetation that also define carnivore habitat.

1361

WILDLIFE - SMALL MAMMALS

RESPONSE: The Forest added new analysis, information and management direction for old growth in the Revised Plan and FEIS. Forest carnivores are a management indicator species and we analyzed habitat components deemed important for their consideration. MO

COMMENTS: Explain if Process Paper D's list of mature and older forest acres by watershed are all available for carnivores and explain when the acreage data was collected.

1361

RESPONSE: Process Paper D's list of mature and older forested acres by watershed is available for carnivores. The vegetation acreage data is collected from the ranger districts from September, 1991. MO

COMMENTS: In working to protect certain "charismatic" large mammals and birds, we trust that you will also protect less entertaining, but probably more important species.

1393

RESPONSE: The Revision contains a goal to maintain or enhance wildlife biodiversity by managing for a diverse array of habitats and distribution of plant communities. This goal will be achieved through the application of several standards and guidelines which protect species and habitats. DD

Protect Management Indicator species

COMMENTS: Evaluate the effects of pest and fire management practices on MIS and discuss access and human dispersal effects on MIS species.

1365

Provide data on MIS so you can estimate the existing conditions of populations.

1369

RESPONSE: A description of all MIS is presented in Chapter III of the FEIS. The effects of all proposed activities on MIS are described in Chapter IV of the FEIS. DD

COMMENTS: Prohibit construction of new roads and obliterate any roads that are causing detrimental impacts to goshawks, sensitive species, threatened and endangered species or any species used as a management indicator.

1365

RESPONSE: The Forest completed an assessment of all roads and trails to consider: value to the public, damage to soils and other resources, disturbance to wildlife, threat of mortality to certain species, and administrative needs of the agency. This assessment provided the basis for deciding which roads will be left open, closed, obliterated, or restricted. Construction of new roads will be evaluated on a site-specific basis. DD

Make Management Indicator Species Standards and Guidelines

COMMENTS: Develop management standards for management indicator species even though this is not a major public issue. Management standards are needed when the level of timber harvest is so high; without standards, habitat management will become inconsistent.

389, 1365, 1369

RESPONSE: The Revision contains standards and guidelines for several management indicator species. DD

COMMENTS: Evaluate the amount, quality and quantity of MIS habitat and animal population trends in each alternative and make this a guideline.

1365

RESPONSE: MIS habitat and population trend is described in Chapter III of the FEIS. MIS habitat will be conserved through the application of the standards and guidelines described in the selected alternative. DD

Consider Additional Management Indicator Species

COMMENTS: Consider mammals as wildlife management indicators for aquatic and riparian habitats. Beaver, mink and otter are important indicators of aquatic and riparian habitat conditions and provide different information than the birds and amphibians currently proposed as indicators. Consider at least two small mammals (e.g., water vole, snowshoe hare, western jumping mouse; or vagrant shrew) as indicators of riparian health.

282, 389, 643

RESPONSE: We did consider selecting mammals as MIS for aquatic and riparian habitats but found bald eagle, trumpeter swan, spotted frog, common loon, harlequin duck, and cutthroat trout to be suitable. DD

COMMENTS: Your list of wildlife management indicator species (DEIS, Chapters 3 & 4) is incomplete until you include any small mammal species. Include the snowshoe hare as indicator of forest successional stages since its presence or absence is also an indicator of the potential for the existence of lynx and fisher. The red-backed vole and northern flying squirrel are indicators of the condition of conifer habitats.

389

RESPONSE: The 16 management indicator species selected to represent other species within forested habitats are adequate. The Forest uses other techniques, such as aerial photography and habitat measurements, to determine forest successional stages and condition of conifer habitats. DD

COMMENTS: Incorporate the notion of representativeness for Management Indicator Species. There is growing criticism of exclusively relying on indicator species.

1365

WILDLIFE - SMALL MAMMALS

RESPONSE: We acknowledge the debate about the use of the Management Indicator Species, however, our planning regulations require their use and we followed those regulations. MO

WILDLIFE - SNAGS, CAVITY NESTERS

Snag/Cavity Nesting Habitat Standards and Guidelines

COMMENTS: Change the guidelines for snags for cavity nesting habitat to standards.

695

RESPONSE: Guidelines are used because they increase our ability to match snag levels to the natural potential of each unique site. Standards do not allow the flexibility needed to account for site variability. DD

COMMENTS: Need a second guideline for the snag/cavity nesting habitat. It should read: "consider cavity nest species and protection measures for retained wildlife trees in cutting units when designating fuelwood areas and sales, both commercial and personal use charge areas."

FS-9, FS-10

RESPONSE: The guidelines for cavity nesting habitat apply to specific management prescriptions. Any vegetation management activities, including commercial and personal use fuelwood, within a management prescription must take into account the specific guidelines in that management prescription area for maintaining cavity nesting habitat. MO

COMMENTS: Include other factors besides dead trees when determining the habitat needs of cavity nesters; include structure of forest stand, including basal area, dead and downed material, patch size and connectivity; consider the effects that future natural disturbances may have on cavity nesting species.

1365, 1369

RESPONSE: All of these factors were considered. The Revision includes direction to manage forests in properly functioning condition. This includes assessing stand structure (which includes basal area), composition, disturbance regime, and patterns (which includes patch size and connectivity). Chapter III of the Revision describes the Forestwide guidelines for the management of dead and down material which are aimed at providing for both site productivity and wildlife habitat needs. DD

COMMENTS: Snags/cavity nesting should be done on a subsection basis, not watershed basis.

413

RESPONSE: Most snag/cavity nesting habitat needs assessments are conducted on a watershed basis or management prescription area basis. This scale was chosen because it helps maintain snag habitat well distributed across the Forest. MO

Create Snag Standards

COMMENTS: Create snag standards so that the Forest can determine future snag densities in order to evaluate impacts of each alternative; include minimum height and dbh. Do not call any dead tree a snag.

1369

RESPONSE: We have done so. The definitions of the various types of snags are found in the Revision glossary. DD

General Habitat Standards and Guidelines

COMMENTS: Leave more snags and dead fall for wildlife to use.

359

RESPONSE: The direction in Chapter III of the Revision increases the amount of snags and dead fall which will be retained in timber harvest areas. DD

COMMENTS: Cite the science and basis for requiring only 60% of an area (20 logs per acre) to meet dead and down wood guidelines and how this ensures wildlife viability; explain why logs are considered for a guideline and other woody debris are not.

1369

RESPONSE: Dead and downed wood (logs) are not evenly distributed, even under natural conditions. We need to take into account uneven distributions, without having to haul logs into an area that does not have any. The science and literature on which we based the dead and down wood guidelines are presented in Process Paper D. MO

COMMENTS: Change the following from a guideline to a standard: Maintain snag habitat at >60% of the biological potential for woodpeckers.

643

RESPONSE: This recommendation was considered but not adopted. A guideline is an appropriate measure. Guidelines are appropriate where variability occurs at the implementation level or desired goals or conditions can be achieved by more than one approach. A guideline provides for some site-specific flexibility while still meeting the essential intent. RR

COMMENTS: Page 111-134, Wildlife (5.3.5) - Create a standard requiring the maintenance of snag potential at >40% of the biological potential for woodpeckers.

1365

RESPONSE: This recommendation was considered but not adopted. Management prescription 5.3.5 (grizzly bear habitat) has a guideline for maintaining snag habitat at 260 percent of biological potential. We chose the higher level because snags eventually become dead and downed logs, and dead and downed logs are important grizzly bear habitat components. MO

WILDLIFE - SNAQS, CAVITY NESTERS

COMMENTS: Determine the viability impacts of existing snag levels in order to come up with mitigation measures to correct existing problems.
1369

RESPONSE: The analysis of snag habitat included a detailed analysis of more than 400 permanent forest inventory plots distributed across the Forest. This analysis is presented in detail in Process Paper D. Species viability analysis included information from the Upper Columbia River Basin Project and the detailed analysis done on the Forest. This is presented in Process Paper D. **MO**

Explain science

COMMENTS: Explain the science and basis for how the structure of woody debris plays a role in wildlife effectiveness and how this will be achieved in the Guideline for Wildlife, General Habitat, Chapter **III**.
1369

RESPONSE: The science and literature on which we based the dead and down wood guidelines are presented in Process Paper D. **MO**

COMMENTS: Cite all references used to incorporate snag guidelines and demonstrate what research validates them as a useful tool in your wildlife management strategy.
1369

RESPONSE: The references used in development of the Revision are listed in the references section at the end of the document and in Process Paper D. **DD**

COMMENTS: Explain how the biological potential of your analysis has been validated in order to use it as a guideline for management; explain how/if this approach worked in the past, if it maintained historical densities of cavity nesters and the reasoning for continuing this approach. Explain, with scientific reference, how the green tree replacement strategy will fully mitigate impacts on cavity nesters, especially the adequacy of 25 trees per acre; evaluate the implication of 41% biological potential for cavity nesters and what this means for viability.
1369

RESPONSE: The science, literature and analysis on which we based the primary cavity nesting species guidelines are presented in Process Paper D. Documentation on historical densities of cavity nesting species does not exist. Validation of the guidelines proposed in the Revised Plan will occur through monitoring of population trends of primary cavity nesting species and monitoring snag densities. **MO**

COMMENTS: Reference the Live Trees Chart in chapter **111**: Use the **40-60%** biological potential for snags in foraging areas because the emphasis in foraging areas is food, not nesting potential. Snags are more important for nesting, not foraging.
413

WILDLIFE - SNAGS, CAVITY NESTERS

RESPONSE: The application of the biological potential and snag recruitment will be made during site-specific analysis of project proposals. RR

COMMENTS: Only need 10 trees per acre recruitment snags for 100% biological potential. Twenty-five live trees per acre is excessive.

413

RESPONSE: This recommendation was not adopted. To maintain snag levels over time, 25 live trees per acre, with a range of ages and sizes, are needed as replacement trees for future snags. MO

COMMENTS: Establish snag and green tree replacement requirements within prescriptions that emphasize public safety and protection of facilities.

1365

RESPONSE: A standard was added to ensure public, contractor, and employee safety in selecting trees for snag recruitment. Snag and green tree replacement requirements can be achieved while protecting public safety and protecting facilities. The "requirements" are Forestwide "guidelines", which allow for deviation if necessary on a site-specific basis. Deviations will be documented with a clear rationale as to the intent of the deviation. DD/RR

COMMENTS: Develop standards for snags or replacement trees so that the Forest can know what to ascribe the planned Forest condition.

1369

RESPONSE: Guidelines for snags and replacement trees are presented in Chapter 111-Part 1 of the Revision. DD

WILDLIFE - SPECIFIC SPECIES

Antelope

COMMENTS: Create forestwide standards and guidelines for antelope winter range.

1249

RESPONSE: This recommendation was considered but not adopted. Very little antelope winter range occurs on the Forest. Most is off-Forest and not meaningfully affected by Forest activities. RR

Bald Eagle - General

COMMENTS: Protect bald eagles and their habitat from human activity.

265, 697

RESPONSE: It is our policy to protect bald eagles and their habitat from human activity. This is accomplished through development and implementation of bald eagle management plans, standard operating procedures, standards and guidelines in the Revision, and monitoring. DD

WILDLIFE - SPECIFIC SPECIES

COMMENTS: Although the bald eagle has been re-classified as threatened, continue recovery.

1446

RESPONSE: We will continue recovery efforts until delisting. Then our management emphasis will shift toward maintenance of healthy habitats and monitoring. DD

Bald Eagle - Roads

COMMENTS: Clarify in EIS that the construction of temporary roads, especially in bald eagle habitat, is not included in new road construction.

1446

RESPONSE: This will be a site-specific consideration when site-specific projects are proposed in bald eagle habitat. MO

COMMENTS: Standard B should be changed to, "no new roads in zone 1 or zone 2."

1365

Standards and guidelines item 1A for bald eagles should read: "Road closures will be located and designed to effectively control human use."

1446

RESPONSE: These recommendations were considered but not adopted. The Revised Plan direction is based on the recovery goals for the eagle. The Forest is meeting or exceeding goals for recovery. Additional direction is not necessary to provide for effective protection of bald eagles. RR

Bald Eagle - Old Growth

COMMENTS: Explain how you can have bald eagle old growth habitat without insect and disease.

1369

RESPONSE: All healthy old growth habitats have endemic levels of insects and disease. This is normal and is usually sustained over relatively long periods of time. Lodgepole pine ecosystems are the exception in that the old growth stage is not sustainable for relatively long periods. The Revised Plan provides for this and prescribes no extraordinary measure to eliminate pathological activity, except some limited actions in developed campgrounds, for example. DD/RR

Bald Eagle - Management Plan

COMMENTS: Include as a standard for bald eagle habitat: "Nest management plans for all existing bald eagle nests will be completed as soon as possible. Future nest sites will have management plans completed within two years of discovery."

1446

RESPONSE: This recommendation was considered but not adopted. The Revised Plan direction provides for effective protection of bald eagles. RR

COMMENTS: Acknowledge the recovery goals and objectives outlined in Pacific Northwest Recovery Plan as the guiding bald eagle management protocol. Chapter V, Monitoring Item summary, Bio Elements, Wildlife: include the completion of bald eagle nest site management plans and give priority 1 status.

RESPONSE: The FEIS and Process Paper D discuss the goals and objectives of the Pacific Bald Eagle Recovery Plan. The Forest developed forestwide standards and guidelines that are responsive to the bald eagle recovery plan. Currently bald eagles in the Greater Yellowstone Area exceed the goals and objectives of the recovery plan. MO

COMMENTS: Incorporate reference to activity plan in South Fork Snake River Activity/Operations Plan prepared by BLM and Forest Service.

1446

RESPONSE: This is referenced in Chapter IV of the FEIS. RR

Bald Eagle - Correction/Definitions

COMMENTS: Correct paragraph 2 in bald eagle nesting habitat, where it lists 1992 Forest Service report with 1995 data.

1446

RESPONSE: This was corrected in the FEIS. RR

COMMENTS: Define "adverse impacts" by livestock use near bald eagle nests.

389

RESPONSE: This would include activity near the nest site which risks disturbing nesting eagles. Some examples include livestock persistently congregating near the nest or human activity necessary to manage livestock or an allotment which occurs near an active nest. RR

COMMENTS: Chapter 3, Bald Eagle Habitat: For consistency with NFMA, ESA and other bald eagle management standards: #A should be a standard to be consistent with #I; #B (second part) should be changed to a standard; #C and #J were listed as standards in the preliminary draft biological assessment (BA pages 15 and 18) but have been changed to guidelines here and in the current draft BA. Both items are under the control of the Forest Service and should be listed as standards to protect the species and its habitat; and #L should be a standard to be consistent with #M, wildlife management actions on the Forest.

1446

RESPONSE: For the Greater Yellowstone area, the bald eagle has exceeded all the goals and objectives of the Pacific Bald Eagle Recovery Plan. Forestwide standards and guidelines are the same that we have operated under for the past 12 years which has led to success. Therefore, no changes were warranted.

WILDLIFE - SPECIFIC SPECIES

Bald Eagle - Establish Stronger Protection

COMMENTS: Human activity should be prohibited, not just minimized in bald eagle nesting zones and use areas.

389

Need a more protective measure than "avoid" in bald eagle standards and guidelines. Use the same protective measure in Zone II relative to recreation site development because that is within the Forest Service's control.

1249

RESPONSE: Prohibiting human activity within bald eagle nesting zones is not practical and may not be necessary in most cases. Controlling the type, duration, timing, and distance of the activity is more practical and effective in protecting bald eagle nesting success. DD

COMMENTS: Chapter 3, Bald Eagle Habitat: Add standards restricting human entry and development within bald eagle zones 1 and 2 and within at least 1/4 mile radius of existing/new nests.

1446

RESPONSE: If this was done, fishing, boating and other recreation activities would be nearly eliminated on the South Fork and Henry's Fork of the Snake River. In the Greater Yellowstone area, the bald eagle population has exceeded all the goals and objectives of the Pacific Bald Eagle Recovery Plan. Forestwide standards and guidelines are the same that we have operated under for the past 12 years, with great success. Therefore the Forest did not elect to proceed with any serious, drastic measures. MO

COMMENTS: Develop a guideline to educate recreationists (e.g., floaters, hikers, campers, ATV users, etc.) about Zone 1 areas.

1446

RESPONSE: A guideline was not added as suggested. The Forest recognizes that public education is important to continued success of the bald eagle and we will take opportunities to do so in the future. MO

COMMENTS: Chapter 3, Bald Eagle Habitat, Standards and Guidelines: Add a guideline to protect alternate and potential nest sites from timber harvest, roads and permanent recreation developments.

1446

RESPONSE: The Forestwide standards and guidelines apply to all existing and newly occupied nest zones in primary use areas. MO

COMMENTS: Standards and Guidelines, #G: Bald eagle populations are doing well in the Greater Yellowstone Ecosystem (GYE), but in the rest of the Pacific Northwest they are not meeting recovery standards. Concern for nesting success should be reflected in all forestwide standards.

1446

WILDLIFE - SPECIFIC SPECIES

RESPONSE: The standards and guidelines in the Revised Plan will continue the success achieved so far on the Targhee and this is reflected in the Revised Plan direction. RR

COMMENTS: Because the bald eagle is threatened, use standards rather than guidelines in this portion of the document.

1446

Change guidelines to standards and the word "discouraged" to "prohibited".

1365

RESPONSE: Standards are used where total (unconditional) compliance is necessary to achieve a desired condition or goal and where we have absolute control over the outcome. There are many instances where standards would not be practical but guidelines would achieve the desired condition or goal. DD

COMMENTS: Explain that potential impacts to eagles and other threatened and endangered species (T&E) require ESA section 7 consultation with Fish and Wildlife Service.

1446

RESPONSE: Since this is a standard operating procedure, it is not reiterated in the Revision. National direction and established policy which exists in other official documents, such as Manuals, Handbooks, Executive Orders, and so forth, are not repeated in the Revised Plan but still will be adhered to. This official direction is referenced in Appendix A, National Goals Relevant to Land and Resource Management, Wildlife and Fish (FSM 2600), of the Revised Plan. DD/RR

COMMENTS: Guideline A and C should be a standard. State how activities will be restricted to protect bald eagle habitat.

1365

RESPONSE: This was not changed. The language, "minimize", connotes a guideline. The practical effect of implementing this direction would be the same if it were established as a Standard. RR

COMMENTS: Add a standard to monitor the effectiveness of bald eagle standards and guidelines.

1365

RESPONSE: The Forest monitors bald eagle habitat and compliance with standards and guidelines in the normal course of duties. A standard is not necessary. Monitoring bald eagle nesting population and the relationship to habitat changes is a Priority 1 monitoring item in Chapter V of the Revised Plan. This is sufficient to determine the effectiveness on the Plan direction for Bald eagles. DD/RR

COMMENTS: Change D to a standard and add, "prohibit new developed recreation sites or facilities in Zones 1 and 2 and to obliterate developed sites or facilities should they have a negative impact on bald eagles." Change L to a standard and include provisions for monitoring and evaluation.

1365

WILDLIFE - SPECIFIC SPECIES

RESPONSE: These recommendations were considered but not adopted. The direction as stated provides adequate protection for bald eagles. If monitoring determines that these actions are not effective or if recovery objectives are not being met then further action could be taken in the future with a Plan amendment. RR

Bald Eagle - Do Not Establish Stronger Protection

COMMENTS: If eagles establish new nest sites in areas already receiving human use, do not restrict the use since it is unnecessarily restrictive and lacks common sense.

413

RESPONSE: The Revised Plan has a bald eagle guideline 1 (g) that addresses your comment. MO

COMMENTS: Do not over-restrict human activities in bald eagle habitat. Remove direction to minimize all human activity from February 1 to August 1 in Zones I and II because they are unnecessary. Bald eagles *nest* quite happily in areas occupied by humans (e.g., NASA's space shuttle launch site is next to eagle nests). Provide education to ensure compatibility between humans and eagles.

734

RESPONSE: The direction as stated meets adequate protection needs of bald eagles yet still provides for human activity. The Forest will comply with the Endangered Species Act and the Revised Plan when managing bald eagle habitat. Research has found that individual eagles have individual tolerances to human activity. This is taken into account when managing human disturbance within bald eagle habitat. We agree that increased education would improve compatibility of humans and bald eagles. DD/RR

Bats

COMMENTS: Include bat habitat prescriptions and management, particularly as they relate to caves, abandoned mines and human activities (especially timber) in or near known bat habitats.

384, 389, 766

Do not mark caves or encourage this type of recreation because it causes a decline in the number of sensitive wildlife populations. Protect caves by making the guidelines standards. Restrict heavy equipment in or near thin-roofed caves if there is a potential for damage; retain vegetation in or near caves to protect the microenvironment; fell trees away from caves in areas where harvest is permitted.

1365

Standard for bat management should prohibit heavy equipment above any cave or abandoned mine known or suspected to be bat habitat; identify season of bat use and apply seasonal restrictions; provide a buffer zone of 500-foot radius around all bat roosts; and minimize human disturbances.

766

WILDLIFE " SPECIFIC SPECIES

Chapter 111, Objective, spotted bat and Western big-eared bat habitat: Recommend consideration of other aspects of bat ecology and emphasize roosting and foraging areas in the final plan.

1446

RESPONSE: The Revised Plan has standards and guidelines to protect bat habitat associated with caves and Forestwide standards and guidelines that maintain late successional forested habitat that will provide suitable bat habitat across the Forest. Site-specific analysis will be done when any activity occurs near caves or mines. Refer to the Standards and Guidelines for caves in the Revised Plan (Chapter 111, Part 1). Guidelines (see the glossary for a complete definition) are generally expected to be carried out. Deviation from a guideline requires documented rationale. MO/AS

COMMENTS: Targhee National Forest should work cooperatively with State wildlife agencies for surveys, long term monitoring and developing prescriptions for bats.

389

RESPONSE: The Targhee works cooperatively with State agencies in areas of common interest. RR

Beavers

COMMENTS: Reintroduce beavers to Yellowstone (ecosystem) because their dams would keep more water in the Forest, which would provide more fish for bears and fisherman, and water runoff would be more gradual instead of causing erosion.

468

Attach a time line to the implementation schedule for AIZs in Chapter IV for beaver reintroduction as well and provide more detailed plans in Chapter 3, 2.8.3 Aquatic Influence Zone, objectives.

643

RESPONSE: This is a Plan implementation concern. The reintroduction of wildlife species is the responsibility of the States of Idaho and Wyoming and the Forest cannot schedule it as one of its activities. Reintroductions are evaluated by the States on a case-by-case basis to ensure that private property and public interests are protected. We support reintroductions under these conditions. DD/RR

COMMENTS: The Forest needs more than just one reference (Objective 4) to beaver.

282

RESPONSE: The objective cited was changed to a goal since it was not time specific. The direction for aquatic resources in prescription 2.8.3 provides for beaver habitat, where they are present, or where the State may want to reintroduce them. RR

WILDLIFE - SPECIFIC SPECIES

Birds

COMMENTS: Protect birds, including songbirds, by protecting older forest habitat from fragmentation and develop management prescriptions for the following avian species dependent on the forest: northern goshawk, boreal owl, great gray owl, northern pygmy owl, northern saw-whet owl, Lewis' woodpecker, three-toed woodpecker, Williamson's sapsucker, and black-backed woodpecker.

318, 389, 1369

RESPONSE: The direction in the Revised Plan provides for maintaining effective habitat for these species through its wildlife [general habitat, goshawk, boreal owl, great grey owl, etc.), snag/cavity nesting habitat, properly functioning condition, and vegetation goals, objectives, standards and guidelines. This means that fragmentation will be avoided. RR/DD

Black Bear

COMMENTS: Oppose management for black bear security because it closes access for hunters and others; oppose bear habitat issue because it is misleading to the public.

46, 311

RESPONSE: Access considerations in the Revised Plan are related to a wide variety of wildlife species, such as elk, grizzly bears, wolves, deer and other fur bearers, not just black bears. The grizzly bear habitat issue is of national concern because the grizzly bear is listed as an endangered species under the Threatened and Endangered Species Act. MO

COMMENTS: Need black bear education program guidelines.

FS-9

RESPONSE: This is an implementation concern. The Revised Plan allows for Forest efforts to educate the public on bears. RR

COMMENTS: Require bear-proof dumpsters in developed campgrounds.

FS-9

RESPONSE: These are required in grizzly bear habitat. RR

COMMENTS: Change guideline prohibiting black bear baiting in grizzly bear habitat to a standard.

695

RESPONSE: Prohibition of black bear baiting in grizzly bear habitat is a separate special order which is separate from the Revised Plan. MO

Deer

COMMENTS: Clarify why the amount of winter range for deer is less than the present amount.

389

WILDLIFE - SPECIFIC SPECIES

RESPONSE: The Forest incorporated all the Idaho Fish and Game identification of winter range into the Revised Plan. RR

COMMENTS: Incorporate crucial deer winter range prescriptions into the Plan.
389

Create forestwide standards and guidelines for mule deer winter range.

1249

RESPONSE: Crucial winter range for elk and deer is included as a specific management prescription or is included in other prescriptions such as wilderness which provide adequate protection. The Forest added Forestwide standards that close all crucial winter range to cross-country snowmachine use. MO

COMMENTS: Include goals and objectives in the allotment management plan for the number of AUMs needed to sustain deer on their summer and winter range.

1206

RESPONSE: This recommendation was considered but not adopted. Direction in allotment management plans are plan implementation concerns and would be addressed in site-specific allotment analysis. The direction for livestock forage utilization includes use by wildlife. RR

COMMENTS: Secure deer habitat.

25, 766

RESPONSE: The Revised Plan maintains and restores deer habitat. DD

COMMENTS: Secure goat habitat.

25

Provide management direction for mountain goats. Include the Idaho and Wyoming State wildlife management agencies' goals, objectives and implementation process for mountain goats in Idaho and Wyoming.

389

RESPONSE: All mountain goat habitat is within Wilderness, proposed wilderness, or backcountry management prescriptions. There is no difference between the prescriptions between the alternatives. Those prescriptions provide adequate protection for mountain goat habitat. MO

COMMENTS: Address conflicts between mountain goat and domestic sheep such as displacement and potential for disease transmission from sheep to goats. Address specific conflict between domestic sheep and mountain goats in Neely Cove, head of Canyon Creek, Waterfall Canyon, Little Horn, Hell's Hole and the ridge between the headwaters of Waterfall Canyon and Little Elk Creek.

766

RESPONSE: There is no documentation of disease problems between domestic sheep and mountain goats. Our data indicates that displacement by domestic

WILDLIFE - SPECIFIC SPECIES

sheep is not a problem. The Palisades Ranger District is working with state fish and game departments to address site-specific conflicts. More information is in Process Paper D. MO

Harlequin Duck

COMMENTS: Change the guideline for Harlequin duck habitat back to a standard as written in the preliminary draft BA. Standards are more consistent with Forest Service commitment to manage for viable populations under NFMA and 36 CFR 219.19.

695, 1446

RESPONSE: A guideline is the appropriate measure. A standard would "prevent" establishing new trails, new roads, or new recreation facilities within 300 feet of any stream reach... regardless of the potential to negatively affect harlequin duck breeding activity. A standard would also prevent relocating an existing trail, road, or facility, even if the new location would reduce disturbance. DD

COMMENTS: Expand Harlequin duck habitat guideline to include all riparian zones and habitat, and tie it to more than a single species because this modification will benefit watershed and water quality, as well as the species.

1446

RESPONSE: This recommendation was considered but not adopted. See preceding response. The Revised Plan direction for Harlequin ducks is sufficient to provide effective habitat. This would be redundant to the Forestwide S&Gs for fisheries, water, and aquatic resources, and Management Prescription 2.8.3 for Aquatic Influence Zone which provide adequate direction beneficial to the duck and for maintaining and improving watershed integrity and water quality. RR

Hawks

COMMENTS: Enforce access restrictions to protect hawks.

(CROSS REFERENCE: Goshawk)

265

RESPONSE: Access restrictions will be enforced to protect a variety of resources. DD

Common Loon

COMMENTS: Develop a management prescription for the common loon because the existing breeding habitat on the Targhee National Forest is important to the continued nesting success of this small population.

389

RESPONSE: This recommendation was considered but not adopted. The Revised Plan direction for common loon is sufficient to provide effective habitat. RR

COMMENTS: Coordinate all management decisions, including the development of a management prescription, about the Fish Creek common loon habitat with Wyoming wildlife and fisheries personnel. Continue to allow angler access because Wyoming wildlife biologists report current public use in this area does not appear to have impacted loons.

389

RESPONSE: This is an implementation concern. Any proposals for management activities which involve common loon or other wildlife habitat will be coordinated with the respective State wildlife agency. Decisions about angler access are outside the scope of this analysis. RR

Moose

COMMENTS: Protect moose habitat by restricting ORVs and prohibiting new roads. (CROSS REFERENCE: Wildlife, Site Specific)

FS-9, 25, 62, 697, 766, 1331

Address moose winter range; create forestwide standards and guides for moose winter range and habitat and add language for moose to the winter range prescriptions.

F-G-1-P, FS-9, 389, 1247, 1249

Coordinate with Wyoming Game and Fish to manage moose winter range.

1249

RESPONSE: It is standard procedure to coordinate with the respective State wildlife agency on any proposals that may affect wildlife. The other recommendations were considered but not adopted. The Revised Plan direction is sufficient to provide effective moose habitat. Moose are generally not displaced by human activity. The Forestwide Standards and Guidelines for fisheries, water, and aquatic resources; access management; properly functioning condition; vegetation; and Management Prescription 2.8.3 for Aquatic Influence Zone provide adequate direction beneficial to the moose. RR

COMMENTS: Provide more moose hunting permits.

285

RESPONSE: The number, type, and location of available moose permits is controlled by the States of Idaho and Wyoming and is not within the authority of the Forest Service. DD/RR

Owl - Buffers

COMMENTS: Cite the science and basis for requiring a 20-acre buffer, greater than 40 percent forested and 1/2 mile strychnine buffer to protect habitat and existing owls; explain how this ensures protection. Cite the science and basis for requiring a 30-acre buffer to protect habitat and existing flammulated and boreal owls; explain how this ensures their protection.

1365

RESPONSE: The FEIS and Process Paper D cite the scientific references used and discuss the rationale for management for Forest owls.

WILDLIFE - SPECIFIC SPECIES

COMMENTS: Change the standard to "not manipulate vegetation within 20-30 acre areas around all active and historic nest sites," since it is not clear whether or not it forbids prescribed fire and grazing. Need a standard or guide to specify what management activities are allowed.

FS-9

RESPONSE: The standard refers to mechanical removal or manipulation of vegetation within the nest area, not grazing or prescribed fire. RR

COMMENTS: Standards and guidelines, Great Gray Owl Habitat: Increase the radius for use of strychnine poison for gopher control to 1 mile around all the great gray owl nest sites.

1446

Expand Standard 3 which says, "Don't allow use of strychnine poison to control pocket gophers within buffer around all active great gray owl nests," to include the 10 guidelines for gopher treatment within great gray owl activity areas.

FS-9

RESPONSE: These recommendations were considered but not adopted. The Revised Plan direction is sufficient to provide effective habitat for great gray owls. The Plan permits application of these guidelines if site-specific analysis at the project level determines that it is necessary. RR

Owl - Habitat

COMMENTS: Provide management prescriptions for boreal, great gray, Northern pygmy, and Northern saw-whet owls since these species are dependent on forested habitat for population viability.

389

RESPONSE: Forestwide standards and guidelines provide the appropriate method to manage these habitats. DD

COMMENTS: Provide an analysis on existing/planned owl habitat.

1369

RESPONSE: This information is found in Process Paper D. It is also discussed in the FEIS, Chapter 111, Affected Environment. "Planned" owl habitat is not part of the Revised Plan, however, maintenance of existing habitat is provided in the Revised Plan direction. RR

COMMENTS: Explain the analysis used and conclusion to, "only protect nest sites if located." Analyze existing and potential impacts on owls.

1369

RESPONSE: The existing situation is discussed in FEIS, Chapter 111, Affected Environment. Impacts are disclosed in Chapter IV, Environmental Consequences, of the FEIS. Analysis documentation is found in PROCESS Paper D. RR

WILDLIFE - SPECIFIC SPECIES

COMMENTS: Explain the term "late age classes" in the owl habitat guidelines as it relates to forest age, basal area, canopy closure, tree species and elevation.

1369

RESPONSE: "Late age classes" is synonymous with "late successional stages" found in the Glossary. Basal area, canopy closure, tree species or elevation are specific details that would be addressed at the site-specific level during project environmental analysis. RR

COMMENTS: Explain the reason for only protecting flammulated owl nest sites and not the surrounding habitat (since it all affects the owl).

1369

RESPONSE: The 30-acres encompass the entire home range for flammulated owls. The limited extent of manipulation of forest vegetation in the Revised Plan's decade is not expected to cause unacceptable impacts to owls. MO

COMMENTS: Explain/calculate the probability that owl nests will be located since this is the key factor in managing boreal and flammulated owls.

1369

RESPONSE: There is no calculated probability that owl nests will be located during project level planning, other than there is no certainty nor any expectation that all nests, without exception, will be discovered. This information is not essential to evaluating the effects of the proposed action or a reasoned choice among alternatives. Application of the standards are expected to maintain or restore existing owl habitat. RR

COMMENTS: Provide vegetation management after owls (flammulated, boreal and great gray) leave the nest in the fall the same as for goshawk.

413

RESPONSE: The Revised Plan's management direction for nest sites and territories applies year round. MO

Peregrine Falcons

COMMENTS: Protect all known peregrine falcons nest sites/cliffs from human activity.

389

RESPONSE: This is standard procedure under ESA. RR

COMMENTS: Protect timber sales and mineral extraction within defined buffers for known peregrine falcon nest sites. This should be a standard, not a guideline.

389

For peregrine guidelines #1: Add shooting ranges due to the disturbance

WILDLIFE - SPECIFIC SPECIES

caused by the Treasure Mountain Boy Scout Camp shooting range in Teton Canyon. Delete aircraft since the Forest Service has no jurisdiction over these.

FS-4

RESPONSE: This recommendation was considered but not adopted. We have no data suggesting that the shooting range is adversely affecting peregrine falcons. The Revised Plan direction is sufficient to protect peregrine falcons. Actions noted refer to agency actions--such as agency aircraft, equipment, or facilities--or third parties operating under a Forest Service authorized permit or contract. RR

COMMENTS: Peregrine standard: Replace herbicides and insecticides with pesticides and develop dates on restrictions.

FS-4

RESPONSE: This is not necessary to provide adequate protection for the falcon. Dates and other restrictions can be specified during project level analysis decision making. RR

COMMENTS: Peregrine guideline 1 should be a standard and it should clearly specify a review process for proposed projects.

1365

RESPONSE: A guideline is adequate and any review process is an implementation issue determined through project level analysis. RR

COMMENTS: First item related to peregrine falcon habitat in Chapter 3 was a standard in the preliminary draft BA but was changed to a guideline here and in the current draft BA which is inconsistent with Forest Service responsibilities under Section 7(a)(2) of ESA.

1446

RESPONSE: Peregrine falcons use a wide variety of habitats for foraging. Since the use of DDT has been stopped, falcon populations have increased in a wide variety of habitats. The guideline is appropriate given the wide variety of habitats and conditions which can be and are being used by peregrine falcons. MO

COMMENTS: Regarding Designated Wilderness Prescriptions 1.1.7 and 1.1.8: Items affecting listed peregrine falcon should be standards. Forest Service control over location of campsites and trails is consistent with responsibilities under Section 7(2)(2) FSM 2670 and NFMA 36 CFR to protect species and habitat without adverse effects by public forest uses.

1446

RESPONSE: A guideline is the appropriate measure. Guidelines are appropriate where variability occurs at the implementation level or desired goals or conditions can be achieved by more than one approach. Guidelines do not mean that compliance with them is discretionary and can be ignored. Variance from a Plan guideline requires documentation in the decision authorizing it. A

guideline provides for some site specific flexibility while still meeting the practical intent. RR

Raptors - Standards and Guidelines

COMMENTS: Raptor Nest Sites: Action should be listed as a standard for consistency with Forest Service policy and sensitive species protection; add a guideline to protect potential raptor nest sites for sensitive/listed species.

1446

Change the guidelines for raptor nest sites to standards.

695

The raptor nest site protection should be a minimum distance; this should be a standard, not a goal.

1273b

RESPONSE: The Revised Plan provides for nest site protection of sensitive species in Forestwide standards and guidelines. The broader guideline for Raptor Nest Sites (other than Threatened, Endangered and Sensitive Species) was dropped from the Revised Plan because the intent is to manage landscapes in their properly functioning ecological condition, which would provide adequate habitat for all species. RR

COMMENTS: General Habitat: Include protective measures for more than the nests of raptors. Provide management guidelines that protect foraging and post-fledgling habitat. Suggest what silviculture practices would or would not be allowed.

1249

RESPONSE: This recommendation was considered but not adopted. Threatened, Endangered and Sensitive Species raptors receive specific direction for habitat management which meets their recovery needs. For other species, the overall Revised Plan direction to manage for properly functioning condition, in ecological context, with emphasis on forest health, biological diversity, vegetation structure and composition which maintains plant and animal communities is expected to adequately meet general habitat needs. RR

Raptors - General Protection

COMMENTS: Cite the science and basis for the 2-tree-height buffer to protect nesting raptors, and explain how this ensures protection.

1365

RESPONSE: This guideline for Raptor Nest Sites (other than Threatened, Endangered and Sensitive Species) was dropped from the Revised Plan because the intent is to manage landscapes in their properly functioning ecological condition, which would provide adequate habitat for all species. RR

Red Squirrel

COMMENTS: Consider the red squirrel's sensitivity to fragmentation and identify existing and planned habitat conditions.

1369

WILDLIFE - SPECIFIC SPECIES

RESPONSE: Existing habitat is described in Chapter III of the FEIS, Affected Environment. "Planned" habitat is not proposed in the Revised Plan, other than that which will be maintained by implementation of the Revised Plan direction for wildlife, ecosystem management, forest health and properly functioning condition. RR

Sage Grouse - Treatments to Sagebrush Habitat

COMMENTS: To reverse declining trend of sage grouse, follow habitat treatment standards (Draft ID Sage Grouse Management Plan 1996-2000) which includes vegetation manipulation, grazing management, fire management and rehabilitation. Use caution for any treatments to sagebrush habitat until the causes for the significant decline in sage grouse can be determined. Any treatment needs to consider significant habitat reductions and fragmentation.

766

RESPONSE: Forestwide standards and guidelines were developed for sagebrush/grassland ecosystems on the Forest. These are based on the ecology and properly functioning conditions for sagebrush/grassland ecosystems. They will provide for suitable sage grouse habitat with conditions that historically existed within the sagebrush/grassland ecosystem. MO

COMMENTS: In low precipitation areas less than 11 inches, prohibit habitat treatment for 5 years. In high precipitation areas more than 11 inches, allow treatments only if sagebrush canopy cover is greater than 25%. Allow treatment only if area is less than 500 acres and more than 1.6 miles from existing treatments with less than 15% sagebrush canopy cover.

766

RESPONSE: These are site-specific implementation concern, to be conducted in the context of a Revised Plan guideline for sagebrush/grassland habitats. RR

COMMENTS: Prevent a reduction in average sagebrush canopy in herbicide or mechanically treated areas to less than 15% canopy cover in winter, brooding, or nesting habitat.

766

RESPONSE: This recommendation was considered but not adopted. The Revised Plan direction is adequate to provide effective habitat for sage grouse. More detailed specifications will be provided during project level analysis. RR

Sage Grouse - Manage Livestock

COMMENTS: Manage livestock for a healthy understory of perennial grasses and forbs and for a fall stubble height of greater than or equal to 7 inches. Manage livestock to produce a fall stubble height of greater than or equal to 4 inches in brood rearing areas.

766

RESPONSE: The Revised Plan provides for managing for a healthy understory of grasses and forbs. The upland and riparian utilization standards provide for adequate stubble height, respectively, to provide for healthy range

WILDLIFE - SPECIFIC SPECIES

ecosystems. If project level analysis identifies a need for more stubble height to meet sage grouse habitat needs, this specification can be implemented in the project decision. RR

Sage Grouse - General

COMMENTS: Use sage grouse as indicator species for other wildlife species dependent on sagebrush-grasslands.

766

RESPONSE: This recommendation was considered but not adopted. Management Indicator Species (MIS) were established in a series of three workshops in 1991-92, with Idaho and Wyoming fish and game departments, and in coordination with adjacent Forests' Management Indicator Species lists. Some additions were made throughout the revision process. Sage grouse was not selected as an MIS. More detailed information is provided in Process Paper D. The sagebrush/grassland community type will be managed to maintain a healthy ecological condition which would provide for adequate habitat for dependent species. RR

COMMENTS: Include in FEIS and FPR some objectives, standards and guidelines to maintain/enhance sage grouse habitat because sage grouse populations have declined in the Lemhi-Medicine Lodge and Centennial subsections.

1446

RESPONSE: Forestwide standards and guidelines apply and are sufficient to provide adequate habitat for sage grouse at the subsection scale. RR

Trumpeter Swan - Habitat

COMMENTS: Evaluate each trumpeter swan territory individually; summarize its production history over past decades, identify specific factors interfering with cygnet production, and correct those factors where possible. Develop swan habitat plans that are not elaborate, about five pages per site, and address past history of occupation and cygnet production, physical/chemical data, potentials and vulnerabilities, and actions to enhance and ensure long-term value to the population.

669

RESPONSE: This recommendation was considered but not adopted. The Revised Plan direction is adequate to provide effective habitat for trumpeter swan. Additional specifications may be made during a site-specific analysis, if it is determined that it is necessary for swan habitat needs. The Revised Plan permits these types of management actions if warranted to provide for swan habitat. RR

COMMENTS: Explain the biological basis for recommending habitat for 10 pairs of trumpeter swans and not 20-30.

1369

RESPONSE: This is described in Process Paper D. RR

WILDLIFE - SPECIFIC SPECIES

COMMENTS: Make Objective 2 (protect emergent vegetation) a standard and guideline.

669

RESPONSE: This recommendation was considered but not adopted. The Revised Plan direction is adequate to provide effective habitat for trumpeter swans. RR

Trumpeter Swan - Nesting sites

COMMENTS: Trumpeter Swans, Standards and Guidelines: Develop individual nest site plans for all active and historic territories. Plans should ensure proper guidelines are applied.

1249

RESPONSE: This recommendation was considered but not adopted. The Revised Plan permits this type of activity if site-specific analysis determines it is necessary for maintaining or improving swan habitat. RR

COMMENTS: Explain why there are no grazing standards for swan nesting areas; nesting cannot be managed without considering grazing.

1369

RESPONSE: Guideline A provides direction for controlling grazing which may affect swan productivity. RR

COMMENTS: Explain why there are no standards for disturbance of swan nesting.

1369

RESPONSE: There are standards and guidelines to limit this type of impact. These are adequate for protecting swans during the nesting period. RR

Human Access to Trumpeter Swan Habitat

COMMENTS: Prohibit ORV and human access in swan and waterfowl winter range wetland areas from December 1 to March 31 and provide an additional restriction to prohibit motorized access from November 1 - August 31 in trumpeter swan and waterfowl habitat to include protecting their nesting and brooding periods. Need education/signs about impacts of humans/motorized access in swan wetlands.

389

RESPONSE: These recommendations were considered but not adopted. The Revised Plan direction provides for mitigating human disturbance. The specific means to do so are highly variable, but can be equally effective. This detail is more appropriate for site-specific analysis and determination. RR

Trumpeter Swan - Management Plans

COMMENTS: Develop new objectives similar to plan for loons. Specific plans are needed to ensure that each territory remains suitable in the decade ahead.

669

WILDLIFE - SPECIFIC SPECIES

Define "active management" and what actions are necessary to maintain suitable water depths for swans in lakes and ponds (e.g., dredging).

1365

RESPONSE: These recommendations were considered but not adopted. New objectives are not necessary to adequately provide for swan habitat. Specific plans and 'necessary' actions are site-specific determinations to be identified at the project level. Generally, 'active management' means any agency proposed action in response to a need for manipulating conditions influencing swan habitat. RR

COMMENTS: Ensure that activities do not increase sediment loads in the streams; reduce sediment loads to protect trumpeter swan nesting habitat (which also produces numerous other environmental benefits to the Forest).

1365

RESPONSE: These are site-specific considerations for specific proposed actions. Forestwide aquatic resources Standards and Guidelines apply. For areas within the aquatic influence zone--management prescription 2.8.3--that direction applies. The Revised Plan is designed to minimize or prevent sediment delivery to any water body/delivery

Palisades Wetland Area

COMMENTS: Provide management direction for ORV travel and human access in trumpeter swan and waterfowl winter areas of the Palisades wetland area. Currently there is no analysis or consideration.

389

RESPONSE: This recommendation was considered but not adopted. The Revised Plan direction is adequate to provide effective habitat for trumpeter swans. RR

Wolves

COMMENTS: Oppose wolf protection efforts because tax dollars are used for wolf habitat; wolves feed on elk and disrupt their populations; and fear that wolves attack backpackers and cross-country skiers.

6, 285, 397, 468

Support wolf protection measures and protect wolf habitat.

697

RESPONSE: The Forest will comply with the Endangered species Act (ESA) and consult with the Fish and Wildlife Service on matters relating to gray wolf and all listed species. The Revised Plan provides for multiple use opportunity while meeting objectives for wolf recovery in the Greater Yellowstone area. This includes coordination with permittees, the recreating public, and others to avoid or minimize conflicts with wolves. RR

COMMENTS: Establish travel corridors and linkage zones for wolves.

1365

WILDLIFE - SPECIFIC SPECIES

RESPONSE: This recommendation was considered but not adopted. The wolf is a nonessential experimental population. The wolf reintroduction FEIS did not consider establishment of corridors or linkage zones essential for wolf recovery. RR

COMMENTS: Change wording in the EIS - Environmental Consequences and Affected Environment chapters-to allow full protection for naturally migrated wolves on the Targhee.

1273b

RESPONSE: This recommendation was considered but not adopted. The FEIS discloses the documentation of the environmental analysis of the proposed programmatic action and its alternatives, and their environmental effects, but does not establish direction for the Forest. This is only done in the Revised Plan upon signature of the Record of Decision. Revised Plan direction is consistent with direction under ESA for management of wolves on the Targhee. RR

Human Impacts on Wolves

COMMENTS: Impose land use restrictions for any area in which human activity might negatively impact wolves, including all active den sites regardless of how many breeding pairs are present in a recovery area. Consider wolf road densities. Roads used by recreationists have numerous wildlife impacts (Rost & Bailey 1974). Road densities greater than 0.61 km/square km adversely affect the suitability of potential wolf habitat because roads provide access to humans who hunt or accidentally kill them (Thiel 1985, Jensen et al. 1986, Mech et al. 1988, DeVos 1949).

1365

RESPONSE: These recommendations were considered but not adopted. The Revised Plan direction provides adequate direction for wolf management. RR

Wolves - Population Control

COMMENTS: "Experimental population" means any population (including any offspring arising solely therefrom) authorized by the Secretary for release..." and you need an objective to protect wolves not included in "experimental" population under the ESA.

1273b

Explain why there will be no standards and guidelines for wolves once their populations are maintained.

1369

RESPONSE: The FEIS for the Reintroduction of Gray Wolves stated that all wolves found in the wild at the time of the first release of wolves would be designated a nonessential experimental population. therefore, all wolves are now included in the rules and management direction developed by the US Fish and Wildlife Service for the wolf reintroduction. The Revised Plan incorporates the rules and management direction developed by the USFWS. In the final rule published in the Federal Register, November 22, 1994, the USFWS stated that the gray wolf reintroduction does not conflict with existing or

WILDLIFE - SPECIFIC SPECIES

anticipated Federal agency actions or traditional public uses of park lands, wilderness areas, or surrounding lands. The USFWS also stated that there are no conflicts envisioned with any current or anticipated management actions of the Forest Service. MO

COMMENTS: Define how conflicts between wolves and livestock will be solved while still maintaining a viable wolf population.

1369

RESPONSE The direction in the Revised Plan for gray wolf management defines this. Additional detail is a site-specific consideration and will be determined at the appropriate time to resolve conflicts. RR

COMMENTS: Gray Wolf Habitat - Standard 3: Indicate that the removal or resolution of attractants must precede any control action.

1365

RESPONSE: Determination of the problem status of wolves includes identification of any attractant that may be drawing wolves to livestock. No change was made to this direction. RR

COMMENTS: Gray Wolf Habitat - Standard 2: Identify more clearly what can occur (when grazing permit holders are allowed to harass adult wolves).

1365

RESPONSE: This is a site-specific determination that will be made at the time a permit is issued or modified, and incorporated into the terms and conditions of the permit. RR

COMMENTS: Gray Wolf Habitat, Standard 4: Last sentence about livestock depredation by female with pups is out of context (page 60257 Federal Register, V 59 N.224). Should read: "prior to the establishment of six breeding pairs, depredating females and their pups will be captured and released at or near the site of capture, one time prior to October 1. If depredations continue, or if six packs are present, females and their pups will be removed."

1446

RESPONSE: This was corrected in the Final Revised Plan. RR

WILDLIFE - THREATENED **AND** ENDANGERED SPECIES

COMMENTS: With only four species remaining on the sensitive species list for Idaho, there should be substantial relief from constraints in the Final Plan. Reevaluate the role of sensitive species and reduce restrictions because there are fewer candidate species. Sixty-one percent of people in the United States agree that threatened and endangered species should be protected, even if such protection results in negative impacts on humans. The Plan reflects the needs of four ESA species: bald eagle, grizzly, gray wolf and peregrine falcon; as well as non-listed native cutthroat trout and goshawk. Clarify the fourth paragraph, page 111-63, 1.1.8, how campsites will facilitate recovery of

threatened and endangered species, because there seems to be no connection between these points.

314, 1364, 1389, 1446

RESPONSE: The Revised Plan must meet the Threatened and Endangered Species Act and the Forest Service Sensitive Species Policy. we consulted with the Fish and Wildlife Service on these aspects of the Revised Plan. There are presently 24 species (12 animal and 12 plant) on the Forest that are Forest Service Region 4 Sensitive. There are presently 5 species (4 animal and 1 plant) listed as threatened or endangered. The Revised Plan provides effective protection for species of concern, while still providing for multiple use opportunities. Developed campsite facilities can concentrate use away from threatened or endangered species habitat or facilities such as bear-proof food boxes can reduce conflict possibilities. MO/AS/RR

Recommendations/Suggestions

COMMENTS: Add the statement, "preventing new listing of threatened or endangered species" to the sentence on Ecological Component on Page 11-2 Clarify that designation of species demanding special management is not optional. Change definition to include all species of plants and animals that require special consideration, this should not be a Forest or Regional decision. Restrict logging, snowmobiles, and open roads/trails to better protect threatened and endangered species habitat.

179, 325, 389, 1365

RESPONSE: Since the prevention of new listings of threatened or endangered species is agency policy, it need not be restated in the Revision. The Revision includes several broad-scale conservation measures designed to protect threatened, endangered, and sensitive species. In addition, further analysis of threatened, endangered, and sensitive species is conducted during the planning of on-the-ground activities. These analyses identify specific measures which can be used to best protect species and their habitats. DD

COMMENTS: Define the term "viability" as a population essentially certain to persist (99% chance of persistence for at least 1000 years), and is well-distributed in current range. If population viability is in doubt, extend range as necessary. Give priority to habitat needs of all threatened and endangered species, including in Aquatic Influence Zones. Map or determine distribution, status and trend of all threatened and endangered species specific prescriptions, standards, guidelines and recovery objectives. Meet all legal and biological requirements. Gather and evaluate data on effects of past management plan; research current status, distribution and threats.

389, 1273b, 1365, 1368, 1369

RESPONSE: A "viable population" is defined in the Revision as the number of individuals of a species sufficient to ensure the long-term existence of the species in natural, self-sustaining populations adequately distributed throughout their range. The Revised Plan places special management emphasis on the recovery of threatened, endangered, and sensitive species as well as the maintenance and restoration of aquatic influence zones. Chapter III of

the FEIS describes the current status, distribution, and threats of all threatened, endangered, and sensitive species while Chapter IV evaluates the past and possible future effects on these species. DD

COMMENTS: The Endangered Species Act may be violated if toxicants are used in areas that are or may be inhabited by threatened or endangered species. Develop a method for monitoring sensitive species and their habitat in order to meet statutory requirements of NFMA. Develop management practices to ensure sensitive species do not become threatened or endangered. Guidelines are provided for only two owl species and the goshawk; monitoring proposals are provided for only grizzly and goshawk.

389, 1273b, 1365, 1369

RESPONSE: The use of toxicants is largely controlled through the application of best management practices (BMP's) and Manual and Handbook guidance and is, therefore, not reiterated in the Revised Plan. A thorough on-site evaluation of threatened, endangered, and sensitive species is always conducted prior to the use of toxicants. It is agency policy to monitor all management indicator and sensitive species. Your concerns are covered in the Revised Plan and FEIS and Process Paper D. Monitoring plans were developed for all the Management Indicator Species. See species specific responses in Appendix A. DD/MO

COMMENTS: Produce better science, more standards and guidelines, or quantifiable objectives for indicator or sensitive species. Monitor and evaluate impacts of the past 10 years; monitor old growth habitat. Require wildlife surveys for sensitive species. Make a goal to support existing populations and distribution of non-game birds and mammals listed as species of special concern. Meet legal and biological requirements of forest carnivores. Provide standards and procedures for selection of sensitive species.

389. 1273b, 1365, 1369

RESPONSE: The FEIS includes more scientific findings and analysis of management indicator and sensitive species than did the draft. The Revision includes new goals, objectives, standards, guidelines, and monitoring requirements directed at improving management indicator and sensitive species. Impacts of the past 10 years are documented in the Analysis of the Management Situation (AMS) and in Chapter IV of the FEIS. Sensitive species are selected by the Regional Forester through a process unrelated to the Revision. The selection process is being reviewed by the Regional Forester and may be revised in the future. DD

Specific species

COMMENTS: Protect wolverines, wolverine natal dens, and reproduction areas from skiers, snowmobiles and snowshoers, particularly in higher elevations (above 8000 feet). Little is known about wolverine habitat and habits, which has resulted in little management attention. The Targhee may provide a critical link between Montana, Central Idaho and Wyoming wolverine populations, and this link should be protected. Provide an 8km buffer around predicted wolverine habitat from January 1 to May 31.

FS-3, 766, 1185, **1348**

WILDLIFE - THREATENED AND ENDANGERED SPECIES

RESPONSE: Chapter V of the Revised Plan contains a priority 1 monitoring item to monitor population trends of marten, fisher, and wolverine and their relationships to habitat changes. We added two new Objectives for wolverines to the Revised Plan: within two years, a GIS inventory will be completed to identify potential wolverine natal den sites, and within four years, the Forest will survey these potential den sites to document wolverine presence. The Revision does not require buffers around predicted habitat. DD

COMMENTS: Provide recovery objectives and strategies; determination of distribution, status and trend; management priorities; and monitoring plans for lynx, fisher, and wolverine as is required by Forest Service management plan. Consult lynx and wolverine Draft Conservation Strategies. Develop road density thresholds relative to habitat segments of wolverine, martin, lynx and neotropical migrant songbirds. Discuss management objectives for fisher, marten and wolverine rather than just grizzly bear, wolf and goshawk.

389, 410, 643, 1273b, 1361, 1365, 1368

RESPONSE: Process Paper D and the FEIS discuss the habitat needs for lynx, fisher, and wolverine and neotropical migratory songbirds. Two wolverine objectives were added the Revised Plan. MO

COMMENTS: Provide prescriptions, standards and guidelines, research, evaluation and protection of pine martens, trumpeter swans, great gray owls, cavity nest birds, bald eagles, peregrine falcons, spotted frog, Harlequin duck, goshawk, lynx, marten, fisher and wolverine. Although some of these species have been removed from federal candidate lists, they should be maintained on forest lists as indicators of forestwide health and habitat. Protect and monitor old growth habitat. Restrict winter recreational activities in crucial breeding or denning areas.

389, 643, 1273b, 1365, 1368, 1446

RESPONSE: Chapter III of the Revision includes specific management direction for trumpeter swan, great gray owl, cavity nesting species, bald eagle, peregrine falcon, spotted frog, harlequin duck, goshawk, wolverine, and other sensitive or management indicator species. Chapter V includes a priority 1 monitoring item to monitor population trends of marten, fisher, and wolverine and to determine their relationships to habitat changes. Chapter III of the Revision contains standards and guidelines to direct the management of old growth and late seral forest stages. The Revision does not restrict winter recreational activities within breeding or denning areas. DD

WILDLIFE - TIMBER

Manase for Wildlife not Timber Harvests

COMMENTS: Use Forest Service Survey (issued by Jack W. Thomas) that shows most Americans want forests managed for recreation and wildlife protection, not lumber and commercial products. (CROSS REFERENCE: Recreation; Miscellaneous)

1364

RESPONSE: The Forest Service operates within the direction of various laws, regulations, executive orders, and other policy instruments. "Multiple Use" is an established maxim in these policy shaping authorities. The Revised Plan provides for recreation opportunity, effective wildlife habitat, and production of forest resources, including wood products, in a balanced manner.
RR.

COMMENTS: Explain the reasons for determining how many and what acres can be harvested while still maintaining native species of wildlife. (CROSS REFERENCE: Timber; Wildlife)

1369

RESPONSE: Some of the standards and guidelines in the Revised Plan are used to determine how much harvest can occur and where. Examples are guidelines for primary cavity nesting species and goshawk management. A goal of the Revised Plan is to maintain or enhance wildlife biodiversity.

This is a site-specific implementation question when individual projects are proposed. For the Revised Plan, the process used to identify suitable acres and sustainable harvest levels is described in detail in Process Papers B, "FORPLAN Analysis", and C, "Tentatively Suitable Timber Analysis." The effects of the selected level of harvest by alternative are described in Chapter IV, Environmental Consequences, of the FEIS. The rationale for selecting the harvest level in the preferred alternative 3M is described in the Record of Decision. RR/CC

Curtail Timber Harvests when Negative Impacts to Wildlife are the Result

COMMENTS: Assess existing native wildlife populations, source habitats, suitability of habitats and allow timber harvest only if further timber reductions are deemed appropriate in light of this information.

1369

RESPONSE: In the FEIS, chapter III populations data are stated for grizzly bear, gray wolf, primary cavity nesters, boreal owl, great gray owl and flammulated owl. Goshawks have been monitored on the Forest for a number of years. During site-specific analysis, surveys are typically completed for various wildlife species which may occur in the specific analysis area. .

This is an implementation issue for specific project proposals. Analysis of the affected environment is conducted when these types of proposed actions are made and may involve some or all of these items. The Forestwide and specific Management Prescription Standards and Guidelines provide direction for mitigating adverse impacts to wildlife in site-specific project proposals. RR/CC

COMMENTS: Restrict timber harvesting in areas where it would have the most negative impact on fish and wildlife.

239

RESPONSE: Many areas in the Revised Plan are not included in the suitable timber bases. Some of these include the aquatic influence zones, grizzly bear core areas, and recommended Wilderness.

WILDLIFE - TIMBER

Limitations on timber harvest are provided where unacceptable adverse impacts to wildlife resources would occur. The forestwide and specific Management Prescription Standards and Guidelines provide direction for mitigating adverse impacts to wildlife in site-specific project proposals.
RR/CC

COMMENTS: Individual or cumulative impacts from some timber harvests may adversely affect BLM management objectives for water quality, riparian, big game habitat, raptor nesting and recreation activities. Analyze these possible effects. Areas identified by Department of Fish and Game as summer and fall crucial habitat and migration habitat may be fragmented by timber harvest schedule.

1446

RESPONSE: The Forest analyzed and realized the past, present and future cumulative effects of timber harvesting. We considered other agencies' objectives. The Revised Plan meets water quality, riparian, big game habitat raptor nesting and recreation activities needs through forestwide standards, guidelines, goals, objectives and prescriptions. The Forest added standards and guides for sensitive raptor species and new prescriptions which will result in more cover being retained over time.

During a site-specific analysis, adjacent land ownerships, including BLM, are considered during assessments. Where anticipated impacts are identified, coordination with BLM may occur to minimize adverse cumulative effects. RR/CC

Address Harvests Designed to Improve Wildlife Habitat

COMMENTS: oppose cutting more trees to improve elk and grizzly habitat because it is ridiculous, in lieu of safe corridors between ecosystems.

51

RESPONSE: Your comment is noted. RR

COMMENTS: Provide information about how past "heavy" timber harvest has impacted native wildlife species, especially in the lodgepole pine salvage areas, and how it has not/will not significantly impact wildlife viability. (CROSS REFERENCE: Timber)

1369

RESPONSE: The Revised Plan estimates less than three percent of the forested acres will have vegetation management in the next decade. As discussed in the FEIS, the proposed treatments are expected to provide for viable populations of wildlife species.

Discussion of past timber harvest can be found in the Analysis of Management Situation and the FEIS, chapter 111, Affected Environment. The cumulative effects of past timber harvest in the lodgepole can be found in the FEIS, Chapter IV. RR/CC

COMMENTS: Define which range timber harvests constitute wildlife improvements and show how you will determine when optimum conditions require timber harvest

on these rangelands. Define your criteria for initiating timber harvests.

1369

RESPONSE: Specific types of timber harvest will be analyzed during implementation of the Revised Plan. Timber harvest could be initiated after an assessment is done which determines ecosystems are not functioning properly or that the existing condition of an ecosystems is not in a desired condition based on goals and objectives outlined in the Revised Plan.

These considerations are more related to a site-specific proposal which may involve different variables that cannot be enumerated in a Forest Plan's programmatic analysis. The Properly Functioning Condition section of Chapter III, Revised Forest Plan, describes the broad goals and objectives where these types of proposals may be appropriate. The Vegetation section of the same chapter describes objectives for treating landscapes to achieve a variety of desirable conditions. RR/CC

COMMENTS: Standards and Guidelines - Size of Harvest Units and Leave Blocks/Strips: To benefit wildlife, adopt an ecological approach to silviculture standards and guidelines. Cite scientific data to demonstrate light, wind and moisture regime. Vertical stratification of vegetation may be such that an area is no longer a "created opening". Standardize maximum clearcut size.

1446

RESPONSE: Chapter III of the Revised Forest Plan Ecological Processes and Patterns, describes the direction for managing Forest resources in an ecological context. Local environmental variables such as light, wind, and moisture are site-specific in nature and outside the scope of this programmatic analysis. Clearcut size is stipulated by Forestwide standards and guidelines and, where noted, in specific Management Prescriptions. RR

Leave Timber for Wildlife Habitat

COMMENTS: Prohibit burning of slash after logging. Slash is an important habitat for toads, chipmunks, martens and other wildlife species.

1204

RESPONSE: The Revised Plan's goal is to have appropriate fuel loading which will meet wildlife needs and fire objectives. Post logging treatments are determined in a site-specific analysis and different alternatives to burning may be considered, depending on what the objective is.

The Revised Plan provides down-woody debris requirements for wildlife habitat and long-term soil productivity, within reasonable fuel loading risk. Burning of activity fuels is permitted within these guidelines. RR/CC

COMMENTS: Do not cut 7.5 MMBF of unsuitable timber over the next 10 years because "unsuitable" timber is necessary to preserve wildlife habitat/species and it is destructive to the environment.

167

RESPONSE: The Revised Plan limits the amount of volume that would be removed from lands not included in the suitable timber base to twenty million board

feet per decade. The Revised Plan allows up to a maximum of 20 MMBF harvest from unsuitable lands. This is not an objective, however, but a ceiling to disclose a maximum level, which was not identified in the Draft Plan and DEIS. There are no plans presently to harvest to that level. The purpose of such harvests would be to enhance or maintain a desired ecological condition, such as aspen regeneration where aspen is being eliminated by conifer succession, not wood production. In most cases, the intended effect would be to improve biodiversity and wildlife habitat. RR/CC

Protect Wildlife in Timber Management Prescriptions

COMMENTS: Either provide habitat for all wildlife, including old growth, or call it timber management; it is misleading to call these areas big game summer habitat/wildlife areas when they could be completely harvested within 30-40 years.

1369

RESPONSE: Many standards and guidelines in the Revised Plan restrict areas from being completely harvested. Included are guidelines for old growth habitat, hydrologic disturbance, and percent of an analysis area in a mature age class.

When done appropriately, timber harvest is not inconsistent with providing effective wildlife habitat. Where management prescriptions, such as 5.4 or 5.3.5, emphasize wildlife habitat, harvest must be consistent with maintaining or enhancing wildlife habitat. The Targhee is moving from an emphasis on timber management to vegetation management for a broader array of objectives. Chapter III, Forestwide Standards and Guidelines, Vegetation, describes the goals and objectives of vegetation management through timber harvest. RR/CC

COMMENTS: Include wildlife standards in all timber emphasis areas or explain the reason for creating these "wildlife sacrifice areas." Significant impacts are inevitable on big game security, old growth species and species affected by habitat fragmentation.

1365, 1369

RESPONSE: The Revised Plan has wildlife standards and guidelines in the Forestwide section and in the management prescription section. If a specific prescription area does not have wildlife standards and guidelines, then the Forestwide standards and guidelines apply.

There are no "wildlife sacrifice" areas proposed in the Revised Plan. Wildlife standards and guidelines are provided in Forestwide and Management Prescription direction which permit or emphasize timber harvest. Chapter IV, Environmental Consequences, describes the effects of implementing the selected Alternative 3M. The Revised Plan meets the goals of the Recovery Plans for threatened and endangered species, such as grizzly bear, bald eagle, and peregrine falcon, meets ninety-one percent of the State goals for elk vulnerability, and provides for maintenance of old growth and late successional forest. Habitat fragmentation from past harvest practices will be a consideration in any future proposals to manipulate vegetation. RR/CC

COMMENTS: The Plan needs a wildlife standard in timber management areas that will protect habitat for wildlife dependent upon older forest habitat in large, unfragmented blocks.

1369

RESPONSE: A set of forestwide guidelines was added to the Revised Plan for maintenance of old growth and late seral forest stages in Chapter III of the Revised Plan. CC

COMMENTS: Evaluate the impacts of big game security in timber management areas and show minimum acceptable levels for big game security. Show all significant impacts.

1369

RESPONSE: Chapter IV, Environmental Consequences, describes the effects of implementing the selected alternative 3M on elk vulnerability. RR

COMMENTS: Raise the minimum security standard needed to hold big game in a big game emphasis area above 30%. because one 250 acre security patch for an entire management area of thousands of acres is not enough.

1369

RESPONSE: This change was not made. The proposed standard actually provides for more than one **250** acre block and is sufficient to provide security for big game. CC

COMMENTS: Evaluate the impact of roads on wildlife in timber management areas. Add standards. Show expected wildlife use and population impacts.

1369

RESPONSE: Viability of various wildlife species is discussed in the FEIS. Open motorized roads and trails are used to evaluate impacts to wildlife using the elk habitat effectiveness model and the elk vulnerability model. These effects are displayed in Chapter IV of the FEIS.

The Revised Plan includes standards for motorized open road density limits to maintain elk security and reduce grizzly bear vulnerability. Chapter IV, Environmental Consequences, describes the effects of implementing the selected alternative 3M on wildlife. RR/CC

COMMENTS: The last item under the standards and guidelines for the Management Prescription Timber Management (Big Game Security Emphasis) should be changed to read as follows: No timber harvesting activity or similar type of disturbance activity can occur within the security area during the time it is designated as a security area. Security area designations will be at least 10 years in duration. New security areas will be designated and protected at least 18 months prior to entry into a currently designated security areas.

(S)

643

RESPONSE: This change was not adopted. The standard as presently worded is sufficient to meet the intent of providing adequate security for big game. RR/CC

Address Habitat Fragmentation Caused by Timber Harvests

COMMENTS: Evaluate the impacts of existing fragmentation caused by timber harvest and road-building and explain how the Preferred Alternative will change fragmentation patterns.

1365

RESPONSE: Impacts of road building and timber harvesting are discussed in the FEIS. All alternatives that were considered in detail discuss impacts on connectivity (inverse of fragmentation), wildlife habitat, old growth and late seral stages etc. **CC**

COMMENTS: Address edge effects in regards to quality of remaining habitat and include changes in forest microclimate, reduced reproduction success of forest songbirds, and the proliferation of shade-tolerant weedy plant species. Fragmentation leads to the decline of remaining habitat due to edge effects.

1365

RESPONSE: Due to your comments, the Forest added a section on neotropical migratory birds and the effects of timber harvesting in the FEIS. This section discusses what is currently known about effects of Forest fragmentation and edge on songbirds in the Rocky Mountains. The Revised Plan recognizes the need to consider natural patch sizes and historic vegetation patterns when we do vegetation management. Refer to Process Paper D for more information. See the section on Noxious weeds in Appendix A for a response to your concern about weedy plant species. MO

Age Class Diversity

COMMENTS: Define why a variety of successional stages is a management objective and why it is needed to maintain species of all native wildlife and connectivity.

1369

RESPONSE: The objective of managing for an array of successional stages is to improve the overall biodiversity in sections of the Targhee. Mixes of successional stages and the maintenance of key species (such as aspen) makes the ecosystem more resistant to perturbations and more resilient when perturbations occur (keeps the systems from becoming simplified). Refer to the Properly Functioning Condition section of the Revised Plan under "Ecological Processes and Patterns", Chapter 111. An array of ecological indices (such as patch size, patch shape, connectivity, diversity) are being considered at the Forest's landscape level analysis and are being evaluated when considering management options. The intent of the Revised Plan is to introduce some of these key concepts and to lay the foundation for finer levels of analysis that are or will be occurring on the Forest. DM

COMMENTS: Old growth for virtually all forest types is, on a regional scale, far below historic levels, thus the appropriate application of RNW is dependent on scale.

643

RESPONSE: Your comment is noted. Scale is an important consideration in any analysis, including RNV. A set of forestwide guidelines was added to the Revised Plan for maintenance of old growth and late seral forest stages in Chapter III of the Revised Plan. RR

COMMENTS: Conservation should focus on older forests rather than increasing age class diversity across the Targhee National Forest and providing open habitats (e.g., DFPR, Page 111-129; DFPR, Page 111-33; DFPR, Page 111-41) because over the past century logging has replaced old growth with early habitat over vast areas throughout the Interior Columbia River Basin.

643

RESPONSE: The Targhee has a large proportion of forest age classes in late successional, mature condition. The proposed level of vegetation manipulation in these age classes is still quite small and will not substantially reduce this amount of late successional forest. A set of forestwide guidelines was added to the Revised Plan for maintenance of old growth and late seral forest stages in Chapter III of the Revised Plan. RR

Old Growth Habitat

COMMENTS: Measure viability of late successional forest by distribution, patch size and connectivity for wildlife habitats.

1369

RESPONSE: Discussion of these variables can be found in Chapter IV, Environmental Consequences, of the FEIS. RR

COMMENTS: Demonstrate that the guidelines for sensitive species in older forest habitat are not arbitrary; describe your sources and explain why the new guidelines are so different from current recommendations.

1369

RESPONSE: The FEIS and Process Paper D document literature sources and the analysis used for sensitive species and older Forest habitats. MO

COMMENTS: For species dependent on older forest habitat, consider a long-range habitat strategy that is not dependent upon the Forest's ability to locate nests.

1369

RESPONSE: A set of forestwide guidelines was added to the Revised Plan for maintenance of old growth and late seral forest stages in Chapter III of the Revised Plan. These will provide adequate habitat for old growth dependent species. The Forest Plan represents a programmatic long-term strategy to provide for these resources. RR

COMMENTS: Standards, guidelines and prescriptions do not adequately deal with objectives for managing old growth habitat for pine martens, great gray owls, or cavity nesting birds. (CROSS REFERENCE: Wildlife, Snags/Cavity Nesters)

389

WILDLIFE - TIMBER

RESPONSE: A set of forestwide guidelines was added to the Revised Plan for maintenance of old growth and late seral forest stages in Chapter III of the Revised Plan. The Plan also provides standards and guidelines for habitat maintenance for these species. RR

COMMENTS: Monitor the golden-crowned kinglet, pine marten, boreal owl, brown creeper, red crossbill and northern three-toed woodpecker. They could be affected by the harvest of old growth.

1365

RESPONSE: The Revised Plan provides for monitoring the boreal owl, pine marten and northern three-toed woodpecker: all are Management Indicator Species (MIS). The boreal owl and northern three-toed woodpecker are also R-4 Sensitive species. The others are not proposed to be monitored presently. Should the need arise to conduct monitoring of one or more of these species, the Revised Plan provides for doing so. It is not necessary to monitor all species to provide adequate habitat. RR

COMMENTS: The Revised Plan makes no provisions to increase old growth habitat without undergoing a forest plan amendment. This seems inconsistent with the flexibility that the timber and range programs have to enlarge a timber sale area or increase the stocking levels of livestock with only minor National Environmental Policy Act documentation. The same guidelines should also apply to increasing old growth acreage.

389

RESPONSE: The Forest presents additional information in the FEIS about the amounts and distribution of old growth and late successional Forest habitat. The Revised Plan would only alter the amount of late successional forested acres by 2.5%. Therefore, almost all the forested late successional acres will move into the old growth in the first decade. MO

COMMENTS: No objectives are specifically tied to maintaining old growth vegetative diversity.

389

RESPONSE: A set of forestwide guidelines was added to the Revised Plan for maintenance of old growth and late seral forest stages in Chapter III. Forestwide goal statements provide for biodiversity of habitats and plant communities, which include old growth; vegetation goals include biological diversity of plant communities and maintenance of vegetation structure, composition and distribution across landscapes, again, including old growth. RR

COMMENTS: The Forest would lose far more than it would gain from harvesting timber on the corridor in the Big Holes because this area is important for wildlife; timber cutting would increase chances of fire; unsightly clearcuts will destroy the aesthetics of this area and devalue home owners' property.

325

RESPONSE: The level of potential harvest in this area is limited and can only be done consistent with protection and maintenance of other valuable

resources, such as wildlife, recreation, visual quality or wilderness character. Most of the Big Holes are in a semi-primitive motorized or recommended wilderness category. A small proportion is timber management for big game security emphasis. Any proposed harvest in the vicinity of private lands, should it occur, would include mitigating visual impacts and would be primarily focused on fuels hazard reduction in the urban-wildland interface or on wildlife habitat improvement. RR

WILDLIFE - WINTER RANGE

Protect Winter Range

COMMENTS: Protect, maintain, and enhance wildlife (big game) winter range including "crucial", "critical", "lower", "winter feeding", and "potential" winter range. Protect winter range protected to improve the quality of hunting and to carry out proposals of Idaho Fish and Game and Wyoming Game & Fish.

FS-1, F-G-1-P, **F-G-1(475)**, 136, 150, 157, 161, 162, 174, 175, 179, 180, 185, 189, 193, 203, 206, 209, 226, 252, 278, 280, 387, 645, 659, 669, 690, 695, 697, 766, 1245, 1247, 1270, 1388

RESPONSE: The Forest worked with Idaho and Wyoming Fish and Game Departments to identify the critical or crucial elk and deer winter range areas on the Forest. By protecting elk and deer winter range, many other wildlife critical winter range areas are also protected. In the Revised Plan, all elk and deer winter range areas are closed to cross-country snowmachine use. In some places, the elk and deer winter range areas fall within other management prescriptions, such as wilderness, proposed wilderness, wild and scenic and recreational rivers, and grizzly bear habitat. Even though they are within other management prescriptions, the habitat components that make them winter range areas are protected. **MO**

Manase Access to Winter Range

COMMENTS: Limit access for cross-country skiing, downhill skiing, and dog sledding to corridors where impacts to wintering big game are minimized.

(CROSS REFERENCE: Snowmobiles)

F-G-1-P, 150, 161, 162, 174, 227, 293, 389, 645, 669, 695, 697, 1247

Close winter range to any motorized vehicles, except on designated routes, from late fall until spring.

219, 293, 1312, 1395

Keep motor vehicles out of certain areas to protect the animals when their energy reserves are low in the winter.

179, 185, 697

Close access to winter areas, but do not institute complete closures.

66

By December 15 the hunting seasons are over and people are far from game winter areas.

289

WILDLIFE - WINTER RANGE

Science clearly shows that protection from disturbance in winter is a crucial factor to individual survival and recruitment rates.

766

RESPONSE: In the Revised Plan, all elk and deer winter ranges are closed to cross-country snowmachine travel to protect wintering big game animals during a time of the year when they need to conserve as much energy as possible. Working with the Idaho and Wyoming Fish and Game agencies, the Forest identified the crucial mid-to-late natural elk and deer winter ranges on the Forest. Crucial winter ranges are those areas which determine a population's ability to maintain itself at a certain level over the long term. MO/AM

COMMENTS: Address horn hunting in big game winter range.

293, 697

RESPONSE: We have no data which indicates that horn hunting on big game winter ranges on the Forest is at a level that is causing detrimental impacts to big game populations. Even though horn hunting is at a very low level on the Forest, horn hunters will have to abide by the Revised Plan standards which close all elk and deer winter ranges to cross-country snowmachine travel during the winter season. Also, horn hunters will not be able to travel on foot or horseback on winter ranges with the 2.7 (a) management prescription during the winter season. MO

COMMENTS: Regarding the topic of Recreation/Goal-Winter Recreation, minimize winter recreation use in habitats for all threatened & endangered species, candidate, and sensitive species in addition to big game; reference & incorporate Teton Basin Ranser District Teton Front Winter Recreation Plan into big game winter habitat objectives.

1446

RESPONSE: The Revised Plan provides direction for protection of winter range through access management in 2.7 management prescription standards and guidelines and Forestwide Standards and Guidelines for Threatened, Endangered and Sensitive species. RR

Monitor Access to Winter Range

COMMENTS: Worthwhile to establish a standard and a monitoring plan for total use (both wildlife and livestock) in many areas.

643

RESPONSE: The forage utilization guidelines in the Revised Plan include both livestock and wildlife utilization. MO

COMMENTS: Change monitoring frequency for the wildlife/recreation conflicts to weekly in 20% of winter range.

1365

RESPONSE: This recommendation was considered but not adopted. The Revised Plan monitoring item is adequate to identify trends and effectiveness of Plan direction for mitigating recreation and wildlife conflicts; precision and

reliability are 50-75%. The intent is to provide a realistic monitoring program that reflects priorities. RR

Maps/Prescriptions

COMMENTS: Map winter range using scientific data.

FS-4

Map the entire Idaho Fish and Game proposal in Prescription 2.7 (a and b).

161, 617, 690, 766, 1194

Protect all big game range defined by Wyoming Game & Fish.

FS-1, FG-1-P, 161, 1247

Clarify on travel maps that closures apply to all roads/trails - not just system roads.

643

Consider increasing winter range because wildlife numbers are increasing and there is not adequate predator pressure or winter range to support the increase.

432

Include deer, elk, and moose winter range and to a higher level that was indicated in Forest Service memo 2/18/92.

389

Since the Forest agrees that winter range is the determining factor in populations' ability to maintain itself over the long term, explain why the proposed prescription winter range 2.7 is even smaller than the areas mapped under current LMP.

766

Incorporate crucial elk, moose, & deer winter range prescriptions into the Plans (areas managed under a winter range prescription in the previous plan).

389

Use the elk and deer prescription wherever there is winter range. Since you say winter range is so important. Italian Peaks and Bear Creek have a range prescription rather than an elk and deer prescription.

643

Include all crucial deer and elk winter range on Map 24 within Management Prescription 2.7 (a-c).

643, 1401

RESPONSE: We worked with the Idaho Department of Fish and Game, and the Wyoming Game and Fish Department to identify the crucial elk and deer winter range areas on the Forest. This was not an easy task because winters are highly variable, and animals are distributed differently in different years depending on winter severity.

Not all of the crucial elk and deer winter ranges were given the winter range management prescriptions (2.7 a or 2.7 b) because some of these winter range areas are in management prescriptions such as wilderness, proposed wilderness, or grizzly bear habitat, and these other management prescriptions provide protection and management direction which is compatible with the needs of winter range. All of the crucial elk and deer winter ranges

are closed to cross-country snowmachine use during the winter period, regardless of which management prescription they are within.

At this time, moose winter range prescriptions are not considered necessary because of the wide range of habitats used by wintering moose and their adaptability to human disturbance. MO

Quality of Winter Range Vegetation

COMMENTS: Improve the condition of big game winter range and protect from degradation from overgrazing by sheep and other domestic livestock, conversion of agricultural land, growing communities and traffic.

293, 389, 643, 1365

RESPONSE: The forage utilization standards in the Revised Plan include the needs of wildlife. If forage utilization standards are exceeded, domestic livestock grazing is adjusted to meet the needs of wildlife. Conversion of agricultural land and growing communities are outside the control of the Forest Service. The Revised Plan prohibits cross-country use and restricts traffic in winter range areas to designated routes only. MO

COMMENTS: Disclose the needs of wintering big game and the proposals to improve winter habitat quality; clarify what is meant by "vegetation management."

643, 766

RESPONSE: The Revised Plan closes all elk and deer winter ranges to cross-country travel to protect wintering big game animals during a time of the year when they need to conserve as much energy as possible. Crucial winter range areas determine a population's ability to maintain itself at a certain level over the long term.

The glossary defines vegetation management as activities designed primarily to promote the health of forest vegetation for multiple-use purposes. For winter range, vegetation management would promote the health of vegetation that provides shelter and food. MO/AM

COMMENTS: The objective to manage for RNV can be misapplied because the Forest only has a very preliminary understanding of what the RNV is (DFPR III-92 third paragraph under the Winter Range description).

643

RESPONSE: The Revised Plan describes the principles and objectives of Properly Functioning Condition which incorporates RNV but uses other criteria for identifying ecological systems at **risk** or in PFC. The concept of RNV originates in the scientific record and, although a relatively new concept, shows merit as one tool for implementing ecosystem based management. The specifics of identifying and applying RNV will be determined after adoption of the Revised Plan. RR/AM

COMMENTS: We recommend the Forest abide by its earlier acknowledgement of ecosystem processes (e.g. insects, fire, disease) so that artificial "vegetation management" projects will not be required (DFPR III-92 to 111-93)

643

RESPONSE: The Final Revised Plan continues to acknowledge the role of natural ecosystem processes. Human demands on ecosystem also introduces a complex set of effects that interferes with the natural processes. Human induced disturbance does not perfectly replicate natural disturbance processes and we do not contend that it does. However, artificially designed disturbance can achieve desired social, ecological, and economic effects while ecologically approximating natural disturbance, with mitigation for risk to undesirable adverse effects. Humans will continue to affect ecosystems. The Revised Plan provides for this in a manner consistent with maintaining sustainable ecosystems. RR/AM

Analysis Flaw

COMMENTS: Condition of shrubs on winter range needs better data in percent utilization of browse species, effects of fire suppression, and effects of livestock grazing in the DEIS because State and Federal biologists have documented poor shrub conditions on winter range.

643

RESPONSE: Current and continued monitoring and data collection about the condition of shrubs on winter range will determine if they are at-risk or meeting the Properly Functioning Condition. At-risk areas will receive priority for restoration within the framework of a site-specific project level or landscape level environmental analysis. The Targhee has other data showing condition and trends, utilization, and actual use utilization for domestic livestock. The grazing utilization standard in the Revised Plan applies to all utilization on plants, regardless of animal species and speaks to maximum allowable use. Regardless of what animal species utilized the plants as forage, livestock will be removed once the desired utilization level is achieved. RR

COMMENTS: Data that are not current and not generated by statistically reliable methods should have its limitation noted in the narrative. DEIS 111-42 gives statistics for winter range meeting DVC with no reference to source.

643

RESPONSE: We used the most current and reliable data available. RR

Road Density

COMMENTS: Explain why you selected two (2) miles per section of open road in big game winter range and why that will promote wildlife habitat.

1369

The OROMTRD of less than or equal to **2.0** mile per square mile is too high for the elk and deer winter range prescription. The density standard should be set no higher than 1.0 mile per square mile. (DFPR 111-93).

643

RESPONSE: The OROMTRD standard applies to the nonwinter period, and therefore does not affect wintering big game animals. During the winter period,

WILDLIFE " WINTER RANGE

snowmachine use is restricted to designated routes to protect wintering wildlife. MO

Standards & Guidelines

COMMENTS: Need Standards and Guidelines and change Prescription 2.7 for big game winter range that includes moose & bighorn sheep in addition to elk & deer.

1247

Change the name "Elk and Deer Winter Range" to "Big Game Winter Range" unless the designation refers only to elk and deer.

699

Provide guidelines for management and mitigation for timber harvest on crucial big game winter range.

389

Develop standards and guidelines to enforce minimizing winter recreation impacts on wintering wildlife, especially by outfitters and guides.

389

Add a standard to prohibit human presence in critical big game winter range that prohibits human presence from Dec. 1 to April 30.

1247

April 1 is far too early to open winter range because spring is the period of greatest stress. Timing should depend on winter conditions and established through consultation with state game biologists (DFPR 111-93).

643

RESPONSE: Moose and bighorn sheep are not included in the 2.7 prescription. Moose do not winter in any particular spot nor in herds like the deer and elk and their "winter range" is the entire Forest. Bighorn sheep have winter range in roadless or designated Wilderness areas where motorized use is prohibited and/or inaccessible.

The Forest worked with the State Fish and Game agencies to identify the important elk and deer wintering areas on the forest. The Targhee developed a winter range management prescription to provide the habitat conditions needed by wintering big game animals. The Revised Plan allows timber harvesting only when site-specific analysis indicates it will maintain or improve winter habitat conditions. Any timber harvesting which may occur in the elk and deer winter range prescription is not part of the ASQ. One example of how timber harvesting can improve winter range is when trees have shaded out important forage plants and reduced the amount of winter forage available for big game.

Outfitters and guides must meet the same restrictions that the general public must meet in winter range. Winter range is closed to cross-country use and may be entered and exited only on designated trails. Designated trails are placed, with the assistance of fish and game agencies, in locations where impacts are minimal, such as on the periphery.

The winter travel plan remains in effect until June 1 (except for prescription area 5.1.4(c), Big Bend Ridge, which ends April 30). This means there is no cross-country travel allowed in winter range areas until June 1. After June 1, the summer travel plan goes into effect. MO/AM

Site Specific D-3

Palisades District

COMMENTS: EIS and Standards and Guidelines should identify and protect crucial winter ranges, specifically on the Palisades District because absence of protection for mule deer and elk crucial winter ranges is of great concern here.

389

RESPONSE: The District staff met with the Idaho and Wyoming fish and game agencies to determine the crucial winter ranges of elk and deer in the Palisades. Additional areas were added to the Final Revised Plan. These areas are protected by the winter range prescription or by another prescription that includes winter range restrictions, such as wild and scenic rivers or recommended wilderness prescriptions. AM

COMMENTS: Evaluate public access to big game winter range in the Palisades District as part of an impact analysis for timber harvest.

389

RESPONSE: Such an analysis would occur on a site-specific, NEPA project basis and is not included in a programmatic Forest Plan. The Revised Plan allows timber harvest in big game winter range after site-specific analysis shows it would benefit big game habitat; such a harvest is not part of the ASQ. AM

LETTERS from OTHER DEPARTMENTS and AGENCIES
at LOCAL, STATE and NATIONAL LEVELS
and LETTERS from ELECTED OFFICIALS

LETTER NUMBER	NAME
1274	US Environmental Protection Agency Richard Parkin
1279	Department of Energy Robert Beraud
1446	US Dept. Interior-Portland office Preston Slesger
699	US Department of Interior-Grand Teton National Park Jack Nickels
1351	US Department of Interior-Yellowstone National Park Michael Finley
1455	Shoshone-Bannock Tribes Shaun Robertson
1398	USDA-US Sheep Experiment Station Harvey Blackburn
389	State of Wyoming John Magagna
1177	State of Idaho, Department of Health & Welfare, Division of Environmental Quality
1362	Christopher Mebane
629a	State of Idaho, Department Parks and Recreation Chuck Welles
1207	State of Idaho, Department of Water Resources Bill Graham
1352	State of Idaho, Department of Fish and Game
1195.1181	Cal Groen and John Helmer
766	State of Idaho, Department of Fish and Game Don Wright
3	US Congress, House Representatives Michael Crapo
1389	United States Senate Larry Craig
1448	State of Idaho, House of Representatives Lenore Barrett
688	State of Idaho, Idaho State Senate Robert R. Lee
1447b	State of Idaho, House of Representatives Golden Linford
1456	State of Idaho, House of Representatives Max Mortenson
689	State of Idaho, House of Representatives Diana Richman
691	Clark County Commissioners Charles Vadnais, et al
723	City of Island Park, Planning & Zoning Dr. Mahlon Huestand
692	Madison County Commissioners Gerald Lee Jeppesen et al
1244	City of Irwin Philip Blomquist



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 REGION 10
 1200 Sixth Avenue
 Seattle, Washington 98101

REPLY TO
 ATTN OF ECO-088

JUN 27 1996

RECEIVED
 JUN 27 1996

Carol Cushing
 Forest Planner
 PO Box 208
 St Anthony, Idaho 83445

#1277
 Robert

Re Targhee National Forest, Draft Environmental Impact
 Statement and Forest Plan Revision

Dear Ms. Cushing:

The U.S. Environmental Protection Agency (EPA) has received the Targhee National Forest Draft: Environmental Impact Statement (EIS) and Forest Plan Revision for review in accordance with our responsibilities under the National Environmental Policy Act and under Section 309 of the Clean Air Act.

EPA Region 10 has used a screening tool to conduct a limited review of the draft supplemental EIS Evaluating management strategies for the Targhee National Forest. Based upon the screen, we do not foresee having any environmental objections to the proposed project. Therefore, we will not be conducting a detailed review of the draft EIS.

If you have any questions, please contact me in Seattle at 206/553-1984

Sincerely,

Richard B. Parkin, Manager
 Geographic Implementation Unit



Department of Energy
 Bonneville Power Administration
 P O Box 3621
 Portland, Oregon 97208-3621

June 25, 1996

Mr Jerry Reese
 Forest Supervisor
 Targhee National Forest
 P O Box 208
 St. Anthony, ID 83445

RECEIVED
 JUN 28 1996

#1277- Beraud, Robert

Dear Mr Reese:

Thank you for providing Bonneville Power Administration (BPA) the opportunity to comment on the Draft Environmental Impact Statement (DEIS) for the Targhee National Forest, Forest Plan Revision (Forest Plan). Staff specialists have reviewed the Preferred Alternative, Alternative 3-M, and determined that potential conflicts could exist between the Forest management prescriptions and the needs and objectives of BPA's various transmission line corridors. Table 1 lists BPA's transmission lines and the associated Forest Management Prescriptions.

To fulfill its obligations, BPA needs to serve its customers. To meet this need, BPA must provide a transmission system that is safe and reliable. A safe and reliable transmission system requires that certain construction, operation, and maintenance activities occur that may conflict with the goals, standards, and guidelines of the management prescriptions proposed in the Forest Plan and DEIS. Objectives to consider in the management of utility corridors include the following:

1. Ensure that reliable and buildable utility corridors are available to serve existing and future regional and local energy needs. It is expected that road closures would be designated and located so there would be no effect on access to corridors for maintenance and emergency activities.
2. As endorsed in the attached July 23, 1993 memo from the Chief of the Forest Service and Director of the Bureau of Land Management, the 1993 Western Regional Corridor Study¹ is to be used as a reference document when considering land use decisions that may affect existing and/or proposed major utility corridors.
3. Ensure that access essential for transmission line infrastructure repairs and maintenance is available.
4. Continue to provide access to and maintenance of existing utility rights-of-way (ROW) for infrastructure repairs and maintenance activities in accordance with special use permits, land use grant instruments, and easement agreements.

¹ Michael Clayton & Associates for the Western Utility Group 1992 Western Regional Corridor Study Copyright 1992 Sierra Pacific Power Company

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- 5 Encourage integrated ROW vegetation management which minimizes impacts and reduces maintenance activities while enhancing ecosystem values.

Although BPA strives to balance the need for a safe and reliable transmission system with the goal of restoring and enhancing environmental quality and avoiding or minimizing possible environmental effects, this may not prevent conflicts with the proposed Forest Plan

To help you identify appropriate changes to include in the Forest Plan Final EIS that consider the management objectives of utility corridors, BPA suggests the three alternative solutions listed below in order of preference:

- 1 Create a new management prescription with standards and guidelines for transmission corridors that applies to all existing transmission line and potential transmission corridors identified by the Western Utility Group (WUG). This would allow the Forest to implement the practice of designating utility corridor management areas which provide for a safe and reliable transmission system. Reducing the proliferation of corridors would have environmental benefits. Additionally, the utility industry would benefit by simplified Forest siting and mitigation requirements.
- 2 Reclassify all existing transmission line corridors and potential transmission line corridors identified in the Western Regional Corridor Study under management prescription 8.1 Concentrated Development Area. As described in *Chapter III - Forestwide Standards and Guidelines, Subsection Direction, and Prescriptions for Implementing the Preferred Alternative of the Draft Forest Plan Revision*, the Concentrated Development Area prescription applies to all existing concentrated developments including utility and transportation corridors. Utility and transportation corridors are defined in the Forest Plan as "a strip of land, up to approximately 600 feet in width, designated for the transportation of energy, commodities, and communications by railroad, State highway, electrical power transmission (66-kV and above), oil and gas and coal slurry pipelines 10 inches in diameter or larger, and telecommunication cable and electronic sites for interstate use"². This management prescription may actually allow more intensive development than is necessary for transmission line corridors.
- 3 Clarify in the Forest Plan and the Final EIS how transmission line corridors will be managed given the current management prescriptions in the Forest Plan DEIS. Include standards and guidelines within the management prescriptions that allow utilities to adequately construct, operate, and maintain transmission lines and corridors.

As you are aware, BPA and Lower Valley Power & Light (LVPL) are proposing to construct a single-circuit 115-kV line from BPA's Swan Valley Substation, west of Swan Valley, Idaho, east approximately 57.9 km (36 miles) to BPA's Teton Substation, northwest of Jackson, Wyoming. The line would parallel the existing ROW when possible. This existing transmission line was constructed in 1968 and was located to make use of the existing State, County, and Forest road systems. The transmission line transportation plan used State Highways 31 and 22 as the main arterioles with secondary roads on the County and Forest road system. A system of on- and off-ROW access roads was constructed during the clearing and power line construction, but some

² Targhee National Forest, Draft Forest Plan Revision, January 1996, pg. G-45

sections of the line remain inaccessible by vehicle. These sections of line are nearly impossible to maintain by conventional methods and, given the level of difficulty of access throughout the snow season, wheeled vehicle access to the remainder of the ROW during the summer season is limited until the ground is firm enough to cross.

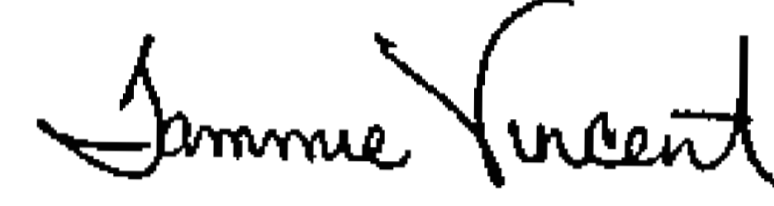
Although the Forest Access Plan restricts access to currently accessible areas of the Forest, it would have limited impacts to the Swan Valley-Teton line access road system. We have included as Attachment 1 to this letter a listing of our proposed changes to the existing access of the Swan Valley-Teton transmission. We request that these changes be included in the final Forest Access Plan. Please understand that BPA staff has not field verified the condition of some on-ROW access roads or the usefulness of several roads that ford streams. BPA may have to propose adjustments based on site specific resource considerations after a comprehensive field review is completed.

Additionally, we have listed the Targhee to Drummond line in Table 1. This line is leased by BPA from Fall River Electric. The same is true for that portion of the Drummond to Madison line located between Macks Inn and Madison. These lines should be added to the Forest Geographic Information System if they are not already included. Attached is a BPA map showing the location of these lines. The Management Prescriptions for the Targhee to Drummond line shown in Table 1 were determined using Map #10, Alternative 3-M Prescriptions, in the Forest Plan DEIS and may be misidentified in Table 1.

Although the management needs for utility corridors were inadvertently neglected in the Forest Plan DEIS, we believe that with some minor modifications the Final EIS will be extremely helpful as a planning tool. Forest staff as well as Forest users should be better able to consistently apply and comprehend the goals and objectives of the Targhee National Forest lands. We commend your staff for the results of their efforts.

We would be happy to work closely with your staff to assure that an adequate consideration of BPA needs and objectives are addressed in the Forest Plan Final EIS. Please feel free to contact Kathy Fisher of my staff at (503) 230-4375 if you would like to discuss these comments further.

Sincerely,



for Robert W. Beraud
Manager, Environmental Analysis

Enclosures



IN REPLY REFER TO

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
500 NE Multnomah Street, Suite 600
Portland, Oregon 97232 2036

TARGHEE NF
DISTRICT 1 / 1

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1446 Slaughter, Preston
U.S. Dept. of Interior

July 12, 1996

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Jerry B. Reese, Forest Supervisor
Targhee National Forest
P.O. BOX 208
St. Anthony, Idaho 83445

Dear Mr. Reese:

The Department of the Interior (Department) has reviewed the Draft Environmental Impact Statement (DEIS) for the Revised Plan (Plan) for the Targhee National Forest (Forest), Bonneville, Butte, Clark, Fremont, Jefferson, Lemhi, Madison, and Teton counties, Idaho and Lincoln and Teton Counties, Wyoming. The Fish and Wildlife service (Service) previously commented on the preliminary draft Of the DEIS and the Draft Forest Plan Revision (Plan) on November 14, 1995. Because the DEIS and the Plan addresses only two of the Service's concerns, many of the Service's previous comments are repeated in these comments. The following comments are provided for your use and information when preparing the Final Environmental Impact Statement (FEIS) and Final Forest Plan Revision.

GENERAL COMMENTS

The efforts Of the Targhee National Forest to address the needs Of fish and wildlife resources, particularly with respect to species listed as threatened and endangered under the Endangered species Act of 1973 (ESA), is commendable. Compliance with the ESA is essential; nevertheless, other environmental laws, such as the National Forest Management Act (NFMA) and the guidance provided in the Forest Service Manual (FSM), are equally important for protecting fish and wildlife species on the Forest and should be included as central reasons for revising the Plan. Further, the ESA should be used as a planning tool to accomplish the planning needs and purposes of the NFMA and the FSH.

The Department is concerned about language in the Plan regarding species protection under the ESA and domestic animal grazing. The summary sections Of the DEIS and the Plan should be carefully evaluated and modified in the FEIS to address this concern. For

Table 1 BPA Transmission Lines on the Targhee NF

Line Type	From	To	Total Miles	ROW Width	Forest Miles	Management Prescription
115-kV	Drummond Island Park - Fall River Electric ³	Madison	3.65		2.4	Eligible Scenic River (no ASQ)
			1.11		5.21	Visual Quality Improvement
			6.43		5.1(G)	Timber Management
			8.55		5.3.5	Crazy Bear Habitat Outside Core
			4.11		5.1.3(a)	Timber Management (no clearcutting)
			1.25		2.8.3	Aquatic Influence Zone (No ASQ)
			0.05		8.1	Concentrated Development Areas
115-kV	Swan Valley BPA - Swan Valley or BPA-Teton	Teton Swan Valley or Teton	5.64		2.5	Eligible Recreation
			12.31		2.1.2	Visual Quality Mitigation
			1.71		3.2(G)	Semi-primitive motorized Concentrated Development Areas
			0.41		8.1	Wilderness Study Area
			0.14		1.2	Aquatic Influence Zone (No ASQ)
			3.18		2.8.3	Developed Recreation Sites
			0.01		4.1	
115-kV	Targhee	Drummond	7		2.7(a)	Elk & Deer Winter Range
			7		5.1.4(b)	Timber Mgt. (Big Game Security Emphasis)
			1.04		2.8.3	Aquatic Influence Zone (No ASQ)
			4.55		5.2.2	Visual Quality Maintenance
115-kV	Goshute, ID BPA-Caribou	Palisades Dam	1.83		6.1(b)	Range Management
			0.23		2.7(G)	Elk & Deer Winter Range
			0.90		5.1.3(b)	Timber Management (no clearcutting)
			0.06		2.9.2	South Fork Snake River Eligible Recreation River
			4.09		2.8.3	Aquatic Influence Zone (No ASQ)
			4.05		4.3	Dispersed Camping Mgt.

³ Indicated print denotes Forest GIS name classification.

example, the preferred alternative in the DEIS states sheep grazing will be phased out on an opportunity basis over much of the Forest for grizzly bear protection. This language could influence the public to become polarized against protection for the grizzly bear. Forest Service regulations, such as the NFMA and the FSM, should be referenced when justifying recommendations for the Forest planning decisions involving species protection and changes in domestic animal grazing allotments.

The DEIS and the Plan do not include "core" and "security" area designations for the Henry's Lake Bear Management Unit (BMU) or a "security" area for the Bechler-Teton BMU. In order to comply with previous biological opinions and the existing Interagency Grizzly Bear Committee (IGBC) Management Guidelines (Guidelines), the Service recommended in previous letters the Forest include these types of designations in the final Plan. These designations should also be included in the FEIS.

Fish and wildlife resources seem to be appropriately treated in the standards and guidelines section of the Plan. However, in many cases "guidelines" known as general, non-binding directions, are designated for an action when a "standard", which is a binding, measurable guide for management on the Forest, may be more appropriate. Management and monitoring of these resources for the next 10 to 15 years on the Forest are closely tied to the standards and guidelines. Thus, the FEIS should include detailed, accurate standards for fish and wildlife resources.

The Forest's detailed treatment of standards and guidelines for the aquatic and riparian resources is commendable. We have seen significant progress by the Forest since 1985 in addressing the needs of these essential habitat areas for fish and wildlife. Many of the guidelines for aquatic resources should be changed to standards so the protection of these resources can be insured (see specific comments).

The section on Standards and Guidelines for Wildlife does not clearly state general goals apply to all of the species. Listing of additional goals in subsequent sections enables the reader to come to understand there are additional concerns for a species. A similar observation was made with respect to the section on Goals and Objectives. Goals and Objectives should be formulated for each species and for each of the other items listed in the Standards and Guidelines section that do not have specific Goals and Objectives statements. The FEIS should clarify this issue in the introduction.

DRAFT EIS - SPECIFIC COMMENTS

Page I-4, Background It would be helpful to include a summary breakdown (%) of the various vegetation types on the Forest beyond the 60 percent lodgepole pine component.

Background - third paragraph In terms of energy and nutrient movement in an ecosystem, clearcutting of a lodgepole pine forest, or other forest types does not duplicate the role of fire. This statement should either be removed or clarified.

Page I-9, Key Issue 4 The ESA does not necessarily contain "stringent" guidelines. As long as listed species are included in the planning process and managed accordingly, in cooperation with other activities, the ESA can be flexible. NFMA has just as stringent requirements for maintaining wildlife populations as the ESA. The ESA aims for the recovery of listed species and the ecosystems upon which they depend. These points should be made in this paragraph by deleting the word "stringent" and, after the words Endangered Species Act, adding "and NFMA."

Pages II-3 and II-15 Description of Alternatives The statements, "All the alternatives comply with State and Federal law" (page II-3) and "All alternatives meet baseline State and Federal Standards..." (page II-15) are misleading and should be removed. All of the alternatives do not comply with all State and Federal laws. For example, there are no designated "core" or "security" areas for the Henry's Lake BMU; there is no "security" area designated for the Bechler-Teton BMU. The prescriptions for these areas provide a moderate amount of protection but do not afford the area the same degree of security as do the "core" and "security" areas for the Plateau BMU. On page II-9, 4. Grizzly Bear Management, the DEIS says, "No timber harvest would be scheduled in the 'core' or 'secure' areas." Therefore, if "core" and "security" areas are not designated, timber harvest can take place in a BMU under various scenarios including ecosystem management. The IGBC Guidelines were in effect during the early 1980's. The Guidelines were not adhered to then and quoting them as the standard now likely will not provide a level of security for the grizzly bear beyond that of the 1980's. Vehicle access is only one of the IGBC Guidelines that need to be met in the Plan.

Page II-9, Grizzly Bear Management There are no "core" or "secure" areas, as defined in the January 27, 1994, Grizzly Bear Management Direction for the Plateau Bear Management Unit (Strategy) and the February 22, 1994, Biological Opinion on the Strategy, in the Henry's Lake BMU, and no "secure" area in the Bechler-Teton BMU. Timber harvest and other activities can take place in these BMUs since there are no "core" or "secure" areas.

These components should be addressed in the FEIS

Page II-15. Second paragraph See comments for page II-3 above.

Page II-17. Second paragraph The Service suggests additional examples be articulated in the discussion, not just grizzly bears and open roads. This would better emphasize the ecosystem management approach being proposed

Page II-19. Table II-1 BIOLOGICAL/Other Riparian and Water Indicators The category, "Mi cutthroat stream with/min. 6" stubble height at HGL", shows the second worse mileage. We assume there is a mistake here. The preferred alternative likely can not reach all of the stated riparian and water quality goals if it results in fewer stream miles with 6" stubble than the existing level of management,

Page III-4. Range of Variability This section says the Forest Service is in the "process" of compiling data to better understand the range of variability. Lacking complete and quantifiable information upon which to base decisions, the Forest Service should withhold implementing decisions until all of the information and proposed process methodology have been reviewed by the scientific and public communities. Until all of the information is available, the Forest Service has developed the appropriate management strategies, and the process has been through public comment, this management methodology should not be included as a part of the Plan.

Page III-5. Succession The discussion of succession is oversimplified. Current theories on the state and transition model of community change have not been incorporated. The model suggests there are forces that, if applied as presented, may change the existing state of a community. This is known as transition. Therefore, re-applying similar forces on a community type may not necessarily yield the previous state. This section should be expanded to include current thinking and knowledge of community ecology and dynamics.

Page III-8. Insects and Disease Insects and disease are viewed primarily from a detrimental perspective. A number of Insects are regarded as pests, however, a greater number are important to healthy ecosystems. The discussion should provide a more complete presentation of these types of organisms.

Page III-19. Riparian In the first paragraph, the Service agrees with the statement that riparian areas visibly reflect the quality and success of management activities in tributary watersheds. We recommend the Forest review the document to ensure this thinking is carried through to other issues related to the needs of fish and wildlife species.

Page III-21. Water In both the DEIS and the Plan revision water is included as a biological element, when it is really a physical element (hydrology is a physical science). Correct or explain to the reader the reason(s) for the characterization,

Page III-21. Lemhi/Medicine Lodge The third paragraph indicates no standards for nutrients, nor any clear direction as to what farms of nitrogen and phosphorus are to be monitored, so recommendations from researchers were used. The Service suggests specific studies be referenced in the document to allow the reader to further understand why these criteria were chosen,

Page III-26. Second paragraph from the bottom The discussion about influence zones should be expanded to include how the influences of topography, geology, location, and season can also modify the area. Standards are, therefore, developed from site specific information. The entire watershed and climate also have influence and control over lakes, reservoirs, ponds, perennial and intermittent streams and wetlands (as defined in the glossary). The second sentence should be rewritten to read, "The entire watershed and climate influence the . ." The third sentence should read, "Lakes, reservoirs, ponds, perennial, and intermittent streams, and wetlands provide unique...."

Pages III-30 and 39. Table III-8 and 12 The Service recently removed the trumpeter swan, spotted frog (in eastern Idaho), Harlequin duck, wolverine, North American lynx, and Northern goshawk from the Federal candidate species list. We suggest the Forest Service maintain these species as sensitive forest species. They are important indicators of forest wide habitat conditions.

Even though the bald eagle has been reclassified as threatened, recovery efforts still need to be implemented and carried out. The Forest Service should ensure that its activities do not directly, indirectly, or cumulatively contribute to a downward trend in the status of this species. All data and references included in the Plan should be the most up to date available. The second paragraph under Bald Eagle Nesting Habitat lists a 1992 Forest Service report and data from 1995. This should be corrected in the FEIS.

Page III-36. Second paragraph It is unclear what is meant by an ecological condition. The phrase should be quantitatively or qualitatively defined in the attached glossary.

Page III-37. Characteristics of noxious weeds In terms of ecosystem-based management, unless the plant species is non-native to the area, all plants are part of a fully functioning ecosystem. If, however, the Forest is referring to specific

grouping of plants listed by Animal and Plant Health Inspection Service (APHIS), for example, this should be referenced as such, thus clarifying the issue.

Page III-49. Last paragraph The last sentence referring to livestock depredation by a female wolf with pups, is taken out of context from the referenced document. The sentence should be rewritten to read, "Prior to the establishment of six breeding pairs, depredating females and their pups will be captured and released at or near the site of capture, one time prior to October 1. If depredations continue, or if six packs are present, females and their pups will be removed."

Page IV-15. First paragraph Timber harvest is another impact to the riparian area that should be included as a reason for riparian acres not meeting the DVC (desired vegetative condition).

Page IV-16. Water Indicators Although stubble height measurements when applied properly are an excellent tool, there can be problems inherent to using stubble height as a monitoring method. Some problems are: 1) which plant species are being measured for stubble height and 2) is this criterion allowing for perpetuation of undesirable plant species - especially Kentucky bluegrass. Especially as it pertains to fisheries habitat, two other key factors provide better information and more channel stability and habitat. These factors are: 1) percent of bank covered with a deep, binding root mass and 2) percent of tree and shrub regeneration along the stream bank,

Page IV-32. Forest Acres Within Core Areas, third paragraph Strictly speaking the existing core areas do not meet all of the core area standards because of past management activities. However, the Forest Service is working to meet those standards and this section should reflect this goal,

DRAFT FOREST PLAN - SPECIFIC COMMENTS

Page II-1 The Service concurs with the statement that habitat effectiveness for big game and particularly grizzly bear has been reduced through increases in road density and reduction of cover. In the context of true ecosystem management, road management applies to many other resources, not just the grizzly bear or big game. This discussion should be expanded in the FEIS,

Page II-3 & 4. Needs for Change Page 5 of the IGBC Guidelines specifically states the "GUIDELINES ARE SUBJECT TO CHANGE AS RESEARCH PROVIDES ADDITIONAL DATA AND/OR MANAGEMENT DIRECTIVES CHANGE." The Service recommends the last paragraph be deleted and replaced with the following statement: "The provisions of the

ESA have not changed since the Plan was put into effect in 1985. However, the understanding of the habitat needs of the species has changed substantially. Meeting the needs of the listed species, in particular the grizzly bear, has substantially changed management on a large portion of the Forest. New information, accumulated over the last ten years, provides new insight and direction regarding effective management of access, vegetation manipulation, and human activities in grizzly bear habitat." Including the above wording will alleviate the need for a detailed discussion of why alternative 1 does not fully comply with the 1985 Forest Plan or the Guidelines direction for timber management in Situation 1 and 2 grizzly bear habitat,

Region 4 of the Forest Service did not have a sensitive species list or direction for dealing with sensitive species in 1985 when the current Plan was signed. The Service is of the opinion that since signing of the Plan in 1985, significant additional information has led to refinement of forest management techniques, including sensitive species life history and habitat needs. It is our understanding that the Plan is to be flexible and where and when appropriate, as new information becomes available, such information will be incorporated, thus leading to continued improvement of natural resource management on the Forest

Page III-2. Definitions of Standards and Guidelines The standards should contain sufficient information to allow for adequate management. The Forest Plan Standards and Guidelines should be developed to reflect a conservative approach until information is available that would allow for changes in management. The majority of the Guidelines have not been standardized, they are non-committal, optional, and may not fulfill Forest Service responsibilities as defined in the FSM section 2670 on Biological Diversity and Threatened and Endangered Species, 36 CFR §219.19 guidelines for viable populations, or sections 7(a)(1) and (2) of the ESA. The Service recommends many of the Guidelines listed in Chapter III be changed to Standards. This would be essential when discussing endangered and threatened species consultations. Additionally, such standards would be important to achieving the ecosystem-based management alternative 3-M is seeking to meet.

Introduction, last paragraph relating to emergency events A list of all potential events should be presented to give the reader a better perspective of what constitutes an emergency. As stated, the list appears to only include events related to law enforcement, search and rescue, and fire,

Page III-6. Last paragraph Other "natural causes" such as high water runoff and floods would be more likely to cause changes in

stream channel stability than avalanches in this area. This point should be expanded in the FEIS.

Page III-7. Goals, Objectives, and Forestwide Standards and Guidelines for wetland types are available, but have not been fully developed in the Plan. These need to be included in the FEIS because of existing Executive Orders that pertain to wetland protection.

Page III-7. Standards and Guidelines - Aquatic Resources The Service suggests item number 2 be a Standard to be consistent with Forest Service direction for new special use permits guidelines.

Page III-7. Standards and Guideline - Watershed General Allowing as much as 30 percent hydrologic disturbance in watersheds at any one time seems inconsistent with many of the revision's goals regarding biodiversity, soils, aquatic, riparian, watershed, municipal watershed, vegetation, wildlife and threatened and endangered species. Furthermore, this quantity of disturbance would likely adversely affect Bureau of Land Management's (BLM) management efforts to improve and enhance important natural resources on that land.

Page III-7. Standards and Guidelines - Municipal Watershed Add standards and guidelines having livestock grazing, timber harvest, camping, and all terrain vehicle (ATV) restrictions to ensure adequate protection of municipal watersheds.

Page III-8. Vegetation Guidelines related to plant species diversity should be reconsidered in the FEIS. Non-native plant species may inhibit efforts to implement ecosystem management. Projects should be designed so they would require use of native plant species.

Page III-9. Raptor Nest Sites This action should be listed as a Standard to be consistent with the Forest Service policy and efforts to protect sensitive species.

Page III-9. Standards and Guidelines - Raptor Nest Sites Add a guideline to protect potential raptor nest sites for sensitive and listed species.

Page III-11. Goals-Grizzly Bear Habitat Goal number 1 should be rewritten to reflect the commitment of the Forest Service to fulfill section 7(a)(2) and comply with 36 CFR § 219.19 of the NFMA. The Goal should read, "Habitat conditions will conserve and sustain a recovered population of grizzly bear in the Greater Yellowstone Ecosystem (GYE) and on the Forest." This wording is consistent with the Forest Service resolve to manage resources on

an ecosystem basis.

Objectives for Grizzly Bear Habitat The objectives of all actions for listed species should be to meet or exceed recovery criteria based on guidelines from the FSM section 2670. Therefore, objective number 1 should be rewritten to read, "Meet or exceed recovery criteria in the Grizzly Bear Recovery Plan."

Objective 3 should be clarified as to what is meant by "bears in trouble." Following IGBC Guidelines, page 51, this objective should be rewritten to read, "Provide safe, secure release sites for relocation of nuisance bears."

Objective 4 should be rewritten as follows, "Implement the road density standards in the BMU's within 1 year of the signing of the ROD in coordination with USFWS and State Wildlife agencies." Compliance with these standards is already in progress and should be completed as expeditiously as possible.

The Service also recommends methods for calculating road densities be included in the final Plan and FEIS.

The following should be included as Standards, in addition to the education program, for Grizzly Bear Habitat. "1. Sanitation standards will be set for human habitation and use on portions of the forest within the recovery zones; and 2. Core area maps for each BMU are enclosed in the appendix." Standards for core areas shall be consistent for all alternatives. The draft Forest Plan does not describe the location of the security or core areas for all of the BMU's. According to the IGBC task force and previous biological opinions, core and security areas are to be designated and are required in each BMU.

Page III-11. Goals - Grizzly Bear Habitat Provide each of these goals with a standard stating that pursuant to the Grizzly Bear Recovery Plan, no timber cutting activities will be allowed within situation I&II Habitat.

Page III-11. Standards and Guidelines - Bald Eagle Habitat Add standards to restrict human entry and development within Bald Eagle Zones 172 and within at least a quarter miles radius around existing and new nests.

No reference has been made to Bald Eagle habitat management and guidelines along the South Fork Snake River - especially relating to the South Fork Snake River Activity/Operations Plan prepared jointly by the BLM and the U.S. Forest Service. Incorporate by reference this activity plan in this section of the document.

Explain that potential impacts to eagles and other threatened and

should read, "Prior to the establishment of six breeding pairs, depredated females and their pups will be captured and released at or near the site of capture, one time prior to October 1. If depredated females are present, or if six packs are present, females and their pups will be removed."

Page III-13. Standards and guidelines - Peregrine Falcon Habitat BA (see page 224) but has been changed to a guideline here and in the preliminary draft biological assessment (BA) (pages 15 and 18) Standard; 3) #C and #D listed as standards in the preliminary draft biological assessment (BA) (pages 15 and 18) but have been changed to guidelines here and in the current draft BA. Both items are under the control of the Forest Service and should be listed as standards to protect the species and its habitat; and 4) #E should be a standard to be consistent with #M, wildlife management actions on the forest.

Page III-15. Standards and guidelines - Great Owl Habitat Increase to 1 mile the radius of use for strychnine poison to control pocket gophers around all active Great Owl nest sites.

Page III-15. Standards and guidelines - Trumpeter Swan Habitat Items A, C, and E were listed as standards in the preliminary draft BA but have been changed to guidelines in the Plan. Use of Standards rather than guidelines would be consistent with the Forest Service commitment to manage for viable populations under NFWA (36 CFR § 219.19.)

Page III-16. Objective - Spotted Bat and Western Big-eared Bat Habitat It is important to consider other aspects of bat ecology. The Service recommends that areas necessary for roosting and foraging also be emphasized in the final Forest Use and Occupation in order to comply with IGBC standards, road density standards should be implemented within one year of signing the Forest Plan and completed within 3 years from implementation. All other areas should be completed within 5 years. To wait a full 10 years to complete the road density standards will put the completion date into the next Forest Plan revision cycle.

Page III-12. Standards and guidelines - Bald Eagle Habitat Add a guideline to protect alternate nest sites and potential nest sites from timber harvest, roads, and permanent recreation developments.

Page III-12. Standards and guidelines - Bald Eagle Habitat Add a guideline to educate recreationists (e.g. hikers, bikers, campers, ATV users etc.) about zone 1 areas.

Page III-13. Standards and guidelines - Gray Wolf Habitat The last sentence referring to livestock depredation by a female wolf with pups, is taken out of context from the referenced document. (See page 60257 of the Federal Register, Vol. 59, No. 224 for the gray wolf reintroduction.) The sentence

developed for all bald eagle nesting territories on the forest. Add a standard requiring that site-specific management plans be developed for all bald eagle nesting territories on the forest.

Page III-11 and 12. Standards and guidelines Change the following guidelines to standards to be consistent with recovery guidelines, NFWA, ESA, and other warranted management standards for protection of the bald eagle: 1) #A should be a standard to a preliminary draft biological assessment (BA) (pages 15 and 18) Standard; 3) #C and #D listed as standards in the preliminary draft biological assessment (BA) (pages 15 and 18) but have been changed to guidelines here and in the current draft BA. Both items are under the control of the Forest Service and should be listed as standards to protect the species and its habitat; and 4) #E should be a standard to be consistent with #M, wildlife management actions on the forest.

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endangered species require the ESA section 7 consultation with the Fish and Wildlife Service.

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Page III-15. Standards and guidelines - Great Owl Habitat Increase to 1 mile the radius of use for strychnine poison to control pocket gophers around all active Great Owl nest sites.

Page III-15. Standards and guidelines - Trumpeter Swan Habitat Items A, C, and E were listed as standards in the preliminary draft BA but have been changed to guidelines in the Plan. Use of Standards rather than guidelines would be consistent with the Forest Service commitment to manage for viable populations under NFWA (36 CFR § 219.19.)

Page III-16. Objective - Spotted Bat and Western Big-eared Bat Habitat It is important to consider other aspects of bat ecology. The Service recommends that areas necessary for roosting and foraging also be emphasized in the final Forest Use and Occupation in order to comply with IGBC standards, road density standards should be implemented within one year of signing the Forest Plan and completed within 3 years from implementation. All other areas should be completed within 5 years. To wait a full 10 years to complete the road density standards will put the completion date into the next Forest Plan revision cycle.

Page III-12. Standards and guidelines - Bald Eagle Habitat Add a guideline to educate recreationists (e.g. hikers, bikers, campers, ATV users etc.) about zone 1 areas.

Page III-12. Standards and guidelines - Bald Eagle Habitat Add a guideline to protect alternate nest sites and potential nest sites from timber harvest, roads, and permanent recreation developments.

Page III-13. Standards and guidelines - Gray Wolf Habitat The last sentence referring to livestock depredation by a female wolf with pups, is taken out of context from the referenced document. (See page 60257 of the Federal Register, Vol. 59, No. 224 for the gray wolf reintroduction.) The sentence

developed for all bald eagle nesting territories on the forest. Add a standard requiring that site-specific management plans be developed for all bald eagle nesting territories on the forest.

Page III-11 and 12. Standards and guidelines Change the following guidelines to standards to be consistent with recovery guidelines, NFWA, ESA, and other warranted management standards for protection of the bald eagle: 1) #A should be a standard to a preliminary draft biological assessment (BA) (pages 15 and 18) Standard; 3) #C and #D listed as standards in the preliminary draft biological assessment (BA) (pages 15 and 18) but have been changed to guidelines here and in the current draft BA. Both items are under the control of the Forest Service and should be listed as standards to protect the species and its habitat; and 4) #E should be a standard to be consistent with #M, wildlife management actions on the forest.

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Standards and Guidelines, item 1A should be changed to read, "Road closures will be located and designed to effectively control human use." Standards and Guidelines for temporary roads are not designated in this section. It is our understanding that the DEIS does not include the construction of temporary roads as new road construction. This should be clarified in the FEIS.

Page III-16. Standards and Guidelines - Harlequin Duck Habitat
Expand the guideline to include all riparian zones and habitat, and tie it to more than a single wildlife species. Modifying this guideline will benefit watershed and water quality objectives as well as protect the species.

Page III-16. Forest Use and Occupation/Access/Goal Modify this goal (or create another) to also emphasize threatened and endangered species, candidate species, sensitive species and big game habitat.

Page III-17. Recreation/Goal-Winter Recreation Minimize winter recreation use in habitats for all threatened and endangered species, candidate, and sensitive species as well as big game.

Pages III-17-18. Information, education, and sanitation
standards have been set for areas within the recovery zone for grizzly bears by the Forest Service, based on IGBC Guidelines. These should be presented in this section as an overall goal or in the Dispersed Recreation or Developed Facilities section. Similar information was requested to be included in the Forestwide Standards and Guidelines beginning on page III-118. The Objectives and standard and Guideline for Wild, Scenic, and Recreation Rivers and Visual Quality are out of order. They should be inserted after the Standards and Guidelines for Winter Recreation.

Page III-18. recreation/Objective - OHV (Off Highway Vehicle)
Expand this objective to minimize also the effects of OHV use on riparian, aquatic, critical and crucial wildlife habitat. Develop motorized recreation management standards and guidelines to exclude use within crucial seasonal wildlife habitat.

Page III-20. Objectives Under Objective 3, change the Roman numerals to ordinal numbers for consistent format.

Page III-20. Range, Goals Explain how these goals protect the social and economic values of the local communities and of the livestock industry. Explain how these objectives can be achieved while maintaining the grazing opportunities on the forest.

Page III-20. Range, Goals/Objectives List criteria that will be used to determine desired vegetative conditions for site-specific

areas. Desired vegetation conditions could be established at an unhealthy level without key native species being identified as indicators of healthy systems.

Under Objective #1, it may be inherently difficult to manage for mid- or late-seral riparian communities, since these dynamic, shifting channel systems are continually undergoing changes. Natural flooding, meandering and erosive processes will annually provide for early-seral vegetation establishment. The ecological status of riparian habitat may be more beneficial to the ecosystem by remaining in an early seral stage rather than moving to a mid- or late-seral stage.

Add an objective to recruit and re-establish riparian-wetland vegetative communities back into these riparian zones.

Page III-21. Riparian Forage Utilization/E Riparian Vegetation Stubble Height If the 4-inch stubble height standards applied only to native and desirable non-native, hydric vegetation-grazing undesirable species without such standards may perpetuate unhealthy, unstable riparian zones.

The 4-inch stubble height can certainly be a good management tool within the "greenline" portion of riparian areas, but this tool should be used throughout the entire riparian zone.

Page III-22. Range/Standards and Guidelines/3 E Reword this guideline so that it does not suggest that projects can only be done if the Forest Service provides 50 percent of the necessary funding.

Page III-22. Range/Standards and Guidelines/3 G Summarize or otherwise elaborate on the process outlined in the National Programmatic Agreement, Option 2 referred to here.

Page III-22. (General) Timber cut under "ecosystem management" does not appear to be part of the allowable sale quantity (ASQ) as it should. Clarify here so one does not conclude that the real sustainable cut is described as part of "ecosystem management". Identify estimates of cuts outside the ASQ to explain to the reader the general magnitude of ecosystem management cut as it relates to the allowable cut.

Page III-22. C.3 This should be rewritten to read, "Do not convert from a cattle allotment to a sheep allotment within bighorn sheep habitat or in a grizzly bear BMU." This will be consistent with Forest Service direction for management of BMUs on the forest.

Page III-22. C.4 The Service recommends a botanist be included

as a member of the ID Team,

Item E should be changed to a Standard, This will be consistent with item C.2.

Page III-23-25 The table shown on page III-24 does not indicate which treatments are standards and which are Guidelines; this should be clarified since the table is presented under the Standards and Guidelines heading. In pre-commercial and commercial thinning, slash may accumulate to the extent that movement of big game and other terrestrial species is impaired.

Standards and Guidelines-Size of Harvest Units and Leave Blocks/Strips The Service has concerns about this Standard because of the far reaching effects timber harvest has had on fish and wildlife species on the Forest prior to 1994. An ecological approach to silvicultural Standards and Guidelines in the Plan is necessary to meet fish and wildlife needs on the Forest. Scientific data to support the adoption of this Standard should be cited in the Plan. The scientific data will assist in demonstrating that light, wind, moisture regime, and vertical stratification of vegetation in an area may be such that the area is no longer a "created opening". Maximum clearcut size and dimensions must be standardized under the preferred alternative to adequately protect fish and wildlife resources.

Page III-29 This section lacks objectives, standards, and guidelines with which to maintain or enhance big game habitat and sage grouse habitat. Since the EIS designates winter range for this area, and sage grouse populations have drastically declined, management guidelines for sage grouse habitat are obviously needed.

Add specific goals and objectives for maintenance of existing suitable wildlife habitat conditions and improvement of presently poor wildlife habitat areas. For objectives to be achievable, it is critical to know current area specific habitat conditions against which future accomplishments can be measured,

Describe for each geographic subsection a clear and definite time frame within which to attain its "desired future condition".

Page III-29. Goals and Objectives/Aquatic and Riparian Ecosystem Add the following streams to this objective: Pass Creek; Warm Springs Creek; Divide Creek; and West Fork Irving Creek.

BLM riparian inventories on these streams show riparian health and/or channel stability problems. Unless riparian conditions are improved throughout the landscape, the Targhee National Forest will not be able to meet many of its overall goals related

to biodiversity, threatened and endangered species, wildlife, soils, aquatic, and riparian protection.

Pages III-26 - 55 There are numerous inconsistencies throughout this section. The Figures list prescriptions (Rx) and the attendant acres for prescriptions in a Table but many of the prescriptions are not listed on the map or are listed on the map but not in the Table. The Desired Future Conditions do not list similar statements in the standards and Guidelines section for Goals and Objectives. These two sections should support each other. There are no "core" or "security" areas shown for the Henry's Lake BMU or "security" area for the Bechler-Teton BMU. Page III-42 lists a prescription 1.1.1 for 10,664 acres, but there is no prescription 1.1.1 shown. Where do these 10,664 acres belong? This entire section should be reviewed and the information adjusted to reflect consistency with the maps, tables and narrative that will be presented in the FEIS.

Page III-35 Goals and Objectives This section lacks objectives, standards, and guidelines with which to maintain or enhance big game habitat and sage grouse habitat. Since the EIS designates winter range for this area and sage grouse populations have drastically declined, management guidelines for sage grouse habitat should be developed and included in the FEIS.

Page III-35 Goals and Objectives/Aquatic and Riparian Ecosystem Add the following streams to this objective: East Fork Irving Creek; Dry Creek; Middle creek; West Fork Indian Creek; East Fork Indian Creek; and Middle and East Forks Dry Creeks

BLM riparian inventories on these streams show riparian health and/or channel stability problems. Unless riparian conditions are improved throughout the landscape, the Targhee National Forest will not be able to meet their overall goals related to biodiversity, threatened and endangered species, wildlife, soils, aquatic, and riparian protection.

Page III-49 through III-55 Big Hole/Palisades Subsection (M331D-1) and Caribou Subsection (M331D-19) Modify write-ups for these subsections to include standards requiring management of forest lands along the South Fork Snake River to be in accordance with the Guidelines in the Snake River/Activity and Operations Plan prepared jointly by ELM and Forest Service. Incorporate by reference this activity plan into this section of the document,

Discuss and incorporate by reference the Teton Basin ranger District's (Driggs) Teton Front Winter Recreation Plan and it crucial big game winter habitat objectives or ORV restrictions

III-51 Goals and Objectives/Aquatic and Riparian Ecosystems Add

Wolverine Creek, tributary to the South Fork of the Snake River to this list. The condition of this stream upstream of the road has been highly impacted by grazing as well as day use and camping taking place at the mouth.

Pages III-61 - 62, last paragraph on page 61 and first paragraph on page 62 The Forest Service has control over the location of future campsite and trail development and activities that may impact the listed peregrine falcon. (Also applies to page III-64, Wildlife.) Listing these items as Standards would be consistent with stated responsibilities under section 7(a)(2), FSM 2670, and NFMA 36 CFR § 219.19 and will provide the protection for the species and their habitat without adversely impacting use of the forest by the public.

Page III-63, 1.1.8, fourth paragraph Clarify how the statement, "campsite facilities may be present for recovery of T&E species" will facilitate recovery of a species. There appears to be no connection between these two points.

Pages III-66, 75, and 97 Pages 66 and 97 use the heading "Ecological Processes", page 75 lists the same heading as "Ecological Elements." Is there a difference in definition for these two terms? If so, please explain. Constant use of terms will assist in understanding the proposals in the Plan.

Pages III-70 and 72, Objectives 2 and 1 respectively These two goals appear to provide the Forest Service the option of cutting timber in areas that otherwise are not scheduled or considered for such management treatments. If this is the case then the options should be specified for each prescription so the total impacts can be evaluated for the entire plan.

Pages III-73, 76, 80, 84, 103, and 105 Under Physical Elements, the use of indigenous species to reestablish vegetation is commendable. Clarify what a "naturalized" species is. "Reasonable time" should be quantified for the specific project or activity and so stated in this section. On page 84 the word "consider" should be changed to "use" to be consistent with the other areas.

Pages III-87 and 89 Standards and Guidelines state that Interagency Guidelines for Management Situation I (MS-1) habitat apply to the Core area. This statement should be deleted from the document. MS-1 and Management Situation 2 divisions on the Targhee Forest were a part of the original Forest Plan. New scientific information regarding grizzly bears has been acquired since the completion of this original plan in 1985 that contradicts the use of MS-1 as a biological standard for grizzly bears. Omitting MS-1 designation is supported by the IGBC Roads

Task Force report and recent formal section 7 consultations with the Service.

Page III-87, Physical and Biological Elements: Lands The Rule Set developed for grizzly bear management in the Grizzly Bear Management Strategy for the Plateau BMU should be incorporated as a table in this section.

Page III-88, Forest Use and Occupation For the most part, mountain biking and other means of mechanized travel should be discouraged in core areas. Additionally, beginning the reclamation of all roads within 1 year of signing of the ROD should be considered a Standard to be consistent with objective 4, page III-11, Forest Wide Standards and Guidelines. Further, it should also be a Standard there will no construction of temporary roads in the core areas.

Outfitter/Guide Outfitter and guide permits should be allowed if the activities are compatible with the objectives for the core area. For example, sleigh rides in November after bear hibernation has been initiated would be allowed.

Page III-89, 2.6 5 Grizzly Bear Security Area The above comments concerning the core area (Page III-86 to 88, management prescription 2.6.2) related to grizzly bear also apply to this section.

Page III-90, Biological Elements Scheduling of activities should follow the Rule Set standards set forth in the Grizzly Bear Management Strategy for the Plateau BMU and the draft Grizzly Bear management direction for the Bechler-Teton BMU.

Page III-91, Range The Targhee Forest should consult with the Service on all of the allotments within the grizzly bear Recovery Zone. The Forest has done a thorough job of addressing Service concerns in this section. Standards for permittees stated in this section should also be included in the Recreation section of the document for Outfitter and Guide permits in security and core areas.

Page III-94, Aquatic Influence Zone, Description The entire watershed and climate also have influence and control over lakes, reservoirs, ponds, perennial and intermittent streams and wetlands (as defined in the glossary). To address this, the second sentence should be rewritten to read, "The entire watershed and climate influence the..." The third sentence should read, "Lakes, reservoirs, ponds, perennial, and intermittent streams, and wetlands provide unique..."

III-94 2.7 (a-b) Elk and Deer Winter Range/Standards and

Guidelines/Game Retrieval] Allowing game retrieval using ATVs is inconsistent with the original strategy of maintaining security areas for big game during harvest seasons in order to prevent early migration to big game winter ranges on BLM lands. Also, the game retrieval allowance in deer and elk winter range generally contradicts the goal of minimizing intrusion. Enforcement would be a nightmare as the Forest does not have adequate personnel to do the job. Early arrival of big game herds on BLM winter range clearly results in conflicts with livestock, winter range over utilization, increased vulnerability to poaching, and increased agricultural depredations.

Page III-95, second paragraph change "ecology" to "ecology." The service recommends certain geomorphic types should always be included in the boundary width. These include but are not all inclusive: 100-year floodplain; areas with unstable soils; landslides; and landslide-prone areas. Under goals, number 1, delete the last two words so the sentence ends after the word "variation."

Page III-96, Boundary Widths of Water Types, by subsections fish bearing stream reaches and non-fish bearing stream reaches should have identical standards because of their importance for watershed cumulative effects analysis. Non-fish bearing streams are especially important in an ecosystem approach to watershed analysis and aquatic/riparian dependent species. This is vitally important for waters in the Central, Island Park, Madison Plateau, and Teton Range subsections where timber harvest has taken place or is scheduled to take place.

Watershed areas in the Island Park and Madison Plateau subsections have already been heavily impacted by resource extraction activities. We suggest the boundary widths in these areas be extended to 300 feet unless site specific scientific data indicates otherwise. This in turn would be consistent with other amended forest plans in the Pacific Northwest in dealing with fisheries and watershed resources.

Page III-97, Insects and Disease This section should be expanded so the goals of ecosystem-based management and aquatic habitat protection are projected and maintained throughout the plan

Pages III-98, 99, and 120, Roads and Trails The first line should start, "No new roads, including temporary roads,..." To habitat, all of the guidelines in this section should be made

Page III-99, Paragraph 4 Additional standards on instream sediment generated by temporary stream crossings should be

Page III-118, Dispersed Camping Management Information, education, and sanitation standards have been set for areas

Page III-114, Special Use Permit Recreation Sites Goals, Objectives, and Standards should be included that require proper sanitation practices for human refuse and pet food in grizzly bear recovery zones on the forest. This is consistent with reasonable and prudent measures agreed to in past consultation on the forest and should be included in the revised Forest Plan.

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Under timber, the entire second item should be eliminated so any changes to the standards and guidelines would have to be addressed in a forest plan amendment. As written, this item permits changes without appropriate public review and comment. The fourth item should be rewritten to read, "Mechanized treatment of wood residue is eliminated."

The last line on the page should have the following words added at the end of the sentence, "...only where salvage will improve the aquatic influence zone." The aquatic influence zone and III-100 2.8.3 Aquatic Influence Zone/Standards and cooperative livestock management strategy between the Forest Service and the BLM where feasible when a stream reach crosses both ownerships of adjacent Forest Service and BLM land

Page III-100, South Fork Big Lost River, Scented River River uses such as jet skiing should be excluded from the South Fork Snake River. The Forest Service has not presented any data to show there has been an evaluation of noise impacts to nesting bald eagles from this type of recreation.

Pages III-104 and III-111, Range Management of allotments at levels below the "C" level is not consistent with the desired future conditions and allotment management plan objectives; therefore level "D" should not be considered as part of the management "goal" for this or any other management prescription.

Page III-112, Developed Recreation Sites The Service supports the watchable wildlife provisions in the objectives for this section and other sections of the forest plan. By informing the public of areas to enjoy wildlife in native habitats, possibly more support for fish and wildlife habitat needs can be encouraged in the local community. Outreach is an important mission of the Service, we would be available to assist in your watchable wildlife efforts.

Page III-114, Special Use Permit Recreation Sites Goals, Objectives, and Standards should be included that require proper sanitation practices for human refuse and pet food in grizzly bear recovery zones on the forest. This is consistent with reasonable and prudent measures agreed to in past consultation on the forest and should be included in the revised Forest Plan.

Page III-118, Dispersed Camping Management Information, education, and sanitation standards have been set for areas

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within the recovery zone for grizzly bears. These should be presented in this section under the Description or a section entitled "Wildlife" under Standards and Guidelines. Similar information was requested to be included in the Forestwide Standards and Guidelines beginning on page III-17.

Page III-122, Range, last paragraph This item should be replaced with the statement shown under 3.A, on page III-21. This will provide consistency for the prescriptions and the Forestwide Standards and Guidelines.

Pages III-123 and 131, Objectives Add the following as Objective number 5 on page 123 and Objective 7 on page 131, "Maintain or enhance inherent habitat values associated with fish, wildlife, and vegetation of the area." This will assist the Forest Service in obtaining the goals and desired future conditions proffered in ecosystem management objectives being implemented on the Forest.

Page III-133 Grizzly Bear habitat within the recovery zone but outside the security area and core area - Biological Elements - Wildlife. The prescriptions for activity areas are appropriately stated, however, the analysis area for EA purposes should be stated as a Standard instead of a Guideline.

Page III-134, Forest Use and Occupation, Access The Service supports the Standards set in the Table on page III-134 for cross Country and Road and Trail use. Temporary roads should be included as a part of TMARD (Total Motorized Access Route Density) and OROMTRD (Open Road and Open Motorized Trail Route Density). Road density standards should be met and calculated on an activity area basis.

Page IV-2, Implementation Schedules Implementation of road closures should be included as an objective to be consistent with the recommended changes on pages III-11 and 16.

Page V-3, Monitoring Item Summary Biological Elements, Wildlife Completion of bald eagle nest site management plans should be included and given priority 1 status,

Aquatic/Riparian Riparian and aquatic monitoring should receive as high a priority as Hydrologic Disturbance in Watersheds. All species of wildlife benefit from aquatic habitat types during some portion of their life history. The Service recommends the monitoring program emulate a pulsed monitoring format for watershed and stream restoration.

Roads and Trail Access Road Closure effectiveness should receive as high a priority as Grizzly Bear Habitat Improvement, since these two activities are interrelated and will be mutually

beneficial.

IV-17 Forest Timber Schedule The following proposed timber sales will have direct impacts on resource management on adjacent BLM lands: Watershed 009A - Island Park/Centennials; Watershed 014 - Big Bend Ridge; Watershed 016 - Falls River; Watershed 019 - Teton Creek; Watershed 020 - Leigh Creek; Watershed 023/024 - Canyon and Moody Creek; Watershed 025 - Camas Creek; and Watershed 026A - Beaver Creek.

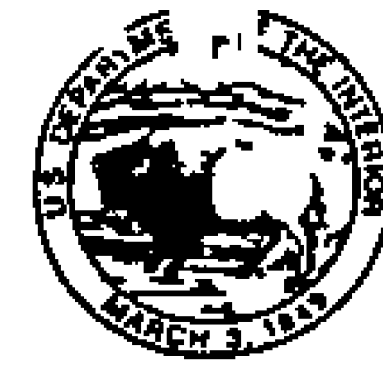
In some cases timber harvest may render BLM management objectives useless due to individual or cumulative impacts adversely affecting resources such as water quality, riparian, big game habitat, raptor nesting, recreation (e.g. hunting, fishing, camping, hiking, snowmobiling). True ecosystem management would involve analyzing the cumulative effects of timber harvest and OHV plans on BLM land and that administered by the Idaho Department of Public Lands. The areas in which the above-mentioned harvests would occur have been identified by the Idaho Department of Fish and Game as crucial habitat for big game summer-fall habitat as well as secure migration areas. These areas are crucial today because there has been minimal harvest in the past. This proposed timber harvest schedule would fragment crucial big game habitat, raptor nesting habitat, riparian areas, and recreation activities shared by the Forest Service and BLM.

Add a standard requiring: 1) analysis of the land management practices on BLM Lands adjacent to the proposed sales; and 2) interagency coordination with BLM to ensure management of the total ecosystem.

V-2 Monitoring and Evaluation/Monitoring and the Budget Clarify how under shrinking budgets and staff the Forest is proposing to monitor and enforce these extensive standards and guidelines. All monitoring and enforcement plans should include a Forest Service manpower work load analysis.

A-1 (Appendix A) National Goals Relevant to Land and Resource Management Include reference to the following resource programs both of which greatly impact land management:

1. Hazardous Materials laws, rules and regulations as they affect discovery of illegal dump sites, transportation across Forest roads, and incidents, spills and accidents; and
2. Idaho Abandoned Mine Inventory Program as it addresses abandoned mine inventories and assessment for hazards.



United States Department of the Interior

NATIONAL PARK SERVICE
GRAND TETON NATIONAL PARK
P O DRAWER 170
MOOSE, WYOMING 83012



IN REPLY REFER TO:

A3815 (GRTE)

June 26, 1996

RECEIVED
JUN 27 1996

699
Grand Teton Natl Park
Nichols, Jack

Mr Jerry B Reese
Forest Supervisor
Targhee National Forest
P O Box 208
St. Anthony, ID 83445

Dear Jerry:

I wanted to thank you for the time your staff spent meeting with my staff at the Driggs office. That meeting helped clear up many of the questions and concerns we had related to the forest plan update. We do, however, still have some comments related to the plan, most of which refer to bighorn sheep.

The Park's greatest concern regarding the Draft Forest Plan Revision and Draft Environmental Impact Statement is management of an important shared resource, the Teton range bighorn sheep population. The Park's Senior Wildlife Biologist, Steve Cain, has been a key member of the Teton Range Bighorn Sheep Working Group (hereafter Working Group) since it beginning in 1990. Recognizing the importance and potential implications of revising the Targhee Forest Plan on the welfare of the Teton range bighorn sheep, the Working Group has met several times over the last several weeks to finalize an interagency strategic plan for management of the herd. Based on this strategic plan, the Working Group has submitted comments on the Forest Plan and EIS under separate cover. Grand Teton National Park fully endorses and echoes these comments. Accordingly, please consider the comments submitted by the interagency Working Group to reflect the Park's position, a copy of the comments and supporting documents are enclosed for your convenience.

Among the concerns raised by the Working Group, we feel that those related to 1) domestic sheep grazing and the potential for disease transmission to bighorn sheep, 2) the loss of former low elevation winter ranges on the west side of the Tetons, and 3) the need for protection of winter ranges from human disturbance and from forage utilization by domestic sheep during summer are most important. As we indicated in our November 6, 1995 letter to you regarding renewal of the Moose Creek Sheep and Goat Allotment, the potential for complete bighorn sheep herd die-offs resulting from contact with domestic sheep is well documented. Current domestic sheep grazing practices on the Targhee pose an unacceptable risk to Teton bighorn sheep. In addition, the ability to reintroduce fire to, protect from human disturbance, and reestablish use of former low elevation winter ranges on the Targhee are critical components of maintaining or enhancing the viability of the herd. These issues should be taken seriously, and, as the Working Group's comments suggest, the Draft Plan should be modified appropriately to specifically address them.

Thank you far the opportunity to comment on the draft Forest Plan Revision and DEIS. We look forward to reviewing the next series of environmental documents for the Forest Plan revision. For questions on land and natural resource comments, please refer them to Mr. Joe Kraayenbrink, Acting Manager of the BLM's Idaho Falls District Office at (208) 254-7525. Mr. Dennis Hoyem is the project contact at the above number. If you have any questions concerning fish and wildlife resources, please contact Mr. Hike Donahoo of the Service's Eastern Idaho Field Office at (208) 233-8550.

sincerely,

Preston Sleeper
Acting Regional Environmental Officer

I believe that successful management and conservation of this valuable resource will require an increased level of cooperation among the Targhee and Bridger-Teton National Forests, Wyoming Game and Fish Department, and Grand Teton National Park in the future. Myself and my staff appreciate the opportunity for input on this planning process as it affects bighorn sheep, and encourage your continued involvement with the Interagency Working Group.

Other specific comments related to the plan include:

Page 3-59 Under access. Will there be any provision to develop more handicapped accessible access?

Page 3-63 Goal #4 Define what "moderate" means.

We would like to continue to work with the forest on operational issues such as permits, visitor information and law enforcement. Please contact Steve Cain (307-739-3485) for bighorn sheep or Nancy Arkin, Park Planner (307-739-3486) for other topics if you would like to discuss these issues further.

Thanks again for the opportunity to comment on your forest plan revision. We look forward to continuing to work with you in the future.

Sincerely,



Jack Neckels
Superintendent

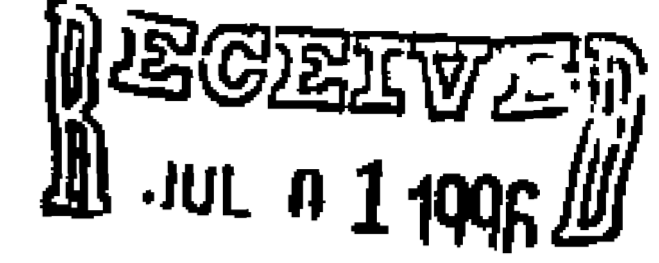
Enclosures



IN REPLY REFER TO:

L7619 (YELL)

JUN 27 1996



Mr. Jerry Reese
Targhee National Forest
P.O. Box 208
St. Anthony, Idaho 83445

#1351 - Finley, Michael

Dear Mr. Reese:

Thank you for providing Yellowstone National Park the opportunity to review the Targhee National Forest, Draft Forest Plan Revision and accompanying Draft Environmental Impact Statement (EIS). We offer the following comments.

The draft Forest Plan Revision calls for additional marked or groomed trails that lead snowmobilers near the boundary of Yellowstone National Park. We believe that two of these trails will encourage trespass activity into the park by snowmobilers. One trail is a loop trail that brings snowmobilers close to the park boundary; the other trail dead ends at the park boundary. We strongly urge that both of these trails be deleted from the final plan. We have enclosed a copy of a portion of Map 12, Winter Motorized Access, Alternative 3-M, indicating the trails we are referring to. Furthermore, we urge that cross-country motorized use be prohibited on the forest lands adjacent to the park in the area shown on another enclosed map (also a portion of Map 12, Winter Motorized Access, Alternative 3-M). Such a buffer would further reduce trespass snowmobiling in the park.

The draft Forest Plan Revision and EIS do not discuss the Targhee National Forest's participation (since 1994) in the Greater Yellowstone Coordinating Committee's Interagency winter Visitor Use Management Planning effort. We recognize that the team's recommendations will not be ready before the completion of the Forest Plan Revision, but we recommend that you include a discussion indicating how the winter visitor use planning effort may be integrated with the revised plan.

We support the proposal to restrict cross-country oversnow motorized travel after April 15. We believe this proposal will provide added protection for grizzly bears emerging from their dens in the spring.

The plan calls for a significant increase in the number of miles of marked and groomed snowmobile routes on the forest. However,

the EIS does not discuss how this increase will affect winter recreation users.

We support your recommendations for wilderness designations. Wilderness designation for areas adjacent to Yellowstone would benefit wildlife that move between the park and forest by minimizing the loss of habitat resulting from motorized access.

The statement that geothermal development is prohibited in the Island Park Geothermal Area (draft EIS, page III-18) was hard to find. In view of the controversy and continued public interest in geothermal protection, we suggest that "Geothermal Development, III-18" be added to the Index to aid the reader. We also suggest that you cite the 1990 regulations, 43 CFR 3201.1-6(f), which implement Public Law 98-473, the Geothermal Steam Act Amendments of 1988. A similar discussion in the draft Forest Plan Revision may also help.

Noxious weeds are listed in the draft EIS (page II-2) among "issue indicators that are the same or vary slightly in all alternatives." We are extremely interested in this issue as noxious weeds have the potential to significantly adversely affect park resources. Our thoughts on this issue are contained in a letter dated February 7, 1994, commenting on the Targhee National Forest's Noxious Weed and Poisonous Plant Control Program (copy enclosed).

If the draft Forest Plan Revision is implemented as described, the steps you propose to reduce timber harvest to sustainable levels, to reduce open road mileage, to improve the condition of riparian areas, and to manage motorized access in order to provide secure habitat for wildlife, especially grizzly bears, will benefit the Greater Yellowstone Ecosystem. Thank you again for the opportunity to comment on the document.

Sincerely,

Michael V. Finley
Michael V. Finley
Superintendent

enclosures (3)

The SHOSHONE-BANNOCK TRIBES



FORT HALL INDIAN RESERVATION
PHONE (208) 238 3748
(208) 238 3900
(208) 238-3808

FISHERIES DEPARTMENT
P O BOX 306
FORT HALL IDAHO 83203

June 25, 1996

Jerry B. Reese, Forest Supervisor
USDA-FS, Targhee National Forest
Supervisor's Office
P O Box 208
St Anthony, ID 83445

RE DRAFT FOREST PLAN REVISION AND ENVIRONMENTAL IMPACT STATEMENT FOR THE TARGHEE NATIONAL FOREST

Dear Mr Reese

Staff for the Shoshone-Bannock Tribes (Tribe) has reviewed the above-referenced documents forwarded to my office. Enclosed, please find one (1) copy of our comments for your staff's consideration. We appreciate the Forest's attempts to keep Tribal staff informed of their management activities. If you have any questions concerning our comments, feel free to contact me at the above address or at (208) 238-3758.

Sincerely,

Shawn Robertson
Shawn Robertson
Acting Natural Resource Director

SWR/swr

Enc

cc corr files w/o enc
proj files

TARGHEE
DISTRICTS 1 2 3 4

JUL 15 '96

ACT	DATE	BY	REMARKS

I. INTRODUCTION

The Shoshone-Bannock Tribes (Tribes) collectively comprise a single, federally recognized Indian Tribe with a governing body, the Fort Hall Business Council, which is duly recognized by the Secretary of the Interior¹. Tribal members are successors-in-interest of Indian signatories to the Fort Bridger Treaty² (Treaty). In part, that Treaty secured the Fort Hall Indian Reservation in Idaho Territory as a permanent tribal homeland.

Article 4 of that Treaty secured for the Tribes--and guaranteed in perpetuity--the continuation of a wide variety of 'use rights' to off-Reservation lands. More specifically, by virtue of Article 4 of the Treaty, the Tribes expressly reserved rights to hunt, fish, and gather natural resources for subsistence and ceremonial purposes "on the unoccupied lands of the United States", including such lands owned by the federal government outside the boundaries of the Reservation⁴.

Tribal members have legal rights to hunt, fish, gather and otherwise use the unoccupied lands of the United States. Thus, the application of any land management action has the potential for impermissible interference with the exercise of such Treaty rights. As such, the Tribes are very concerned about potential impacts to fish and wildlife, habitat, and other natural and cultural resources from various land uses and activities.

The proposed Forest Plan revision represents a significant opportunity to address Tribal concerns regarding resource use and protection on the Targhee National Forest. The Tribes provide the following comments to be included within the public record related to the proposed Project and to be used within the evaluation process.

II. COMMENTS

In written and verbal input to the Forest, the Tribes have submitted comments requesting the Forest to consider specific issues identified by the Tribes to be crucial in protecting Tribal interests. Each of the comments outlined below have been previously submitted to the Forest and are being resubmitted due to the Forest's inadequate consideration of them within the proposed Plan.

A. The Forest has failed to appropriately consider alternatives which maintain Tribal member harvesting of firewood, posts, and poles for personal use under

¹See Swim v. Bergland, Civil No. 78-4021 (D. Idaho 1981), 696 F.2d 712 (9th Cir. 1983).

²15 Stat. 673, July 3, 1868.

³15 Stat. 674-75

⁴State v. Tinno, 497 P.2d 1386 (1972) (1868 Treaty rights extended to "unoccupied" federal lands off-Reservation).

established Treaty rights.

The Targhee National Forest is one of the most important forests in the region for Tribal members to acquire forest wood products--in particular posts, poles, and firewood. It is also one of the few forests which has an abundant supply of these products (primarily lodgepole pine) in a readily available and accessible manner. Since time immemorial, Tribal members have continuously used the Forest lands in procuring these resources for both on- and off-Reservation uses. In numerous coordination and public meetings with Forest representatives, the Tribal government, as well as its members individually, expressed a compelling need to maintain continued access to these products. We also requested that the Forest consider, within the Forest Plan, alternatives which serve to maintain Tribal uses of these products in a manner which meets the members identified needs. However, the Forest Plan lacks any discussion of this issue and fails to recognize the Tribal Treaty right to harvest wood products and the importance of continuing this right with minimal interference from other Forest activities or administrative efforts (such as fee permit harvesting).

Based on our unproductive discussions with Forest employees, we assert that the Forest inappropriately relies upon invalid assumptions when they fail to recognize Tribal gathering as an established right covered by Treaty. Forest staff have stated that in their opinion, the Treaty only covers Tribal hunting and fishing. The Tribes dispute this contention and offer the following information for the Forest's consideration.

The U.S. Supreme Court has established principles, termed canons of construction, for interpreting Indian treaties, which the Forest--as a federal agency--must recognize and uphold. An important principle is that Indian tribes reserve all rights not expressly extinguished by treaty or statute, regardless of whether those rights are specifically described in the Treaty ("reserved rights doctrine", see Swim v. Bergland). While the Fort Bridger Treaty only refers to the reserved right to "hunt" on unoccupied lands, this language has been interpreted as the right to fish and otherwise gather (State v. Tinno). In addition, subsequent agreements between the Tribes and the federal government have upheld the gathering rights reserved under the original Treaty and specifically reference harvesting of timber for personal use (Swim v. Bergland). The Forest has not shown evidence that Tribal rights for gathering of personal use forest products have been extinguished.

The Forest as a trust steward of Indian assets and Tribal rights must ensure consistent analysis with court established legal doctrine, in addition to meeting the expressed needs of American Indians. Quite to the contrary, the Forest has responded to our many requests simply by stating that this issue requires additional clarification of the Treaty right by the Tribal attorney's office and the Office of General Counsel. This request is unnecessary provided that the Forest follows established principles of the government-to-government relationship and ensures consistency with federal statute.

Furthermore, the Forest has failed to provide any justification for not assessing Tribal harvesting needs in the Forest Plan or the reasons for applying a strict prohibition on wood products gathering by Indians. Not only is this approach inconsistent with basic NEPA and trust responsibility principles, but is inconsistent with the analysis in other parts of the

proposed Forest Plan'

Given that the Forest must consider Tribal rights activities including wood gathering within the Forest Plan we also request that the Forest consider the established Tribal need to use these resources in support of other rights activities. This rights activity occurs when gathered wood products effectuate other terms of the Treaty. For example, corral poles are used for promoting an agrarian livelihood on the Reservation and firewood/poles are utilized when hunting or conducting ceremonies. Following other standards of construing Indian treaties it is clear that Indian tribes reserve all rights necessary for effectuation of treaty purposes⁶. Through historical and ethnographic research, it is well established that the Tribes have a long history of use of the Targhee Forest for Treaty purposes and that the gathering of wood products supports those Treaty purposes.

The Tribes again request that the Forest analyze the effects of prohibiting future gathering efforts of the members and provide reasonable accommodations to continue the gathering of wood products under Treaty. Further, within this analysis, the Forest must clearly recognize that Tribal rights, including gathering rights are a protected interest and not a privilege afforded the Tribes by the Forest Service.

B The Forest has failed to assess the direct, indirect, and cumulative effects of existing and proposed road closures on Tribal rights activities.

In addition to providing wood products to the Tribes, the Targhee Forest is also important for providing habitat for big game species hunted by Tribal members. The Forest must recognize that Tribal hunting is maintained by the Tribal government, through the assurance of a harvest opportunity as well as implementing habitat/species protection and management programs as an important contemporary ceremonial and subsistence activity of the Tribes. The Forest Plan implies that these activities are important from a historical perspective but neglects to emphasize the contemporary importance.

Under recent management, the Forest has effectively closed (through road closures) many areas of the Forest that were extensively used by the Tribes, especially for hunting and gathering. The Tribes understand that many of these closures were implemented as mitigation for an extensive timber harvesting program, however, this harvesting program has been effectuated at the expense of Tribal hunting. As expressed to the Forest previously, Tribal hunting is a crucial lifeway and a direct link exists between the harvest opportunities on the Forest and the Reservation socio-economic condition.

We acknowledge that road closures will assist with maintaining a resident big game herd on

⁶The Forest has recognized other gathering rights of the Tribes (e.g. medicinal plants) but not other forest resources.

⁶Winters v. U.S., 207 U.S. 564 (1908) *citation not seen*, and Swim v. Bergland

the Forest which has been supplanted due to harvest activities. However, based upon the extensive road closures to-date, the Tribes request that the Forest describe in detail the nature and extent of previous closures in order to assess the specific cumulative effects to Tribal access.

Specifically, the Antelope Flats area forest road 771, and the Keg Spring locale (road 042) are of special interest to the Tribes for purposes of hunting. We request that the Forest revise the access management strategy to provide reasonable access to these areas prior to and following the general rifle season.

In addition, the Forest has also proposed the seasonal closure of roads beginning prior to the general archery season. The Tribes specifically identified the time from August 1 to the opening of the general rifle season as a critical time for Tribal resource use. However, this was not considered or discussed in the Forest plan. Further, the Forest has not described a compelling conservation necessity for closing roads this early in the summer/fall season. The Tribes request that the Forest assess the potential for leaving roads open during this time period for mitigation of detrimental effects on Tribal rights activities from cumulative road closures.

C Monitor cultural resource sites on grazing allotments consistent with the national programmatic agreement.

The Tribes were a principle party in the Southeastern Idaho efforts to integrate grazing management with cultural resource protection efforts. We appreciate the Forest's attention to these efforts by proposing activity compliance with the pending State/R-4 agreement and the national programmatic agreement. However, we call to the Forest's attention, the agreement standards for monitoring cultural sites on grazing allotments.

In order to assess the potential mitigative benefits of the Forest's selected alternative we request that the Forest identify which sites will be selected for monitoring, the monitoring procedure that will be used, and the schedule for monitoring.

D Establish a consultation procedure and intergovernmental agreement with the Tribes to guide future cooperative efforts.

As an outgrowth of the Forest Plan revision, accompanied with other regional efforts, the Tribes and Forest Service have fostered new principles for cooperative management and consultation efforts. The President (through Memorandum April 29, 1994), and the Forest Service (through recent policy direction) have provided a foundation, in addition to existing law and policy, which reinforces the need to develop future partnerships and relationships.

A crucial component of an effective working relationship is an efficient consultation procedure that meets the needs of both parties. Further, many site specific issues regarding Treaty rights and Tribal issues can only be identified and considered under the project level analysis performed by the Forest staff. Since the Intermountain Region lacks such a detailed procedure in the Forest Service Manual, the Tribes request that the Forest include provisions

in the Forest Plan for developing such a procedure specific to activities on the Targhee. The Tribes also request that the development of this process be included as a mitigation proposal for effects on Tribal activities and be included in the schedule of activity completion in the Forest Plan.

E Recognize Tribes as comanagers along with other agencies including the IDF&G.

By virtue of Treaty and well established legal principles, the Tribes are recognized comanagers of natural resources along with the other federal and state agencies with jurisdiction or authority on the Forest. Tribal agencies, such as the Natural Resources Division and Fish and Game Department, have been institutionalized by the Tribal government with authorities and responsibilities similar to our cooperating agencies. As such, the Forest must recognize Tribal agencies similar to their recognition of other agencies (i.e. the Idaho Department of Fish and Game). Consequently, the Forest should reference the Tribes as a party to future coordination efforts where they have recognized the IDF&G, in particular where it effects resources of special concern to the Tribes.

In addition, based upon our comanagement status the Forest must ensure consistency of the proposed Plan, and management actions, with established Tribal policies and objectives (40 CFR §1502.16(c), 40 CFR §1506.2(d)). This was recommended to the Forest previously, however, no copies of Tribal policies were solicited by Forest representatives.

F Socio-economic analysis.

The Tribes specifically requested a socio-economic analysis which describes the Reservation as a discrete economic unit. While the justification for this request was described to the Forest in previous correspondence, the Tribes again call to the Forest's attention Northern Cheyenne Tribe v. Hodel, et al.⁷ in support of our recommendation. In addition, we encourage the Forest to contact the Challis Resource Area of the Bureau of Land Management which is in the process of conducting a similar analysis, for reference materials if needed.

G Minimum level of analysis for treaty rights in future project EA's/EIS's

The Tribes appreciate the Forest's recognition of Tribal reserved rights within the Forest Plan. The above comments detail additional analysts that we contend is necessary to appropriately assess the potential effects of proposed Plan commitments on rights and trust assets. Since Treaty rights are a protected property interest⁸ and are of particularly high value to the Tribal members and government, we request that the Forest provide additional emphasis toward the

⁷No. CV 82-116BLG (D. Mont., May 28, 1985).

⁸Menominee Tribe v. U.S. 391 U.S. 404 (1968) citation not seen in The Rights of Indians and Tribes S. L. Pevar 1992 Southern Illinois University Press.

future need to consider Treaty rights and Tribal interests during all Forest undertakings and activities.

As previously expressed to the Forest in written comments, effects to Treaty rights from Forest activities can be continually eroded as individual projects are implemented. Since the effects are often also site specific, not all of the potential effects can be identified or addressed in this Plan. Consequently, we are requesting that the Forest commit, within the Forest Plan to developing a minimum baseline level analysis that would be incorporated into each NEPA document prepared under the Plan in the future. In addition, we request that the Forest discuss this commitment in the mitigation proposals and propose a schedule to work towards developing this procedure.

Tribal staff are committed to working with the Forest in developing an appropriate procedure that meets both parties management needs. As discussed above, this item could be included within the outlined consultation procedure and/or an intergovernmental agreement.

III CONCLUSION

We appreciate the Forest's attention to certain Tribal comments within the Forest Plan. However, we recognize serious deficiencies in the analysis that can only be rectified with additional consideration and assessment as we have requested. Integral to the Forest's efforts to complete the final plan, we encourage the Forest to provide for meaningful consultation opportunities with Tribal representatives in order to arrive at a final Plan which meets the needs of both parties.



United States
Department of
Agriculture

Agricultural
Research
Service

Pacific West Area
U S Sheep
Experiment Station

Range Sheep Production
Efficiency
Unit



369 State of Wyoming
Magagna, Jim

STATE OF WYOMING
OFFICE OF THE GOVERNOR

STATE CAPITOL BUILDING,
CHEYENNE WY 82002

June 27, 1996

1398 Blackburn, Harvey

RECEIVED
JUL 01 1996

JIM GERINGER
GOVERNOR

June 4, 1996

SUBJECT: Response to Draft Environmental Impact Statement and Forest Plan Revision

TO: Jerry Reese, Forest Supervisor, Targhee National Forest

FROM: Harvey D. Blackburn, Research Leader

Jerry B. Reese, Forest Supervisor
Targhee National Forest
P.O. Box 208
St. Anthony, ID 83445

TARGHEE NF
DISTRICTS 1 2 3 4 5

4 11 '96

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Spec. Inv.	
Training	
Off. of Cong. & Public Affairs	
Director's Sec'y	

Dear Mr Reese

I and several members of my research team have reviewed with great interest the Forest Revision Plan you are presenting. Clearly significant time and resources have been invested in developing the alternative approaches presented in the plan.

Two factors are the underlying basis for our response. The concept of multiple use and the fact that the U S Sheep Experiment Station has collected and analyzed data from our Centennial Mountain summer ranges for a considerable period of time. This data base provides an excellent resource for determining long term ecological trends for this forest

Our research has demonstrated that sheep have very marginal if any impact on riparian areas. In fact in a forth coming article we demonstrate that for willow and wildlife species our grazing areas are in better condition than those found in Yellowstone National Park. Given this type of information we believe any reduction in AUMs especially for sheep is unjustified. Furthermore, and in general to the entire forest, by the proposed reduction in sheep AUMs the Forest Service is losing a valuable means of managing and manipulating native vegetation towards a desired condition.

Specific to the Sheep Station grazing in the Centennials, our long term range and ecological research represent a significant data base from which ecological trends can be evaluated. In fact it is impossible for us to relocate and keep our long term data collect effort in place.

From the Sheep Station perspective we find Alternatives 1, 2 and 3 a more beneficial alternative than Alternative 3-M and would prefer the adoption of Alternative 3.

We would like to thank the Forest Service for providing us an opportunity to comment on this important document.

On behalf of the State of Wyoming, please be advised that we have reviewed the Draft Environmental Impact Statement and the Draft Forest Plan Revision for the Targhee National Forest. In accordance with our own comment period given to all affected state agencies, I have attached comments from the Game and Fish Department, the State Historical Preservation Office and the State Geological Survey for your review. I trust you will give them due consideration as they raise significant issues which should be addressed.

Thank you for the opportunity to comment and I look forward to your response as well as the progress of these studies.

Sincerely,

Jim Magagna
Director of Federal Land Policy

JM jh
Enclosures



WYOMING STATE GEOLOGICAL SURVEY
 BOX 3308 UNIVERSITY STATION • LARAMIE, WYOMING 82071 3008
 (307) 766 2286 • FAX 307-766-2605 • E MAIL wsgs@wsgs.uwyo.edu

STATE GEOLOGIST Gary B. Glass

WYOMING STATE GEOLOGICAL SURVEY BOARD
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W. Don Hausel	Coof P. Daniel Vogler	James C. Cole	Alan J. Ver Ploeg	Ray E. Harris	Rodney H. De Bruin	Richard W. Jones

359 State of Wyoming
 May 15, 1996

MEMORANDUM

TO Julie Hamilton, Wyoming State Clearing House

FROM Gary B. Glass, P.G., State Geologist

SUBJECT Draft Environmental Impact Statement and Draft Revised Forest Plan for Targhee National Forest (State Identifier # 96-015)

We have reviewed these two documents and have the following comments.

There is no indication that the preparers of either document considered the earthquake (seismic) potential in the area. The maximum credible earthquake in this region could cause loss of life as well as considerable property damage. Seismicity should be considered in the design, construction, and siting of facilities throughout the area.

We have prepared preliminary landslide maps of the Wyoming portion of the Targhee National Forest. These maps are available if the Forest does not have them.

There is no discussion of groundwater concerns. The Madison Limestone in this area is a significant aquifer.

In addition to gold in the Wyoming portions of the Targhee National Forest, there is a potential for copper-silver-zinc-lead mineralization in red beds, especially in the Caribou area. In the past, gold was mined near Alpine.

There are other mineral resources of potential economic importance in the Teton Range. There has been production of granite for dimension stone in T44N, R117W and there is still a possible quarry site at that location. There was a very large chemical-grade limestone quarry in T42N, R118W, which was used to refine sugar beets. There are large resources of chemical-grade limestone in the area. There are some minable phosphate occurrences in T43N, R118W. Sand, gravel, and crushed stone resources also occur throughout the forest including the Teton Range. And at least one diamond has reportedly been found in the Teton Range.

If there are questions regarding our comments, the following members of my staff are available (their specialties are in parentheses)

Jim Case (Geologic hazards- landslides and earthquakes, aquifers)
 Dan Hausel (Metals and precious stones)
 Ray Harris (Industrial minerals and construction materials)

Our E-mail address is: wsgs@wsgs.uwyo.edu

Serving Wyoming Since 1933



THE STATE OF WYOMING
 Jim Geringer, Governor

Department of Commerce
 Celeste Colgan, Director

Karyl Robb, Director
 Division of Cultural Resources

359 State of Wyoming

March 6, 1996

Wyoming State Clearinghouse
 Office of the Governor
 State Capitol Building
 Cheyenne, WY 82001

RE: Targhee National Forest, Draft Environmental Impact Statement and Draft Revised Forest Plan (State Identifier Number: 96-015); SHPO #0396RLC006

Dear Sir

Richard Currit of our staff has received information concerning the aforementioned statement and plan. Thank you for allowing us the opportunity to comment.

Management of cultural resources on impact and plan projects is conducted in accordance with Section 106 of the National Historic Preservation Act and Advisory Council regulations 36 CFR Part 800. These regulations call for survey, evaluation and protection of significant historic and archeological sites prior to any disturbance. Provided the U.S. Forest Service (USFS) follows the procedures established in the regulations, we have no objections to the project. Specific comments on the project's effect on cultural resource sites will be provided to the USFS when we review the cultural resource documentation called for in 36 CFR Part 800.

Please refer to SHPO project control number #0396RLC006 on any future correspondence dealing with this project. If you have any questions contact Richard Currit at 307-777-5497 or Judy Wolf, Deputy SHPO, at 307-777-6311.

Sincerely,

Judy Wolf

John T. Keck
 State Historic Preservation Officer

JTK.RLC-jh

Division of Cultural Resources
 State Historic Preservation Office
 6101 Yellowstone Road
 Cheyenne Wyoming 82002
 (307) 766-7697 FAX (307) 766-4211

May 15, 1996

389 Correll, J. n

WER 7371
Targhee National Forest
Draft Environmental Impact Statement and
Draft Revised Forest Plan
Targhee National Forest
SIN 96-015

WYOMING STATE CLEARINGHOUSE
OFFICE OF FEDERAL LAND POLICY
ATTN: JULIE HAMILTON
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CHEYENNE, WY 82002

Dear Ms. Hamilton

The staff of the Wyoming Game and Fish Department has reviewed the draft environmental impact statement and draft revised forest plan for the Targhee National Forest. We offer the following comments:

Terrestrial Considerations

Wyoming Game & Fish Department personnel have previously commented on the Targhee National Forest plan revision and draft environmental impact statement in a letter dated November 15, 1995. However, the Forest Service did not address any of our terrestrial wildlife concerns described in that letter. Since our previous comments reflect our concerns about significant omissions in the documents relative to wildlife and wildlife habitat, we have repeated them below and have provided additional comments:

DRAFT FOREST PLAN REVISION

1 Harvest Techniques Standards and guidelines for when and how clearcutting will be used are unclear. We request the Forest Service identify goals for this management method and clarify why clearcutting is the most appropriate technique for these goals. Application of the salvage cut or catastrophic event clause in almost all the proposed prescriptions is also of concern. Our interpretation of the draft revision is that salvage cut principles could occur in any area including old growth and crucial security areas which would normally not be considered for timber harvest. Standards and guidelines should be

developed for this timber harvest method to avoid timber harvest levels that would have a detrimental impact to other forest resources.

2. Additional Cutting The identified management prescriptions and standards and guidelines are lacking the unscheduled timber harvest clause in prescription areas that are not included in the allowable sale quotient. In the past, some commercial timber has been removed from these areas. The plan revision should provide guidelines as to when, how, or where this can occur. If such activities are considered for crucial big game winter range, the plan revision should provide guidelines on management and mitigation for these areas, or if the cut will be permitted at all.

3. Road Density The draft management prescriptions establish standards and guidelines which limit the density of open roads and trails. Road densities vary by prescription and to some degree are based on security habitat needs for wildlife, especially elk. However, many areas in Wyoming on the Ashton Ranger District and the northern portion of the Teton Basin Ranger District already exceed the standards for open road density. We believe two miles or less of roads per square mile, with more restrictive standards dependent on specific prescriptions, should be adequate to accomplish Forest Service objectives. Wildlife security areas adjacent to timber harvest activities should be at least 3-4 times larger than the timber sale area.

The existing and proposed plan revision allow road density to be achieved by closing or reclaiming existing roads. However, the Forest Service often prefers to install gates to control road use and access rather than obliterating portions of, or reclaiming a road. The gate closure technique allows access by all-terrain vehicles, snowmachines, and other motorized vehicles, (even if prohibited by Forest Service policy) and for administrative purposes. From a wildlife perspective, an open road should be defined as any road that can be traveled on by motorized vehicle even if the road is designated as closed. A comprehensive road management and transportation plan should evaluate the need for roads on the Forest, how those needs are achieved by the existing road system and what impacts these roads have on other forest resources. The forest plan should also include a forest-wide direction to limit cross country motorized travel to protect big game habitat.

Recent research indicates road density is significant in habitat management for forest carnivores such as lynx and wolverine. Both species are on the Forest Service Region 4 sensitive species list. The forest plan should acknowledge this association.

4. Standards There is a lack of specific, quantifiable standards throughout both documents for all resources. Standards govern management of Targhee National Forest resources. Many objectives are listed as guidelines or optional management. A forest plan that is heavily reliant on guidelines and de-emphasizes standards will not provide managers the needed direction to address problems as they arise, or implement sound resource management decisions.

5 Indicator Species According to a Forest Service memo dated Feb 18, 1992, deer elk and moose winter range habitats were recommended as management indicators for the forest plan revision. However, the revision does not include moose crucial winter range, and the amount of winter range for deer and elk is less than that currently present. Please clarify this discrepancy.

6 Trumpeter Swan and Waterfowl Wintering Areas No analysis or consideration is indicated for off road vehicle travel and human access in trumpeter swan and waterfowl wintering areas associated with the Palisades Wetland Area (Palisades Ranger District). We recommend off-road vehicles and human access be prohibited in the wetland area from December 1 - March 31 in order to provide a secure area for waterfowl and trumpeter swans to winter. All corridors for winter motorized travel in the immediate area of this wetland should be located on/or south of the McCoy Creek Road. An additional restriction to prohibit motorized access from November 1 - August 31 should be considered to protect the nesting and brood rearing period. In addition, we recommend posting of signs around the wetland educating the public about negative impacts of human and motorized access in this area.

7 Winter Range The preferred alternative does not recognize big game winter range from the Snake River Canyon to the state line. Areas managed under a winter range prescription in the previous forest plan are now proposed to be managed under a timber prescription that emphasizes timber management in an urban/interface situation, a semi-primitive motorized recreation prescription or a visual quality prescription. We recommend the Forest Service correct this oversight and incorporate crucial elk, moose and deer winter range prescriptions into the forest plan.

Moose winter ranges in the following areas need to be included and protected in the forest plan: from Wyoming State Highway 22, north to Teton Canyon in Management Prescription 3 2, from North and South Leigh Creek to Badger Creek in Management Prescription 5 4, and north of Badger Creek in Management Prescription 5 3 5.

8 Targhee Bighorn Sheep Teton Range bighorn sheep exhibit many characteristics of a low quality population (Whitfield and Keller 1984). Low quality populations result from poor forage availability and habitat conditions (Geist 1971). The continued existence of this genetically isolated bighorn sheep herd is uncertain, and we support management strategies (Suminski 1991) directed at maintenance and perpetuation of this population.

This bighorn sheep herd is threatened by a number of factors, including a) potential competition with and disease transmission from, domestic sheep grazing on national forest lands, b) loss or abandonment of former low-elevation winter ranges due to development, fire suppression, poaching and other human disturbances, c) likely genetic isolation and related consequences of inbreeding, and d) habitat displacement due to recreationist activities.

We are disappointed bighorn sheep were given little consideration in the forest plan. Memoranda dated Feb 15, 1989, Feb 14, 1994 and April 18, 1995 to the Forest Service from the Wyoming Game and Fish Department and a letter dated Nov 6, 1995 from Grand Teton National Park stressed concerns about bighorn sheep winter range and domestic sheep grazing. At the Forest Service plan revision meeting on Jan 16, 1992, bighorn sheep were discussed as a possible management indicator species. Problems identified for this herd at this meeting included disease transmission from domestic sheep and loss of winter range due to plant succession and fire suppression.

The draft plan should include a forest-wide standard protecting crucial bighorn sheep winter range, and we also recommend historic bighorn sheep winter range be included in the winter range prescription. Bighorn sheep ranges located in Teton, Darby, Fox and Phillips Canyons, Rendezvous Peak, and Bitch Creek also need to be addressed in the forest plan. The standard should include recreation and travel constraints for these areas.

9 Disease Transmission From Domestic to Wild Sheep Scientific data indicate the single most important and ominous threat to the continued existence of the Teton bighorn sheep herd is the potential for a complete herd die-off resulting from a disease transmission from domestic sheep. The cause and effect relationship between bighorn die-offs and contact with domestic sheep is well known. The Forest Service's environmental assessment on the Moose Creek Sheep and Goat Allotment Grazing Permit renewal states "of 38 recorded die-offs of bighorn sheep from 1905 to the present, (at least) 23 were known to have been caused by contact with domestic sheep."

This well-documented relationship forms the basis for accepted and formalized management guidelines, recommendations, and practices at the domestic sheep/bighorn sheep interface. One such formal guideline, produced by and for the Forest Service (Suminski 1991) suggests establishing a buffer zone between domestic sheep and bighorn use areas to prevent transmission of fatal diseases, and recommends no trailing of domestic sheep occur within at least 2 miles of occupied bighorn ranges. This document also cites a 1981 letter from the Forest Service Chief to Regional Foresters stating "appropriate caution should be exercised to prevent contact between domestic sheep and bighorn sheep." Similar guidelines formulated by the Bureau of Land Management, and in consensus with the American Sheep Industry Association, the Western Association of Fish and Wildlife Agencies, and several bighorn sheep specialists and organizations (18 June 1992 memo from Director of the Bureau of Land Management) state a) domestic sheep grazing and trailing should be discouraged in the vicinity of bighorn sheep range, b) bighorn sheep and domestic sheep should be spatially separated to discourage the possibility of coming into physical contact with each other, and c) buffer strips (up to 9 miles wide depending on local conditions and management options) surrounding bighorn sheep habitat should be encouraged.

The Wyoming Game & Fish Department strongly recommends the Forest Service follow management strategies outlined by Suminski (1991). In particular, we emphasize implementation of management strategies 1, 2, 3, 5, 7, 8, 10. We also strongly encourage

implementation of a minimum of a two mile "buffer zone" between occupied bighorn sheep habitat and domestic sheep grazing

10 Recreation Under the recreation discussion (p III-17), a goal to minimize winter recreation impacts on wintering wildlife is included. We recommend standards and guidelines be developed and enforced to help achieve this goal

11 Lion Range Subsection (p III-47) Plans for this subsection have a wildlife objective to improve big game winter range. However moose and bighorn sheep winter ranges have been overlooked. This should be corrected. The Forest Service should also include standards and guidelines to address this objective

12 Designated Wilderness (pp III-57 - III-65) Bighorn sheep population indices indicate a declining population. We recommend the Forest Service include a goal in this section to maintain habitat for a viable bighorn sheep population, and give bighorn sheep priority over other wilderness uses. Bighorn sheep should also be included as one of the species (grizzly bears, harlequin ducks, and peregrine falcons) in all opportunity classes. No new trails or campsites should be allowed in bighorn sheep habitat

13 Management Prescription 2.7 (p III-92) This section should have a standard to limit outfitter special use permits from Dec 1 to April 30 to protect big game on crucial winter ranges. To minimize disturbance in elk security areas and protect habitat effectiveness all-terrain vehicles should not be allowed for game retrieval in any prescription

14 Timber Harvest, Palisades Ranger District Timber harvest on the Palisades Ranger District in Wyoming should only occur after development of a comprehensive cumulative impacts analysis that evaluates impacts to old growth and wildlife, and reviews public access to areas that winter big game species. Absence of protection for mule deer and elk crucial winter ranges on the Palisades Ranger District is of great concern. The environmental impact statement as well as the Standards and Guidelines should incorporate language that identifies and protects crucial mule deer and elk winter ranges

15 Management Implementation Draft standards and guidelines contain no specific language directing the Targhee National Forest to implement certain management practices, including prescribed burns, certain standards or activities specified for allotments, data collection to monitor allotment management plans, etc. We recommend the documents incorporate language stipulating compulsory management actions which are designed to repair, upgrade, or enhance watersheds and ecosystems

16 Elk Cover and Forage No elk cover/forage relationship guidelines (i.e. sight distance requirements logging impacts, and elk vulnerability guidelines) or habitat effectiveness guidelines are included in this plan revision. Guidelines should be developed and incorporated as standards especially in prescription areas considered as contributing to the suitable timber base and allowable sale quotient

17 Monitoring Programs Monitoring programs to identify current status of the forest plan relative to goals have not been included. The Forest Service should identify accomplishments, and future management directions

18 Outfitter and Guide Standards No outfitter and guide standards and guidelines were included. The Forest Service should provide these standards to allow for public review

19 Range of Natural Variability Many of the vegetation and habitat objectives are too ambiguously worded to accommodate management within the "range of natural variability". We understand the range of natural variability analysis study is not complete, and we have not had the opportunity to review this technique. Without specific range of natural variability criteria, we cannot determine wildlife impacts of an range of natural variability-driven forest objective. For example, if canopy in a lodgepole pine fire discriminates varies from 10% to 90%, how can we determine impacts on a threatened and endangered species? The range of natural variability analysis should be reviewed by the scientific community for accuracy and applicability in natural resource management prior to utilization in this revised plan

20 Riparian habitat Logging in contiguous areas should be conducted in a manner which improves streambank conditions. All previous discussions about riparian habitats have been omitted from the current description of the preferred alternative. These discussions should be re-instated

In our review of the riparian section prior to its omission, a written standard implied that population reductions were an appropriate solution in areas where wildlife use exceeds standards or guidelines for forage removal and streambank trampling. Livestock grazing standards and guidelines are generally based on vegetation and soil conditions within allotments, but the wildlife grazing standard is not tied to a specific area. More specific criteria should be developed to characterize what constitutes wildlife overutilization

21 Timber Harvest near Aquatic Systems The Wyoming Game & Fish Department does not support clearcutting within 100 feet of any water body, or cutting up to 50% of a timbered shoreline (lentic or lotic). To protect wildlife resources and minimize habitat degradation via erosion and other factors, a vegetative buffer strip managed for individual tree removal only (selective harvest) should be maintained for lakes, streams, wetlands, and impoundments. A wider buffer is necessary for areas with steep slopes or erodible soils

22 Biodiversity Several standards related to biodiversity have been changed to guidelines. We believe indicator species should remain as standards to assess habitat and species diversity. Without such standards, habitat management will become inconsistent and potentially conflict with Forest Service goals. Also no objectives are specifically tied to maintaining vegetative diversity as it pertains to old growth

23 Forest-wide Forage Utilization Standards The Wyoming Game & Fish Department does not believe the forest-wide forage utilization standards and guidelines are adequate to protect important habitats and areas susceptible to overgrazing. We believe qualified Forest Service personnel should periodically monitor all stocked ranges to determine forage utilization and to record damage to riparian communities and other sensitive habitats. We suggest the Forest Service also maintain written documentation of compliance for each allotment management plan. Upon completion of the new forest plan, an updated allotment management plan should be prepared for each allotment that will continue to be grazed by domestic stock. Also, all criteria designated under allotment management planning should be designated as standards, not guidelines. We recommend wording on pages III-20-III-22 be changed to read that data will be collected not should be collected, along riparian areas, to monitor livestock trampling and distribution.

24 State Wildlife Objectives The revised plan should incorporate wildlife objectives of the States of Wyoming and Idaho. State objectives are not based upon managing habitat to accommodate only "minimum viable populations". A "minimum viable population" is merely that needed to maintain genetic diversity. A population kept at that level would neither support sport hunting nor offer sufficient viewing opportunities to satisfy the non-consumptive public. Population objectives of the respective states should become forest-wide goals.

25 Old Growth We do not understand why old growth prescriptions managed or unmanaged, were not delineated in the Wyoming portion of the Targhee National Forest. Omission of old growth management from preferred Alternative 3-M is inappropriate. The National Forest Management Act requires no conversions of forest cover types yet restocking of spruce-fir and Douglas fir types is often difficult to nearly impossible. Therefore, conversions to lodgepole pine are inevitable. If old growth is reduced or lost, how will the new plan propose to replace it? Timber harvest in spruce-fir or Douglas fir types should only occur when there is evidence the site will naturally regenerate within the designated 5 year period. Also, standards and guidelines as well as specific goals for maintenance of old growth should be developed and enforced.

We recommend the Targhee National Forest also conduct an accurate inventory of old growth timber on the Forest by watershed or timber management unit and identify provisions for determining how large an area (watershed diversity unit cutting unit) must be maintained in order to accommodate 100 acres of old growth. For example will 5,000 or 500 contiguous acres be required to maintain 100 acres of old growth? One hundred acres of old growth within a specified area appears insufficient to maintain old growth habitat functions and dependent wildlife species. Much of the language in this revision is unclear regarding old growth management. Specific management criteria should be developed.

The revised plan also makes no provisions to increase old growth habitat without undergoing a forest plan amendment. This seems inconsistent with the flexibility the

tumber and range programs have to enlarge a timber sale area or increase the stocking levels of livestock with only minor National Environmental Policy Act documentation. The same guidelines should also apply to increasing old growth acreage.

26 Mountain Goats No management considerations are provided for mountain goats in the Wyoming portion of the revised plan. However, many mountain goats summer in Wyoming. Depending on livestock stocking rates, and distribution and length of domestic grazing in the high elevation cirque basins, domestic grazing can have a considerable impact on mountain goat summer range. We recommend the Forest Service evaluate all domestic sheep allotments that overlap occupied mountain goat habitat for impacts to high elevation cirque basin habitats and mountain goats. Goals and objectives of both the Idaho and Wyoming state wildlife management agencies should also be considered in the forest plan implementation process.

27 Protection of Big Game Winter Ranges The statement "Motorized access is managed or restricted to provide security for winter elk and deer" may be insufficient to provide adequate protection for important and crucial big game winter ranges. The Forest Service should prohibit motorized access in core areas of winter ranges that are crucial to the winter survival of big game.

28 Grizzly Bear Habitat In prescription area 2.6 to 2.6.5, grizzly bear habitat - Situation I, the Forest Service has designated the suitable timber base as part of the allowable sale quotient. If the Forest Service is interested in recovery of the grizzly bear on the Targhee National Forest, these areas should be considered for exclusion from the suitable timber base and allowable sale quotient.

29 Limited Access in Big Game Security Areas No specific definition is provided for "limited" access. If a primary goal is to maintain big game security habitat "limited" access should be more specifically defined and should include "prohibited" where warranted. Words such as "limited" or "restricted" are nebulous and promote ambiguity (reference snowmobile hill climb issue near Afton where the word "restricted" was used by the Forest Service). When areas are managed for "wildlife protection" or "wildlife values" and other resource uses are permitted (e.g. timber harvesting, grazing, off road vehicle use, etc.), wildlife values are ultimately compromised. The Forest Service should add a provision to prohibit motorized activities if they conflict with the primary goal of providing and protecting big game habitat. Motorized vehicle use should occur only on designated routes and only in those areas that do not conflict with big game security. Goals for timber management should consider big game security habitat.

30 Livestock Management Livestock grazing in areas where the goal is to protect big game security habitat can be incompatible due to the impacts of domestic animals on these habitat types. It is essential that management of livestock on important big game ranges assures the maintenance or improvement of habitat conditions for wildlife.

31 Water Developments for Livestock Water developments should be prohibited in areas that will dramatically affect the quality and quantity of forage for wildlife and which would adversely impact the distribution of big game

32 Range Management Standards In each prescription area, range management forest-wide forage utilization standards apply. However, the revised plan does not define these standards. The Forest Service should list these standards, especially for high value wildlife habitats and/or areas susceptible to domestic livestock overgrazing

33 Allotment Management Plan Integrated Ecosystem Management Process Additional standards should be implemented through the allotment management plan integrated ecosystem management process. We recommend the following additions

a Management should maintain or improve edge, edge contrast, food, and cover on all rangelands and shrublands to provide wildlife habitat

b On seasonally important big game range, management techniques that will maintain or improve key forage species in grass, forb, and shrub communities should be prescribed

c On mixed grass/forb/shrub range, a desired forb and shrub composition should be identified by the Forest Service wildlife biologist and used to assist in developing an integrated range/wildlife condition class objective. On mixed range, a forb component should comprise at least 10 percent, with a shrub component at least 30 percent of mixed vegetation cover

d Conflicts between livestock grazing and habitat conservation need to be identified for all riparian, aquatic and wetland habitats. Methods for conflict resolution should be developed

34 Goshawk Nest Surveys Effective protection of goshawks and goshawk nests cannot be achieved without adequate surveys. Surveys should be conducted for any activity which may disturb this species

35 Wildlife Surveys We recommend mandatory surveys for important wildlife and habitats prior to any project or activity that could significantly disrupt these important wildlife species or their habitats. We suggest forest-wide standards and guidelines require surveys to locate raptor nests, threatened and endangered species, candidate species, State priority species, caves, wetlands, etc

36 Sensitive Species The only sensitive species for which measurable standards are defined is the goshawk. The Targhee National Forest standards, guidelines, and prescriptions do not adequately deal with objectives for managing old growth habitat for pine martens, great gray owls, or cavity nesting birds, or habitats for bald eagles, peregrine falcons, or trumpeter swans. We suggest adding a goal to provide habitat to support existing populations and distribution of nongame birds and mammals listed as

species of special concern (Wyoming) or sensitive species by state agencies and the Targhee National Forest

37 Bald Eagles The revised plan states that in occupied nesting zones and primary use areas, human activity will be "minimized" (p III-11). However, where possible, human activity should be prohibited if nest success is a goal. Additionally, historic levels of livestock use are permitted near bald eagle nests as long as no adverse impacts occur related to this activity. "Adverse impacts" should be defined to avoid any misunderstanding of what constitutes an adverse impact

38 Peregrine Falcons All known peregrine falcon nest sites/cliffs should be protected from human activity. Timber sale and mineral extraction activities should not occur within the buffer defined by the peregrine falcon recovery plan or current U.S. Fish and Wildlife Service recommendations for known peregrine falcon nest sites. This stipulation should also be a standard, not a guideline

39 Use of Toxicants We recommend toxicants (including M-44s) be restricted on the Targhee National Forest. In adopting a new management system based on enhancing biological diversity, using toxicants on National Forest System lands to kill wildlife would be a contradiction to the ecosystem approach of land management. Furthermore, in areas that are or may be occupied by grizzly bears or other threatened or endangered species, the use of toxicants on the Targhee National Forest may violate the Endangered Species Act

40 Livestock Pastures The Forest Service has designated as a standard that all administrative sites will comply with forest-wide standards and guidelines for livestock pastures. However, no other livestock pastures are required to meet this compliance. The Forest Service should clarify this discrepancy, and justify management of select livestock pastures by guidelines rather than standards

41 Livestock Conversions Livestock conversions should be considered only after a cumulative impacts analysis is completed to determine what impacts such a conversion will have on wildlife, range resources, vegetation communities, watershed function, recreation (i.e. hunting, hiking, etc.) and soil maintenance and stability

42 Range Improvements In addition to the criteria listed on page III-22, another criterion should be added stating range improvements (i.e. fence construction, water developments, livestock type conversions, etc.) will avoid adversely affecting local wildlife. Emphasis should be placed on improvements that benefit both livestock distribution and wildlife

43 Designation of Natural Resources Goal statements on page III-20 imply wildlife is not a basic natural resource found on the Targhee National Forest. The Wyoming Game & Fish Department strongly disagrees with this implication. Many native wildlife species have evolved and coexisted for thousands of years within the Targhee Forest. Wildlife is one of the basic resources. We believe forage production for

basic natural resources, including wildlife, should be considered before other consumptive uses

44 Maximum Utilization Levels Most maximum utilization levels in Table 1 (p III-21) appear overestimated. We are unaware of any scientific literature supporting utilization levels at 40%/4" stubble height for grasses and 50%/3" stubble height for herbaceous upland species for season-long and rotation grazing of unsatisfactory ranges. In many cases, upland ranges in unsatisfactory condition do not recover to satisfactory condition after several years of complete rest. The preponderance of current scientific literature recommends much more conservative utilization levels. Utilization recommendations for sagebrush grasslands, coniferous forests, and mountain shrubs range from 30-40% (Holechek 1988). Root growth is significantly reduced at levels exceeding 50% leaf removal; and 60% leaf volume removal results in 50% root growth stoppage (Dietz 1989). Dietz (1989) reports 20 to 50% of the total root system of grasses is lost annually. These roots must be replaced if the plant is to remain healthy and productive. Utilization rates in Table 1 are consistently 5 to 10% higher than levels recommended in the scientific literature. This table should be modified unless the Forest can provide a scientific basis (literature, etc.) for the recommended utilization levels. Application of generic utilization levels to all shrubs is inappropriate. While many species of shrubs can withstand 50-60% utilization (i.e. willows, rabbitbrushes), others (i.e. antelope bitterbrush, sagebrush, mountain mahogany) should not receive more than 20-25% use.

45 Riparian Forage Utilization Riparian rangeland maximum utilization levels identified in the revised plan (p III-21) are excessive according to current scientific literature. The Forest Service Intermountain Research Station publication by Clary and Webster (1989) provides an excellent review of recommendations for grazing intermountain riparian areas and should be consulted for developing standards and guidelines. Clary and Webster recommend that "residual stubble or regrowth should be at least 4 to 6 inches in height to provide sufficient herbaceous vigor, maintenance, bank protection, and sediment entrapment". Moreover, these utilization guides are based on "use in pastures in good to high ecological status". Degraded riparian areas may require complete rest to initiate the recovery process. The required rest period may range from 1 to 15 years. Knopf and Cannon (1982) concluded that 10 to 12 years was not sufficient time for a riparian willow community to recover from a history of excessive grazing. Others recommend 35-45% utilization on excellent condition meadows and down to 20-30% on meadows in poor condition (Ratliff et al. 1987, Platts 1982). Meyers (1989) reported additional stubble height, such as 6 inches or more, may be necessary to protect riparian ecosystem functions.

Allowable utilization levels identified in the revised plan for use of unsatisfactory riparian areas range to 4" stubble height. This is contrary to current scientific literature. This section also allows or exceeds the minimum stubble height recommended by current literature for each category, including 2" stubble heights for Kentucky bluegrass areas. Riparian sites dominated by Kentucky bluegrass are usually a result of historic and present overgrazing by livestock and the characteristic of site conversions. Allowing for

continued utilization at the 2" stubble height level will never allow for re-establishment of native species capable of restoring proper watershed functions. We recommend that all stubble heights be increased to 5" and 6" for satisfactory and unsatisfactory conditions, respectively, unless the Forest Service can provide scientific documentation to support the levels in the revised plan.

46 Allotment Management Planning Goals for allotment management planning state the Forest Service wishes to "Achieve or maintain rangeland in satisfactory condition which is defined as 1) having a resource value rating of 50 or above for vegetation." A resource value rating of 50 places a rangeland site in "fair" condition. This designation results in a "satisfactory" condition from a Forest Service range management perspective. The Wyoming Game & Fish Department does not consider "fair" and "satisfactory" as equivalent range conditions for wildlife habitat. We recommend goals for resource value rating scores should be greater than 50, which would place rangelands in Good or Excellent condition ratings.

47 Allotment Management Planning The allotment management planning section appears fairly intensive and inclusive. However, given current budget and personnel restrictions, it is unlikely the Forest Service can implement allotment management planning at the levels prescribed in the revised plan on all allotments. To compensate, utilization levels may be used to evaluate range condition. As previously discussed, we believe the proposed utilization levels are too high and are not supported by scientific literature. Utilization levels should be more conservative and specific relative to vegetative species and location.

48 Resource Value Ratings We recommend more emphasis be given to maintaining or improving resource value ratings for rangelands and less on utilization levels, unless the Forest Service makes utilization levels more specific relative to species and site. Resource value ratings compare current range conditions to potential natural vegetation. This is consistent with the ecological approach to resource management which the Forest Service is taking.

49 Fire and Fuels Management We recommend the following be incorporated into standards and guidelines for fire and fuels management:

a Change the goal to "To provide well-planned and executed fire management programs that mimic natural fire regimes, are efficient, and are responsive to land and resource management goals and objectives."

b Add to the standards and guidelines information and education section "prepare and make available to the public informational and educational materials addressing fire behavior, effects, and natural role in ecosystem management."

50 Management Prescriptions (p III-56) We recommend the Targhee National Forest develop a management prescription for those avian species dependent on forested

habitat for population viability. These species include, but are not limited to northern goshawk, boreal owl, great gray owl, northern pygmy-owl, northern saw-whet owl, Lewis' woodpecker, three-toed woodpecker, Williamson's sapsucker, and black-backed woodpecker. A management prescription should also be developed for the common loon because existing breeding habitat within the Targhee National Forest is important to the continued nesting success of this small population. Any management prescriptions for the common loon within Wyoming should be coordinated with wildlife and fisheries personnel in our Jackson regional office, and non-game personnel in our Lander regional office.

51 Ecological Component (p II-2) To the sentence "Native plant and animal species are favored and habitats are managed with the goal of delisting threatened and endangered", we suggest adding "and preventing new listing of threatened and endangered species."

52 Caves, Standards and Guidelines (p III-5) Abandoned mines are a significant component of bat habitat. Over one-half of 118 underground features surveyed in Wyoming occupied by bats were abandoned mines (Friday and Luce 1996). If abandoned mines occur on the Targhee National Forest, they should be protected as bat habitat and given the same management consideration as caves. All underground features on the Targhee National Forest should be considered habitat for Townsend's big-eared bat and other Wyoming Game and Fish Department bat species of special concern until surveys have been conducted. We suggest the Forest Service standards and guidelines for bat management include the following provisions:

- a) Subsection 1 Due to potential disturbance, logging, road construction and other uses of heavy equipment should be prohibited above any cave or abandoned mine known or suspected to be bat habitat until season of bat use is well documented. Seasonal restrictions should be applied as necessary where caves or abandoned mines are known to be occupied by bats.
- b) Subsection 2 Direction and amount of air flow are significant components of bat habitat and are affected by standing timber near cave or abandoned mine entrances. We recommend a buffer zone for timber harvests with a minimum of 500 feet horizontal radius around all bat roosts.
- c) Human disturbance to roosting bat colonies can have significant negative impacts on populations. Disturbance can be direct (vandalism or intentional disturbance), or indirect (walking through an occupied cave or abandoned mine), resulting in roost abandonment or death of wintering bats. We recommend logging roads be planned to avoid improving access to caves and abandoned mines used by bats during any season of the year.
- d) Spotted bat and Townsend's big-eared bat objective (p III-16) Man-made underground habitat should be described as either an abandoned mine adit or abandoned mine shaft. Adit refers to a horizontal feature and shaft to a vertical

feature. The spotted bat is rarely associated with caves and abandoned mines instead occupying cracks in sheer rock walls and other habitat associated with canyons. Therefore, the Targhee National Forest should remove this species from all discussions related to caves and abandoned mines.

e) The Targhee National Forest should recognize management activities may impact bat habitat other than caves and abandoned mines. For example, snags may be an important component of habitat for forest dwelling species including Townsend's big-eared bat.

f) Management Prescriptions (pp III-56 and V) For all management prescriptions, the Targhee National Forest should work with the respective state wildlife agencies to verify cave and abandoned mine locations and conduct bat surveys. Long-term monitoring of populations and distribution should also be conducted.

53 Access, Standards and Guidelines (p III-16) Roads should be dosed and/or use restricted to meet the guidelines of the Interagency Grizzly Bear Committee grizzly bear/motorized access management recommendations. All potential off-highway vehicle use should be incorporated in the analysis of road density to determine impacts on habitat security and effectiveness, including the proposed use in the Wyoming portion of the Island Park Madison Plateau and Teton Range Subsections. The Madison Plateau and Teton Range Subsections should be managed to meet the goals for grizzly bear habitat security. A moratorium on new road construction should be considered in Management Situation I and II grizzly bear habitat.

54 Wilderness We support the goals, objectives, standards and guidelines for designated wilderness opportunity classes I, II, and III wilderness study areas, wild rivers, and scenic rivers, except as noted in our aquatic comments. In addition, phasing out any domestic sheep grazing adjacent to wilderness areas will reduce the likelihood of conflicts with grizzly bears that might primarily use the recovery zone. This would help protect resident grizzlies within the zone.

55 Carcass Removal (Section 2.6.5, p III-91) The Forest Service states disposal of livestock carcasses includes burying greater than 2 feet under the ground. This will do nothing to prevent a grizzly from obtaining the carcass and possibly coming into conflict with other livestock in the area. Removal of the carcasses or complete incineration is the only alternative that will prevent a bear from using the carcass. Grazing permits should include specific language to assure guidelines for minimizing grizzly bear-livestock conflicts are met.

56 Garbage Storage (Section 2.6.5, p III-91) Garbage storage should meet the same requirements as other attractants in grizzly bear areas. Guidelines for hanging food, etc. should include the definition "a minimum of 10 feet off the ground and 4 feet from any vertical supporting structure."

DRAFT ENVIRONMENTAL IMPACT STATEMENT

57 Small Mammals (pp III-30 and IV-18) The list of wildlife management indicator species is incomplete without inclusion of any small mammal species. We recommend inclusion of at least two small mammals as indicators of riparian condition, possibly the water vole, snowshoe hare, western jumping mouse, or vagrant shrew. The snowshoe hare is also an indicator of forest successional stage and condition of the conifer forest. Presence or absence of the hare is also an indicator of the potential for existence of lynx and fisher, and whether or not habitat management to favor these species should be considered. Red-backed vole and northern flying squirrel could also be considered indicators of the condition of conifer habitats.

58 Lynx and Wolverine Lynx and wolverine are forest carnivores for which Draft Conservation Strategies, including habitat management guidelines, have been prepared. We recommend these guidelines be consulted during finalization of habitat management priorities for the various segments of the Targhee National Forest.

59 Cumulative Impacts Analysis We believe the draft environmental impact statement's cumulative impacts analyses are incomplete. The analyses should consider historic, ongoing, and proposed livestock grazing, timber harvest, road development and use, recreational use, water developments, oil and gas developments, recreation, etc., and include impacts to wildlife, forest, riparian habitats, old growth, succession, soil, watershed, rangeland condition, and other resources.

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Aquatic Considerations

Upon review of the most recent version of this document, we became aware that most all of our previous aquatic comments were not addressed. Hence, we are resubmitting them here.

DRAFT ENVIRONMENTAL IMPACT STATEMENT

Page III-20, Table III-4, Fish-bearing Streams. Neither the text nor the table indicate the type fish considered for this classification. Although most of the fish-bearing streams on the Forest contain only trout, several contain only nongame fish species. As written, the table suggests this category includes all stream with any species of fish. While we have no problems with this grouping, some readers may be misled or confused and think this includes only streams supporting trout. We suggest a footnote be added to the table to clarify this.

Page III-20, Table III-4, Teton Range Subsection. It is unclear in both the text and table how the Desired Vegetation Condition for the Teton Range subsection was determined considering Aquatic Habitat Condition and Trend and Vegetation Seral Stage and Trend are listed as unknown. We suggest the document be modified to either explain how the numbers were obtained or changed to an unknown status.

Page IV-18, Wildlife Associated With Aquatic Ecosystems. This section makes no mention of impacts to any fish species which seems inappropriate given the ability of fish community structure and abundance to reflect watershed and riparian conditions. We

suggest this resource element be included in this part of the document by including cutthroat trout habitat

DRAFT TARGHEE FOREST PLAN REVISION

Page III-7. Biological Elements, Goals #3. Although all of the streams on the Forest in Wyoming flow into Idaho, they are still under the jurisdiction of the State of Wyoming until they exit the state. This section seems to address only streams that are presently impacted and where water quality improvements are desired. We suggest modifying this passage to indicate water quality would be maintained or improved to meet respective state water quality standards.

Page III-7. Standards and Guidelines. This section makes no mention of the need to secure protective minimum fishery pools in new, enlarged or retrofitted reservoirs. Though the Forest must recognize legitimate water rights and the authority of respective states to administer those rights, minimum pools for fisheries are an important opportunity for maximizing public benefits and realizing multiple use goals. We suggest another Guideline be added to this section in which the document conveys the desire to maximize multiple uses of water by requiring all new water storage facilities to include minimum fishery pools and encouraging existing facilities to consider water management strategies and/or design alternatives that maintain or improve reservoir fishery values whenever special use permits are reissued.

Both of the elements of this section make reference to "Forest-specified instream flows". Because Wyoming has enacted legislation that allows the state to acquire instream flows, we suggest these elements be modified to say "State and/or Forest-specified instream flows".

Page III-15. Wildlife, Objectives - Common Loon Habitat. Implementing a management prescription could unnecessarily inhibit angler activity, especially at Fish Lake. It is our understanding from discussions with Department wildlife biologists that loons occupying this habitat have successfully hatched young in recent years. The current use of this area by the public does not appear to have impacted loons. We suggest this information be addressed in the development of future management prescriptions or plans, and that continuation of reasonable angler access to this water receive a high priority. Further, we suggest any management decisions for this area be coordinated with wildlife and fisheries personnel in our Jackson regional office, and non-game personnel in our Lander regional office.

Page III-25. Timber Management, Standards and Guidelines - Logging Systems. We suggest the following best management practices be included in the final document:

- a) Buffer zones of undisturbed vegetation should be left along each side of standing waters and water courses to minimize sedimentation and direct fish habitat

impacts. Factors such as slope, stream channel stability and fish habitat should be considered when determining appropriate buffer zone width.

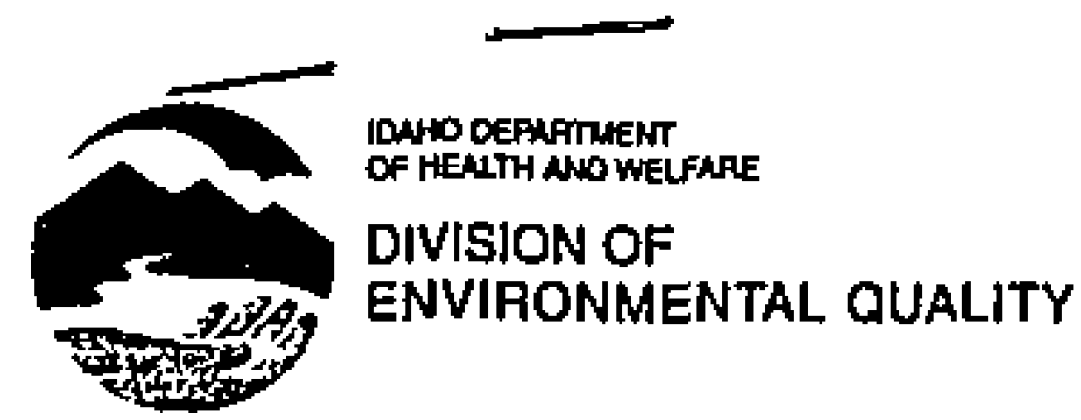
- b) Surface disturbing activities in areas with slopes greater than 40 percent are a special concern because of potential problems with soil stability. Special technical consideration should be given to the proposed activities in these areas including coordination with Wyoming Game and Fish Department fisheries personnel in Jackson for activities within Wyoming.
- c) A specific skid pattern design should be developed and strictly followed to avoid sedimentation to stream channels downstream from project areas. In certain areas, felling trees toward a predetermined skid area (felling to the lead) may be appropriate. In areas with important fisheries and where slopes are greater than 40%, winching logs directly out of sensitive areas (end-liming) should be implemented.

Page III-58. Designated Wilderness - Opportunity Class 1, Objective 1. The State of Wyoming currently has a fishery management plan for wilderness fisheries. Because this is a state jurisdictional responsibility, we suggest the Forest Service recognize this and simply refer to the State's document within their forest plan.

Page III-59. Designated Wilderness - Opportunity Class 1, Biological Elements, Fish and Other Aquatic Resources. The reference that "Fish stocking for recreational purposes is permitted with species native to the Wilderness" seems inappropriate. Fish Lake is the only water so managed in Opportunity Class I and, as such, has been and will continue to be stocked with brook trout to provide a recreational fishery. This is a "grand-fathered" activity with enactment of the Wyoming Wilderness Act (1984) and we have no plans to cease stocking this water in the near future, and will stock species we deem most appropriate. We recommend the present verbiage be modified to more accurately reflect states' rights to stock fish in waters contained in this jurisdiction.

Page III-76. Minerals/Geology. We suggest the following best management practice be incorporated into the document: No pollutants (topsoil, silt, sand, gravel, solid wastes, slash, debris or chemicals) should be stored or deposited within the active flood plain, in areas immediately adjacent to riparian areas or in natural drainages (draws, land surface depressions or other areas where overland flow could concentrate materials and carry pollutants directly into surface waters).

Page III-96. Aquatic Influence Zone, Standards and Guidelines - Boundary Widths of Water Types by Subsections. We support the general goal of ecosystem management as portrayed in this document. In this regard, we believe all perennial streams, whether fish bearing or not, would have the same approximate sediment carrying capacity and should have the same protective buffer requirements.



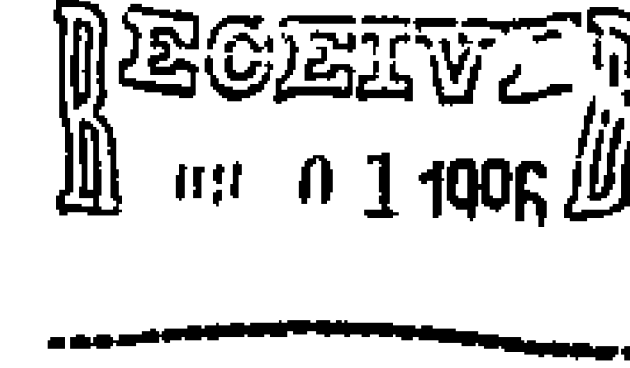
900 North Skyline Idaho Falls, ID 83402 1716, (208) 529-2850

Philip E. Batt, Governor

Thank you for the opportunity to comment

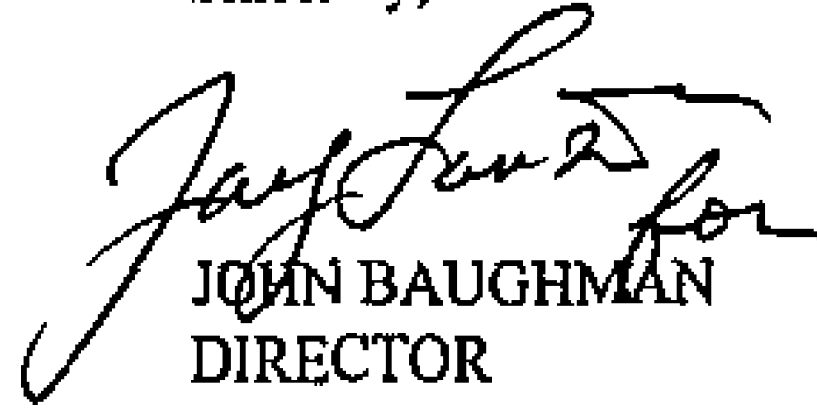
June 27, 1996

Jerry Reese
Forest Supervisor
Targhee National Forest
P O Box 208
St Anthony, ID 83445



1362 - McVernon Chiswick
and 1177 (fax) - Michael, C.

Sincerely,


JOHN BAUGHMAN
DIRECTOR

JB TC as
cc Wildlife, Fish Divisions
USFWS

RE: Comments on Draft Forest Plan Revision and Draft Environmental Impact Statement

Dear Mr Reese

Comments on the draft forest plan revision and the draft environmental impact statement follow. This review and comments are limited to the evaluation of aquatic and riparian resources, the potential effects of different forest alternatives on water quality, and a comparison of proposed actions with State of Idaho water quality requirements and policies.

General Comment on both documents The Forest Leadership and Interdisciplinary Teams have done good jobs of summarizing and presenting a tremendous amount of information in a generally accessible and understandable manner. Alternatives were clearly described, the consequences of different actions, and the balancing of issues were presented clearly. The public and agency participation opportunities through distribution of the plan, mailings, ads, and the public meetings were thorough.

The key issues and indicators seem appropriate. The analysis is responsive to earlier concerns that DEQ raised about riparian protection.

Comments on the Draft Environmental Impact Statement (DEIS):

General comment EISs often contain separate volumes to present data and a detailed analysis of key issues. Information on ecological processes, riparian and water indicators, was not presented and summarized so that I could independently review the data and draw my own conclusions. Instead, in many areas only the project teams' conclusions were presented (e.g. aquatic connectivity, riparian condition, water quality). Either the data relied upon for developing these alternatives should be added to the final EIS as a separate volume, or, if it is reported elsewhere, it should be cited in the final EIS.

Specific comments (by page numbers)

II-18 Aquatic connectivity This would seem to be a useful indicator of ecosystem patterns, however, I could find no further discussion of how this was measured, critical values, or differences in significance of different systems. The range in the different alternatives of 342,000 acres to 793,000 acres of aquatic zones where connectivity would be maintained seems huge. I did not locate any discussion of why maintaining connectivity in 448,000 acres of aquatic zone was the preferred choice.

II-19 Riparian and Water Indicators The table indicates that under the preferred alternative, stream miles with adequate habitat conditions for cutthroat trout streams would decline from existing conditions (97 to 83 stream miles), but stream miles with improved conditions for other fish-bearing streams (no cutthroat) would greatly increase. Is this a mistake? Proposing to lower water quality from existing conditions by allowing habitat impairment, a component of water quality, is generally prohibited under Idaho's antidegradation policy (Idaho Code 39-3603). Doing so for a species in decline would be additionally unwise.

On this comparison of alternatives, I did not locate any discussion why the conditions of key indicators in the preferred alternative were the preferable conditions. For example, are their estimated thresholds of minimum stream miles with adequate habitat to fully support cutthroat trout populations? Rephrasing this question in the jargon of the Idaho Code, will the minimum conditions necessary to fully support beneficial uses be maintained by the preferred alternative? This type of analysis should be attempted and presented in the environmental impact statement. Instead, the analyses of the comparisons of alternatives seem to be limited to split-the-difference approaches between the extreme alternatives of maximum Forest exploitation and maximum Forest preservation.

III-1 Affected environment A fundamental inadequacy of this environmental impact statement is the omission of maps or figures to compare the affected environment to the proposed actions. At least a few key maps showing the distribution of key indicators on the forest in a format that is readily comparable to the (excellent) maps of the draft forest plan revision are needed. The ecosystem approach promoted in these documents is based in part on analyses of important ecosystem processes and patterns. The patterns relied upon are generally spatial patterns. Spatial information has to be spatially illustrated; tabular presentations do not present the essential information. The many tables comparing total acres of vegetative cover, aquatic zones, riparian areas in desired or impaired conditions are incomprehensible without some illustration of the distribution and location of these indicators. Since these tables appear to have been generated from a geographical information system type database, I presume that this spatial information is also reasonably available.

At the minimum, the following should be illustrated with enough detail to reasonably compare the effects of the proposed action to the affected environment. If the information can be legibly

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presented at the same scale as the maps of the draft forest plan revision, this would be most readily compared to the proposed action. Otherwise, presenting at the subsection level would be appropriate since that is how the tabular and narrative analysis is broken down. Regardless, existing conditions of key indicators or other spatial data that were relied upon to adopt the proposed action must be presented. The following should be included in the revised presentation:

- 1 Aquatic zones (connectivity of these zones is relied upon as a key indicator; which zones are disconnected now?),
- 2 Riparian areas meeting, moving toward, and not meeting, the desired vegetative conditions (This is a key issue, and since some 2500 acres of degraded riparian zone are predicted not to improve under the proposed action, the locations and patterns of these areas should be shown too), and
- 3 Locations of cutthroat and other fish-bearing streams with the areas that meet and do not meet the riparian habitat indicators (residual vegetation stubble heights). Further, I could not locate any discussion of how the "hydraulic green line" criteria were derived. To avoid appearing arbitrary, this (and the basis for all key indicators) should be described.

III-22 Water quality-channel stability "Channel stability ranges from fair to good." This general assessment, which is repeated for all the subsections, is so vague that it is meaningless. Are the conditions related to grazing or other anthropogenic reasons? Where are the problem areas? Will the proposed revision improve these conditions? How were these conclusions developed? No data is presented or cited. If it is unpublished Forest data, then if the data are relied upon to select the proposed action, it needs to be presented in the analysis (with a map). How was the data developed? Cite the reference for the methods and briefly summarize them here. If the citation is not to a published journal or widely available government report, the methods should be completely described in an appendix.

III-23 Typo Temperatures listed are in °C, not °F.

III-24-25 Madison Plateau This section describes water quality problems but I could not locate any discussion of how the proposed action will affect these conditions. "Standards and guidelines will not be able to mitigate impacts acceptable levels. Current conditions do not reflect watershed objectives. Turbidity increases, sometimes significantly [in Moose Creek], during and after rainstorms." However, the later discussions of this area do not address how these water quality problems will be addressed (page 5-3-5 on Map 10 for the preferred alternative 3-M).

III-26, Third full paragraph "Idaho DEQ sampled several streams in 1994. Conclusions cannot be drawn from their data, however." What is that statement supposed to mean? Does it mean that the interdisciplinary team could not conclude anything from a set of raw data points considered out of context? It reads like an unnecessary swipe. These streams were sampled as part of DEQ's Beneficial Use Reconnaissance Project (BURP). These data have not yet been interpreted and reported out by DEQ. The results of the first three years (1994-1996) of the

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program are scheduled to be analyzed during the fall quarter of CY96 and will be reported out in early 1997. We have sampled many streams throughout the Targhee in addition to the ones listed in this paragraph.

I request you either change this "conclusions cannot be drawn from their data" statement as follows:

1. If we can provide a reduced and interpreted data set to you in time for the FEIS, report that, or
2. Change the statement along the lines of "Idaho DEQ Brockman Creeks. However, at writing, the data had not been interpreted and conclusions from the data could not yet be drawn for this DEIS."

III-27 It's a lot further than 48 miles from the Medicine Lodge - Beaver/Camas hydrologic sinks to the Thousand Springs area.

IV-17, Fifth full paragraph (Hydrologic Effects) Researchers have shown. These are significant findings but no citation is given. TNF data? Needs a source if it is to be relied upon.

Comments on the draft Forest Plan Revision (DFPR)

III-2 Forest Standards and Guidelines for Ecological Processes and Biodiversity. The aquatic environment is completely left out of this discussion. Biodiversity is not just important in terrestrial ecology. Biodiversity is one element considered in whether beneficial uses for aquatic life are fully supported in Idaho water bodies.

III-6,7 Aquatic, riparian resources, and watersheds. The listed goals are appropriate but incomplete. Habitat conditions and inventory needs are solely described for cutthroats. What about waters that either currently do not or never supported cutthroat? A more general goal of maintaining natural conditions for aquatic life, or to fully support attainable beneficial uses would be appropriate for the non-cutthroat trout streams.

III-95 Goals. "Riparian, wetland, and aquatic ecosystems are managed to promote their health and function with the range of variation, where feasible." I could not locate a discussion of what is intended by this disclaimer. It is broad enough that, liberally applied, it could negate all protections. Does it mean where feasible due to natural conditions, feasibility due to other desired forest uses? Needs a definition.

III-132 Area 5 3 5. The discussion of this area does not address how water quality problems on the Madison Plateau will be addressed (see earlier comment on EIS).

V-9 Aquatic/Riparian Monitoring Verification of water quality limited streams. I recommend that this section be significantly revised. First, a significant difficulty for the authors of this section is that the State standards for water quality are likely to change over the 10-15 year life of

this plan. Secondly, DEQ, the state water quality agency, has not yet published procedures for evaluating whether waters are impaired as required by Idaho's new (1995) water quality law, Idaho Code 39-3601 *et seq*. Thus, I suggest starting out with a disclaimer that monitoring to determine compliance with state standards will change as the science and the standards change over the life of the plan. However, this section follows such guidance as was available at writing (this line could go in many places in the plan).

Indicators. The indicator data collected should be usable with state guidelines for assessing beneficial uses. For "water quality limited" streams to be delisted, they must be monitored to determine if beneficial uses are fully supported. "In making such determinations, the director shall compare the physical, chemical, and biological measures of the water body in question with the reference stream or conditions appropriate to the land type, land uses, and geophysical features of the water body in question." (Idaho Code 39-3606). DEQ is approaching these requirements by comparing macroinvertebrate, fish (and potentially algal) communities in streams to reference conditions as the primary measures. Secondly, if data for parameters which have numerical standards are available, the data would be compared against these standards to determine whether these standards are met (i.e. chemical or physical integrity).

Method - Idaho's beneficial use reconnaissance program protocols are not mentioned. While, these be controversial, they are so far the only available protocol directed toward verification of "water quality limited" streams and should be included if the focus of this monitoring is as stated, verification of "water quality limited" waters. Our protocols are derived from attempts to define and measure biological integrity, as described by Karr (1991), EPA (1994), and many others. These references may provide useful thoughts on the water quality sections of the plan and could be provided if desired.

V-10 ***Note. For streams which remain on the Forest's "water quality limited" list, additional restriction on forest activities which generate nonpoint source pollutants could be imposed. Changes in best management practices (BMPs) for nonpoint sources that are deemed necessary shall be made to protect beneficial uses (Idaho Code 39-3610 and 3611). Depending on the significance of the water quality problems on a water body, the "total maximum daily load" or equivalent process may be required. This involves:

1. Completing an inventory of all point and nonpoint sources of the identified pollutants,
2. Conducting an analysis of why current control strategies are not effective in assuring fully support of designated beneficial uses,
3. Completing a plan to monitor and evaluate progress toward meeting water quality standards and to ascertain when designated beneficial uses will be fully supported,
4. Developing pollution control strategies for both point sources and nonpoint sources for reducing those sources of pollution, and,

5 Identifying the period of time necessary to achieve full support of designated beneficial uses (Idaho Code 39-3610 and 3611)

V-10 BMP Monitoring Idaho Code 39-3610 generally requires BMPs as the legal remedy for addressing "water quality limited" streams in addition to other requirements for BMPs to be installed and maintained. What does "Priority 3" mean for monitoring? Lowest priority? Will it happen? A statement describing what is meant by these priorities is needed.

I hope these comments are helpful with your forest planning effort. Please call me if you need further information or clarification of these comments, State of Idaho water quality standards, or any other items.

Sincerely,

Christopher A. Mebane
Watershed Management and Assessment Supervisor

cc James S. Johnston DEQ-EIRO

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PARKS & RECREATION

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June 20, 1996

Jerry B. Reese, Forest Supervisor
Targhee National Forest
St. Anthony, ID 83445



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Dear Mr. Reese:

The Idaho Department of Parks and Recreation Trails Program has reviewed the Draft Forest Plan Revision for the Targhee National Forest and the Draft Environmental Impact Statement Forest Plan Revision for the Targhee National Forest. Our program appreciates the Targhee National Forest's effort in putting this plan together. The extensive public involvement and the wide range of alternatives reflect this effort.

After reviewing the document, the Trails Program staff projects that the selected alternative, 3M, will provide inadequate trail opportunities and doesn't represent the wishes of the citizens most affected by the Forest Plan Revision. This was reflected by a referendum vote. On May 27, 1996, the voters of Fremont, Madison, Teton, and Lemhi, by a super majority, selected Alternative 2 as the best response to their needs. The results were as follows: Fremont County--86% in favor, Madison County--76% in favor, Teton County--70% in favor, and Lemhi County--78% in favor. The Targhee National Forest should seriously consider these results, since the overwhelming majority of these citizens do not favor the selected alternative 3M.

The Draft Environmental Impact Statement Forest Plan Revision for the Targhee National Forest (DEIS) has numerous misstatements. The first is found on page I-8 under Key Issue 3 Security for Elk. The statement "Observations and studies by the Idaho Fish and Game Department, University of Idaho, and Forest Service scientists have determined that as motorized road and trail densities increase, elk security declines" is false. The Targhee National Forest is using unsupported conclusions when it makes this statement. Our program has reviewed all the studies that the Targhee National Forest used for Security for Elk and Elk Habitat Effectiveness. None of the studies show how the motorized trail densities effect Elk Security or Elk Habitat Effectiveness (EHE). Until such a study is undertaken, the Targhee National Forest shouldn't state that scientists have determined that as motorized trail densities increase, elk security declines. Our Trails Program staff strongly recommends that throughout the Forest Plan Revision and the Draft EIS, the Targhee National Forest do not compare road and trail densities as if they are equal to each other.

There is also new information regarding the effects motorized use has on elk habitat effectiveness and elk vulnerability. Our program reviewed the Draft Interagency Guidelines for Managing Elk Habitats and Populations on USFS Lands in Central Idaho. This document does not equate motorized trails as having the same effects as motorized roads. In addition, the document also states "Similarly, roads and trails restricted to all motorized vehicles during the

summer and hunting seasons also decrease EHE and increase elk vulnerability by making elk habitat more accessible to humans using nonmotorized methods of travel, like hiking and pack stock. With that reasoning, the revision could include restrictions on non-motorized use to increase elk security, however, we don't believe that restrictions on nonmotorized use is necessary either.

Our Trails Program staff supports road and trail closures for wildlife protection when scientific facts support the reasoning for the closure. Extrapolating vehicle use on roads regarding the impact on Elk Vulnerability (EV) to trail bikes on trails is hypothetical at best. Presently, there is no data that supports motorized trail density having the same or similar effect on elk as open road density. Comparing a road bed with cuts and fills, roadside vegetative removal, and sight distances to trail tread with minimal cuts and fills, minimal impact on trailside vegetation, and minimal sight distances is not comparable. Road density in EHE and elk vulnerability should not include motorized trail density as a part of the formula.

The department has data that shows in Hunting Unit #39, which has some of the heaviest OHV recreation and motorized trail densities in Idaho, elk harvested from 1980 to 1989 during the general elk hunt steadily increased from 100 in 1980 to almost 600 in 1989. The primary result of this increased harvest was the increased herd size. While the herd size was increasing, so was OHV use. Also, Hunting Unit #43 on the Fairfield Ranger District is one of the highest trail bike use areas in the state and it is still the number one producing controlled elk hunt in Idaho. Elk vulnerability due to hunting pressure does not significantly decrease with elimination of trail bikes from an area. The Idaho Department of Fish and Game's 1988 Deer/Elk Rifle Hunting Study shows that only 1% of hunters use trail bikes to hunt. That still leaves 99% of the hunters in an area.

What data do you use to address the effects of trails open to trail bike use on elk numbers in any elk range as it relates to EHE? Does reduction in EHE because of trail bike use significantly affect carrying capacity, conception rates, or calf or adult elk survival? Elk Calf Response to Simulated Noise Disturbance in Southeast Idaho, Journal of Wildlife Management, 49(4) 926-930, showed there was no significant difference in calf survival between harassed and unharassed calves. The disturbance factor in this case was a simulated mine disturbance that occurred every two days from June 4 to July 15. How can singling out occasional trail bike traffic have a measurable effect on calf survival?

The Trails Program staff also has a problem with the way the alternatives were presented regarding elk security. On page II-5, when analyzing Alternative 2, the draft EIS states, "The 72% of the Forest meeting state elk vulnerability standards is a 30 percentage points increase over the existing level of 42%, probably resulting in a potential for a slightly lower proportion of bulls to be harvested during the general hunting season." Then on page II-9, when analyzing Alternative 3M, the draft EIS states, "The 91% of the Forest meeting state elk vulnerability standards is more than twice over the existing level of 42%, thereby greatly improving elk security." Why does Alternative 2 only probably slightly improve elk security with a 1/3 increase when Alternative 3M greatly improves elk security with a 1/2 increase? What are your standards for greatly improves and slightly improves, and how were these numbers determined? How can the Targhee National Forest make the statement that a 30% increase would probably only slightly improve elk security and then turn around and say that a 49% increase greatly improves elk security?

When discussing elk security and elk vulnerability, it is very important to note that 90% of bull elk mortality is caused by hunters. The Targhee National Forest can't control the number of hunters, that is the job of the State Fish and Game Department. If the Targhee is serious about increasing elk security, it could recommend to Fish and Game that long general seasons be shortened or eliminated or that a permit system be implemented as well as implemented road closures. This would be a better way to control mortality.

On page II-6, under the issue Access, the draft EIS states, "Winter OHV access would be increased with an additional 210 miles of groomed trails for snowmobiles for a total of 666 miles." The county snowmobile programs in the Targhee National Forest currently have a difficult time grooming all the trails they presently have. Without additional funding sources, grooming of additional snowmobile trails can not happen.

Our program strongly disagrees with the restrictions on snowmobile use within the Bear Management Units (BHU). Cross-country snowmobile access would be restricted from December 15 to April 1 in all BHU's. This restriction is excessive and is the result of an out-of-court settlement between your Forest and the Greater Yellowstone Coalition. Your own draft EIS shows that in 1994, the Greater Yellowstone area was exceeding grizzly bear population recovery goals. If these restrictions are implemented, it is very likely that snowmobilers will appeal the plan on this basis and take it to court if necessary. Although we are not wildlife biologists, it appears there is no need to restrict snowmobile access from December 15 to April 1. Our program would support allowing snowmobiles from November 15 to June 1. A better and more effective method exists. Instead of restricting use over a wide area, use should only be restricted around the den sites.

Our program disagrees with the statement on page IV-39, "Some of the impacts to trails such as rutting or displacement of soils, being caused by OHV use would also be removed." Rutting or displacement of soils on trails is caused by the design and maintenance of the trail, not the type of use on it. Some non-motorized trails in the Selway-Bitterroot Wilderness, as well as other areas that have never had OHV use on them, have as many as three parallel trails rutted 2 to 3 feet deep. We also disagree with the statement on the same page, "Much of the cross-country travel that is presently occurring would be eliminated by Alternatives 3-6." Alternative 2 will also eliminate cross-country travel. The statement should reflect this. Overall, restricting use to designated routes will not work unless there is proper signing of the area and user education. If this plan is going to work, the Targhee National Forest will have to invest time and money into making designated routes work. Just putting designated routes on a travel map won't work.

Our program disagrees with the statement on page IV-50, "Those alternatives with fewer miles of road and trail open for motorized use would likely see increased concentrations of motorized use on miles remaining open, reductions in recreation dependent on motorized use, increases in nonmotorized recreation or some combination thereof." The Targhee National Forest has no way of proving whether motorized recreation would decrease or nonmotorized recreation would increase. Perhaps both would decrease, since our department's Trail Ranger program and motorized users would be unable to maintain trails that were formally open to motorized use.

That concludes our comments on the Draft Environmental Impact Statement Forest Plan Revision for the Targhee National Forest. We encourage you to make changes to the unsupported conclusions made in the document.

Our program also has several comments regarding the Draft Forest Plan Revision for the Targhee National Forest. We appreciate the effort that your forest put together in writing the revision. It was one of the easier forest plans that our program has reviewed and an improvement in organization over the last Forest Plan.

On page III-17, under Objectives-Winter Recreation, the first objective states, "Establish a linear capacity for two-way snowmobile trails for purposes of safety and quality of the recreation experience." We strongly encourage the Targhee National Forest to consult with our department and the county snowmobile programs on this issue. Establishing a linear capacity for two-way snowmobile trails involves several factors, ones in which our department has 22 years of experience.

On Page III-18, under Standards and Guidelines - OHV, Standard #4 states, "No motorized vehicles > 50 inches wide are allowed on trails unless the trails are specifically designed for such vehicles." This standard fails to address ATV use on single track trails. Does the Targhee National Forest plan to make every single track trail open to ATV use? Our program strongly recommends that this standard be changed to only allow 2 wheeled motorized vehicles on trails unless the trails are specifically designed for such vehicles. When ATVs are allowed on single track trails, the wheels being too wide for the trail tread, they ride on the cut bank or on top of the fill. After considerable use, the narrow trail is broken down and severely damaged.

Examples of this can be found throughout the forest. Recently, our staff examined the effects of ATV use on the Pass Creek Trail #18045. The ATVs have broken down the trail tread and, in one section, completely left the trail for approximately 1/2 mile to avoid a steep sidehill. In order to get around this sidehill, ATV users have climbed straight up the mountain and then straight down again. This action is causing resource damage because the trail was not built to ATV specifications, and the forest failed to close this trail to ATV use.

This plan needs to address ATV use. Our registration figures show that ATV use is growing faster than trail bike use. If land managers are going to protect their single track trail resource, they need to provide opportunities for ATV users. Our program offers the Off-Road Motor Vehicle Fund and the National Recreation Trails Fund, which can help you build those ATV opportunities. As a general rule, our Trails Program staff opposes the conversion of single track trail into ATV trails because of the outcry from both nonmotorized users and trail bike users. Old roads or some suitable trails could be designated for ATV use but not all trails.

In the Desired Future Condition for the Lemhi/Medicine Lodge subsection, the Recreation Objective needs to be expanded. The subsection should set an objective to preserve single track trails and another objective to create more ATV opportunities. The benches along the Lemhi's with the numerous jeep roads have a good opportunity to provide a quality ATV riding opportunity in the spring and early summer. Our program suggests that you work cooperatively with the BLM and the Salmon/Challis National Forest on developing a loop from Big Eightmile Canyon to Spring Mountain Canyon on the north side of the Lemhi's and from North Canyon to Warm Creek on the south side of the Lemhi's.

The Centennial Subsection, the Island Park Subsection, and the Madison Plateau Subsection all have had varying degrees of roading in the past. Now many of these roads are being proposed for removal from the inventory. We suggest that when it does not conflict with other resource objectives, ATV opportunities be developed with these old roads.

On page III-49, under the Desired Future Condition for the Big Hole/Palshades subsection, the revision states, "The subsection will be managed to provide high quality motorized recreation opportunities both summer and winter with a signed system of roads and trails for OHV and full-sized vehicles while protecting resources." While this is an admirable desired future condition, it ignores the fact that this subsection also provides quality nonmotorized recreation opportunities in the Big Holes and the Palshades mountain ranges. Our department suggests that this statement be revised to read as follows, "The subsection will be managed to provide high quality recreation opportunities both summer and winter with a signed system of roads and trails for OHV, nonmotorized use and full-sized vehicles while protecting resources."

On page III-53, under the Desired Future Condition for the Caribou subsection, the DFC states, "This subsection will be managed to provide high quality non-motorized and dispersed camping recreation opportunities." This statement leaves out motorized use, which this area currently provides and will provide in the future.

Our program also reviewed the management prescriptions for Alternative 3M. Every one of these prescriptions has the problem of equating motorized trails as the same as an open road. We have previously on pages 1-3 of this letter stated our objection to this process and proved why it is pseudoscience. Through this process, the Targhee Forest has eliminated some important trails to trail bike riders in the Big Holes, Caribou, and Lemhi subsections.

One of the major problems with your elk habitat effectiveness analysis and elk vulnerability analysis is that the Targhee Forest assumed that if a road or trail was open to motorized use, then it was used more than twice per week by motorized users. If an open motorized route is counted in the elk vulnerability analysis, then why are some of these routes disappearing because of a lack of use? Examples of these trails are the lower trail of Pass Creek on the Lemhi Ranger District and the North Fork of Pine Creek trail (that runs on the ridge that divides North Pine Creek and West Pine Creek) in the Big Hole Range.

The Targhee National Forest should not abandon any trails, unless it has contacted the volunteer trail maintenance groups or our Trail Ranger Program. First. Many of these routes could continue to receive use and maintenance under these programs.

All snowmobile seasonal restrictions in the Targhee Forest Plan should allow snowmobiling from November 15 to June 1 for the reasons stated earlier on page 3. Eastern Idaho has the largest concentration of snowmobiles in Idaho and some of the longest snowmobiling seasons in the state. If the Targhee National Forest is going to provide adequate snowmobile opportunities for these users, then snowmobiling should be allowed from November 15 to June 1.

Our program also reviewed the Chapter V Monitoring and Evaluation. On page V-17, under Recreation, impacts to on-trail and off-trail soils and vegetation the trail, not the use, is the main cause of erosion. If you close an improperly designed trail to all uses, it would still erode unless rehabilitation work was done.

The frequency of monitoring is inadequate in 5-10% of the system trail areas (60-120 miles). If more of the Targhee National Forest staff had the capability to ride trail bikes, the Targhee National Forest could easily monitor close to 100% of the trail system annually in areas open to motorized use. To give one example, our program did a rail-trail survey of 900 miles statewide with one staff person in only three weeks.

We also have some concerns over the Monitoring Item - Effectiveness of Road and Trail Closures on pages V-23 and V-24. We strongly agree that this item does need to be monitored, but involving user groups with this item could significantly decrease your precision and reliability if a certain user group wants to eliminate another user group from an area or start user conflict. We strongly suggest that this remain the responsibility of the Forest Service. This information should also be made public.

Our Trails Program staff does not agree that your Monitoring Item - Achievement of standards in prescription areas for Total Motorized Access Route Density and Open Road and Open Motorized Trail Route Density, has high precision. According to your own definition of a open road or trail, the route must be open to motorized use and must have more than 1 to 2 motorized vehicle trips per week for the majority of the weeks for the spring/summer/fall period. This very low use should not even be of concern. The largest problem with this method is that it underestimates elk habitat effectiveness and elk vulnerability, which is unfair to motorized users. There are many open roads and trails on the Targhee National Forest which have less than 1 to 2 motorized vehicle trips per week for the majority of the weeks for the spring/summer/fall period. The Targhee National Forest has no scientific proof that any motorized trail or road has more than 1 to 2 trips per week unless counters with cameras are installed on every motorized route on the Targhee National Forest. With only six cameras, and hundreds of roads and trails, there is no way that this monitoring item will work with accurate precision.



PHILIP E. BATT
GOVERNOR
KARL J. DREHER
DIRECTOR

The Idaho Department of Parks and Recreation ORMV Program has invested significant resources in the Targhee National Forest, under the recommendation of the ORMV Advisory Committee. The users represented by this committee expect that their investment will ensure the maximum availability of resources for their use. We feel that the partnership of the Idaho Department of Parks and Recreation ORMV Program providing facilities and the Forest Service providing the resource base will give the user an excellent return on his/her fees.

In conclusion, our Trails Program staff encourages the Targhee National Forest to change its selected alternative from 3M to 2 and make the suggested recommended changes. We appreciate the opportunity to be involved in the planning process and look forward to working with the Targhee National Forest in the future.

Sincerely,

Chuck Wells
Trails Program Supervisor

g:\wp\ncpa\targ2

RECEIVED
JUN 27 1996

June 25, 1996

#1207 Graham Bill

Jerry B Reese
Forest Supervisor
Targhee National Forest
Post Office Box 208
St Anthony, Idaho 83445

Dear Mr Reese

We have reviewed the Draft Forest Plan and supporting documentation for the Targhee National Forest. The amount of effort and time devoted to its preparation is apparent. We are submitting the following comments concerning water resource management within the Forest.

The Idaho Water Resource Board completed a plan for the Henrys Fork basin in 1992. Through this effort the Board designated several streams within the Targhee as Natural or Recreational Rivers. These designations prohibit certain stream channel alteration activities below the high water mark. We urge you to ensure that the Henrys Fork Plan, and the state river protection designations, are recognized in the Forest Plan.

The Water Resource Board is currently preparing a comprehensive state water plan for the South Fork Snake planning area. A draft plan is expected in September 1996. This plan will likely designate additional stream reaches for protection as state Natural or Recreational Rivers.

We note that the Draft Forest Plan recommends Wild and Scenic suitability studies for the South Fork Snake, Fall River, Henrys Fork and Warm River. These rivers are either currently designated, or are being recommended for designation as state Natural or Recreational Rivers through the Water Resource Board's planning process. The Board does not support federal Wild and Scenic River designations on streams that are already designated under the state system.



IDAHO FISH & GAME
600 South Walnut / Box 25
Boise Idaho 83707 0025

Phil Batt / Governor
Jerry M. Conley / Director

Thank you for the opportunity to comment We have enclosed a copy of the
Comprehensive State Water Plan Henrys Fork Basin for your files

June 27, 1996

Sincerely,

Bill Graham
Bill Graham, Chief
Water Planning Bureau

Mr Jerry Reese
Forest Supervisor
Targhee National Forest
P O Box 208
St Anthony, ID 83445

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Re Comments on Draft Forest Plan Revision--Targhee National Forest Research Natural
Areas

Dear Mr Reese

I appreciate the opportunity to comment on the Targhee National Forest Draft Forest Plan
Revision (Forest Plan) These comments are specifically directed to the research natural areas
Forest Plan prescription, they complement comments submitted for the Idaho Department of
Fish and Game by Don E Wright, Regional Supervisor, Upper Snake Region These
comments are arranged in a manner parallel to the structure of the Forest Plan

Management Area Description

Proposed and established research natural areas on Targhee National Forest (the Forest) need
to be identified by name The specific objectives and a brief description of the biological and
physical values of each area should be included in the research natural areas management area
description

While the Forest Plan provides Forest-wide management standards and guidelines, the site
specific management prescription for each research natural area is specifically stated in the
Establishment Record for each individual research natural area on the Forest This
relationship between the Forest Plan and the Establishment Record should be described in the
management area description

The statement "Livestock grazing may occur if not detrimental to the ecological processes of
the area" is not consistent with Forest Service Manual (FSM) policy and needs to be modified

I suggest the following language:

Unless specifically stated in the Establishment Record, commercial and domestic livestock grazing are prohibited in these areas.

Prescription Goal and Objective

An important objective of the national research natural area network (and similar public and private natural areas) is to preserve a *wide spectrum* of pristine representative areas that typify *important* forest, shrubland, grassland, and alpine situations (FSM 4063.02). The selection and establishment of research natural areas are part of the *continuing land and resource management planning process* for National Forest System lands (FSM 4063.03, Regional Guide for the Intermountain Region). Research natural areas should be selected to represent ecological conditions *needed to complete* the natural area system (FSM 4063.2).

Based on these fundamental policy guidelines, the goal and objective statements for the research natural area management prescription must be expanded. The goal statement should contain language concerning representation of the spectrum of natural forest, shrubland and grassland plant communities present on the Forest and the fish and wildlife habitats that these plant communities represent. I suggest the following language:

Maintain a series of specially designated areas that provide representation of the spectrum of important terrestrial and aquatic ecosystems on the Forest. Protect and maintain these areas so that ecological processes prevail in the development of ecosystem composition and structure.

The objective statement should reference an administrative process whereby research natural area needs within the region and on the Forest are recognized and whereby new candidate areas identified to fill these needs are evaluated. This statement should be added as a third objective for the management prescription. As an example of how this might read, I offer the following language:

During project planning, identify areas that provide high-quality representation of the important terrestrial and/or aquatic ecosystems on the Forest. In cooperation with the Intermountain Research Station and the State Natural Heritage Program (Idaho Conservation Data Center, Idaho Department of Fish and Game) assess the value of these areas for their contribution to the national research natural area network. When areas are identified that provide needed terrestrial and/or aquatic components for biological diversity, recommend these

areas to the Regional Research Natural Area Committee for consideration of research natural area designation.

The revised goal and objective statements should be linked in the Forest Plan to (1) a presentation of the natural forest, shrubland and grassland plant communities present on the Forest, and (2) an assessment of the conservation status of these elements of biological diversity. This information is currently available in a format that could be incorporated into the Forest Plan (Rust 1995¹).

Standards and Guidelines

The standards and guidelines section should be modified to be consistent with FSM policy guidelines. The Forest Plan standards and guidelines should reference the Establishment Record as the source for specific management prescriptions for each respective research natural area. The standards and guidelines should state that management activities that fall outside the direction provided in the Establishment Record must be approved by the Station Director, Intermountain Research Station.

Ecological Processes, Fire/Fuels An objective of the research natural area Forest Plan prescription is to maintain ecological processes in high-quality, representative natural areas. Fire plays an important functional role in many of these ecosystems. Prescribed fire may be needed to maintain ecological processes in research natural areas. The current statement concerning prescribed fire use (page III-73) should be modified to reference the Establishment Record or fire management plan for the area, perhaps as follows:

In accordance with the Establishment Record, prescribed fire (management ignited and natural ignited) may be used to maintain fire-dependent ecological processes and to provide a natural range of fuels, understory vegetation, and successional stages. Where specific direction is not provided or modification is needed, prescribed fire management plans should be developed and approved by the Station Director.

Physical Elements, Soil and Water The draft language in the Physical Elements, Soil and Water, Standards and Guidelines is not consistent with national and regional objectives for

¹ Rust, S. K. 1995. Framework for representativeness assessment of research natural areas on National Forest System lands in Idaho. Unpublished report prepared for USDA Forest Service Northern Region, Intermountain Region and Intermountain Research Station Conservation Data Center, Idaho Department of Fish and Game, Boise. 65 p.

Mr Jerry Reese
June 27, 1996
Page 4

research natural areas I am particularly concerned about the language pertaining to burned area emergency rehabilitation Please change this language to read as follows.

Burned area emergency rehabilitation will only be permitted in research natural areas under the incident-specific approval of the Station Director Plans for the emergency rehabilitation of research natural areas will be developed in prescribed fire management plans

Similar comments also apply to the other three guidelines identified in the Physical Elements, Soil and Water section Restoration and rehabilitation management activities in research natural areas must all be approved by the Station Director

Biological Elements In the Biological Elements Standards and Guidelines section, "exist/evolve" should be replaced with "exist/develop "

Forest Use and Occupation. Access The standards and guidelines identified in the Forest Plan should assure attainment of management prescription goals and objectives Recreational use of research natural areas raises paradoxical issues While it is desirable for forest users to experience the value of areas designated to preserve and maintain pristine, representative natural conditions, this use is, in itself, a powerful, insidious threat to the perpetuity of this exact value (the experience of pristine naturalness) An adaptive management strategy similar to the Limits of Acceptable Change approach implemented in many wilderness areas may be appropriate for the management of recreation use of research natural areas

To effectively achieve the goal stated for the Research Natural Areas prescription, the standards and guidelines need to establish more exacting side boards on recreational use of research natural areas Horse and pack stock use should be limited to (road and) trail travel Research natural areas should be closed to *all* motorized use - winter and summer, trailed and off-trail

Forest Use and Occupation. Recreation In order to effectively attain the prescription goal of "maintain the natural processes inherent in each research natural area," the management prescription cannot provide the "semi-primitive motorized" recreational opportunity spectrum The ROS classification for the prescription should be appropriately stated as "primitive "

Range The draft Forest Plan language is inconsistent with FSM policy I suggest the following language

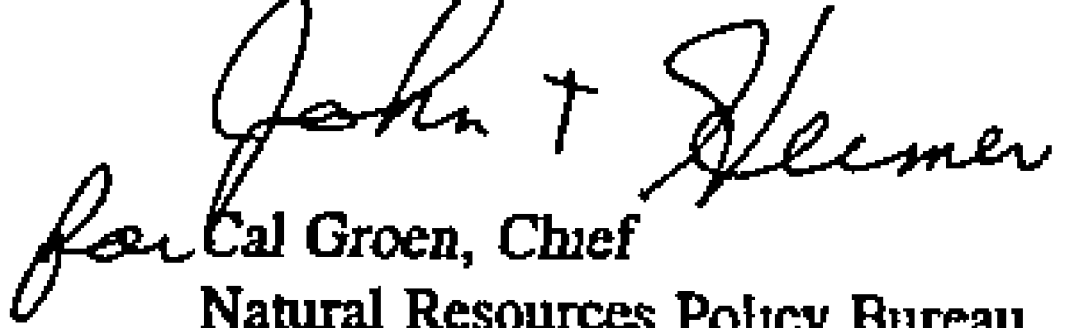
Mr Jerry Reese
June 27, 1996
Page 5

Prohibit commercial and recreational livestock grazing unless the Establishment Record specifically states that livestock grazing is needed to achieve the objectives for the research natural area

Draft EIS

Over the past decades several research natural areas have been proposed for establishment To clarify the disposition of these proposals, the specific reasons for dropping further consideration of research natural areas previously proposed should be addressed in the environmental impact statement

The effects of managing for the maintenance of biological diversity through the research natural area management prescription need to be disclosed in the Forest Plan environmental impact statement

Sincerely,

for Cal Groen, Chief
Natural Resources Policy Bureau

CG SR alb

cc Mark Orme, Forest Planner, Targhee National Forest
Walt Grows, RNA Coordinator, Targhee National Forest
Angie Evenden, R1/R4/INT Natural Areas Program Manager
Al Winward, Regional RNA Committee Co-Chair, Intermountain Region
Bob Martin, Environmental Staff Biologist, Upper Snake Region, IDF&G



IDAHO FISH & GAME
 UPPER SNAKE REGION
 1515 Lincoln Road
 Idaho Falls Idaho 83401 2198

Philip E. Balt / Governor
 Jerry M. Coalev / Director

June 25, 1996

RECEIVED
 JUN 27 1996
 # Hold W right, Don
 IFG

Mr. Jerry Reese
 Forest Supervisor
 Targhee National Forest
 P O Box 208
 St. Anthony, ID 83445

Subject: Targhee Forest Draft Plan Revision (DFPR) and Draft Environmental Impact Statement (DEIS)

Dear Jerry

The Idaho Department of Fish and Game (IDFG) commends the Targhee National Forest (TNF or Forest) on your perseverance in designing proposed remedies for problems on the Forest and re-directing Forest activities to accommodate changes that have occurred since adoption of the current Land Management Plan.

We commend the TNF's goals to improve riparian conditions, establish a comprehensive access management plan, protect roadless areas, provide habitat to support T & E and sensitive species, conduct timber harvest within sustainable levels, and provide recreational opportunities on the Forest.

We appreciate the Forest's acknowledgment that big game hunting is a valuable Forest resource and the TNF is responsible to provide habitat to support the fish and wildlife goals of the State of Idaho.

Many TNF proposals in the Draft Plan Revision are excellent, and could contribute to this Forest's recovery from more than two decades of road building and logging above sustained yield. In previous letters and in the comments provided below, we have identified Plan Revision deficiencies that we believe may prevent attainment of the Forest's goals and objectives. The Idaho Department of Fish and Game has the statutory mandate to preserve, protect, perpetuate, and manage the fish and wildlife resources of the State of Idaho. It is under that authority and responsibility that we offer these comments. It is our intention to assist you with meeting the goals of the Forest Service and the State of Idaho.



I GENERAL COMMENTS

A. Standards, Guidelines, and Objectives

These are the foundation of explicit Forest Service guidance for management on the ground over the next 10 to 15 years. We consider standards and guidelines to be the primary product of more than 5 years of planning.

Standards in the DFPR will require TNF compliance unless the Plan is amended. We view standards as a disclosed commitment to the public for the 10 to 15 year plan period. The DFPR proposes to address many crucial management needs with guidelines, which may be waived under a wide range of circumstances. We believe a vast majority of the guidelines in the DFPR should be changed to standards, to convey the commitment of the Forest Service to implement the intended management direction.

We recommend that standards and guidelines be clearly written to explicitly convey to the public the Forest's intended management. There are an unbelievable number of exceptions written into standards and guidelines. They are filled with phrases such as "should", "generally", "usually", "strive to maintain", "as it becomes practical to do so", "if possible", "if feasible", "unless otherwise specified in the management direction", etc. These phrases clearly indicate either a lack of Forest commitment to implement the standard or guideline, or a lack of belief that compliance is feasible.

Equally troubling are the large number of important standards and guidelines that imply a specific action will be taken, but include in the statement such phrases as "where ground verified", "where there is potential for damage", "where data shows", etc. This language is clearly included to provide an exception for compliance whenever there is a lack of data to demonstrate the need for compliance. Given the lack of budgetary and monitoring assurance to meet these types of requirements within standards and guidelines, it appears likely that the implied action may not occur. These types of standards and guidelines are a meaningful disclosure to the public of intended Forest management only if there is assurance of funding to collect the necessary information for the Forest to act, consistent with the identified language.

The DFPR also contains a large number of standards and guidelines that more closely meet the Forest Service definition of goals or objectives. There are also a large number of objectives that are neither measurable, nor followed by standards and guidelines that provide assurance the proposed objective will be met.

B Planning Process

We suggest the Forest Service never again use a general planning process similar to that used for this Plan Revision. We believe a productive Forest planning process that utilizes the best available science, while incorporating public input, would be to conduct the following activities in chronological order.

1. Complete a scientific analysis of the current management situation. This would be done in cooperation with state and federal fish and wildlife agencies, Indian tribes, and other appropriate agencies.
2. Conduct public scoping to determine needs for management changes and recommendations for additional analyses and information summaries.
3. Complete scientific analyses of alternative methods to achieve the recommended changes (desired future condition) on the Forest. This would be done in cooperation with state and federal wildlife agencies, Indian tribes, and other appropriate agencies. Legal constraints on all alternatives would be identified.
4. Present scientifically-based alternatives for Forest management to the public. This would address public desires for management direction within the range of legal constraints.

The activities recommended above were vigorously requested throughout the TNF Plan Revision process by the agencies and the public. Contrary to this, the TNF established from the beginning an adversarial atmosphere in which public meetings became dominated by discussions of whether or not many federal laws and nationwide Forest Service policies would be applied to TNF management. For the first 2 to 3 years of this planning, the TNF committed to simply listening to the public, during the time when agencies and the public were imploring the TNF to provide scientific information and side-boards (e.g., legal constraints) to positively focus, and limit, the public debate. The result of this strategy was that after nearly 4 years of Citizens Involvement Group debate, about half of the draft Forest-wide standards and guidelines were deleted from the Plan.

During the first 4 years of planning, agency representatives were informed by the TNF that we held the same status as individual citizens, despite the fact we represented large constituencies (states of Idaho, Wyoming, or United States) that had provided us legal mandates to achieve. Particularly frustrating to state and federal agencies was being told the goals and objectives we were mandated to achieve on Forest Service land would be implemented on the TNF only if we could obtain consensus from the diverse individuals in the Citizens Involvement Group. In

the middle of the planning period, the TNF erroneously cited the Federal Advisory Committee Act as a legal constraint preventing coordination with us as an agency, and limiting coordination with us under the same legal constraints as coordinating with private citizens.

This process has been very disappointing to the agencies as well as the public. However, one of our greatest concerns is the apparent lack of effective consultation and coordination between the planning team and TNF District biologists. It does not appear the significant field-level knowledge of District biologists has been incorporated into the DFPR or DEIS. We recommend the Forest Service evaluate the TNF planning process prior to revising plans on other Forests.

II. SPECIFIC COMMENTS

A+ Big Game Management

The current TNF Land Management Plan designated elk as an indicator species for monitoring condition and trend of general forested habitat. It should be noted this indicator species is assumed to represent other species sensitive to human disturbance and affected by general forested habitat.

1. Need For Change

We recommend the first ecological component (DFPR II-3) be restated as "Manage to improve elk security." Both elk vulnerability and elk habitat effectiveness should be addressed. Two key elements of elk/hunting management are overlooked several times in the DFPR and DEIS: 1) the fact that Forest management affects hunter density and distribution, by affecting animal numbers and distribution and the quality of the hunting experience, and 2) the importance of managing for sufficiently high levels of elk habitat effectiveness such that big game remain on Forest lands and are therefore available to the hunting public of Idaho, rather than being driven into refuge areas (such as Yellowstone National Park and Harriman State Park) or across state borders to more secure habitat.

An example of these impacts occurred from the 1980's to the present when most of the elk, deer, and hunters abandoned the lodgepole salvage area. Surviving big game moved either into refuges or more secure habitat elsewhere. The highest hunter densities on the Forest now occur in the portions of the Island Park subsection that have adequate access restrictions and elk security cover.

Several times in the DFPR and DEIS, reference is made to "the elk population", usually to assert that "it" is at an all-time high. In numerous letters, meetings, and

a two-day workshop, we educated the TNF that elk sub-populations summering on the Targhee National Forest and elk populations that visibly gather on winter ranges are not one and the same. For example, the Sand Creek winter range supports animals from 3 states and at least 2 refuges. During the summer and hunting season, the TNF supports a portion of that herd, the portion critical to general elk hunting on the TNF in Idaho.

We also note that the DEIS does not report our radio-telemetry study, which estimated that the portion of the ~~east~~ east of highway 20 and north of Robinson Creek, which previously summered about 30% of the Sand Creek elk herd, was supporting only 1 to 2% of that herd by the time we began appealing timber sales in 1991.

For an analysis of quantity and quality of big game hunting on most of the TNF, some of the least useful data are the size and bull:cow composition of herds on the winter range. The most important factors for elk hunters to hunt on the Forest in Idaho are 1) the numbers of elk on the Forest during hunting season, and 2) the proportion of total bulls on the Forest comprised of mature branch-antlered bulls. These mature bulls are critical for reproductive success, calf survival, hunting quality, and the hoped-for re-establishment of general bull elk hunting on the Forest.

The Plan Revision need for change relative to elk is that available information indicated numbers of elk summering on the Forest were decreasing, the proportion of the population summering in refuges was increasing, and vulnerability of bulls to hunting harvest was so high that to meet the biological and public desire objectives for the population required implementing spike-only regulations.

The above information is on file at the TNF supervisor's office. Regardless, after 5+ years of interagency coordination on this subject, the preliminary DEIS environmental consequences section stated "From information that the Forest has been able to analyze, the current summer elk populations on the Forest are at record all-time highs." To our knowledge, other than contributing to our study (which showed a radically reduced summer population in the study area), the Forest collected no data on summer populations, and no data are presented in these documents to support the statement. Even if it were true, it ignores the greater importance of herd composition and the population being well-distributed.

It is shallow and misleading to summarize the elk situation on the TNF only in terms of winter population size off the Forest. A credible evaluation of big game and hunting requires analysis of habitat quality and population size and spacial and temporal distribution of animals, herd composition, vulnerability to harvest, productivity, calf/fawn survival, quality of the hunting experience, and amount of hunting opportunity.

5

It is also important to note that the current Forest Plan uses elk as an indicator species to represent general forested habitat. A significant, measurable reduction in elk security, and the observed elk response to those impacts, should be assumed to indicate that similar impacts were occurring for other Forest wildlife species that are sensitive to the impacts of extensive logging and human disturbance.

2. State of Idaho Elk Hunting Objectives

The elk hunting objectives presented in the DEIS (III-40) should be completed by adding the following after the respective bull:cow ratio:

For Ready Access units: "... with 40% of bulls branch-antlered, and maintain the percentage of yearling bulls in the antlered segment of the harvest at or below 50% and the percentage of mature bulls [having at least 6 points on one antler] at or above 10%."

For Front Range units: "... with 50% of bulls branch-antlered, and maintain the percentage of yearling bulls in the antlered segment of the harvest at or below 35% and the percentage of mature bulls (having at least 6 points on one antler) at or above 20%."

We are intensely dismayed that the TNF has refused to properly depict the very objectives the TNF agreed to incorporate in the Plan. These objectives are published in the IDFG 5-year Elk Plan. We also provided the objectives to the TNF by letters and meetings during the 1992 to 1995 planning period, by letter of November 15, 1995 (review of preliminary DFPR and DEIS to identify major problems), and by personal contact during spring, 1996. The TNF's obvious reluctance to correct the documents makes us distrustful. We are forced to speculate that a loop-hole is being crafted so the TNF can argue at a later date that access restrictions are not necessary and/or permitted game retrieval (see below) is not affecting elk vulnerability. We consider the TNF failure to accurately state the agreed-upon elk objectives to be a breach of faith, and it reduced our ability to support the DFPR preferred alternative during the public review period.

3. Game Retrieval

We strongly recommend deleting the game retrieval guideline from all management prescriptions.

During coordination meetings over the last 4 years, the TNF agreed that analyses and proposals for elk habitat management would be jointly developed by an interagency / tribal elk work group. The Forest also agreed to adopt the elk objectives of the State of Idaho. Neither we, nor the team, agreed to propose permitted game retrieval. The issue was discussed in meetings and workshops.

6

and we conveyed the following to the Forest, while explaining our opposition to the game retrieval proposal

- 1 Game retrieval is a significant variable in predicting elk vulnerability
- 2 It was not included in the study that developed the elk vulnerability model the team agreed to apply to the Targhee Forest
- 3 Game retrieval may negate and/or invalidate the significant progress that access restrictions are predicted to provide toward meeting elk vulnerability objectives
- 4 Eighty-five percent of 3,300 Idaho elk and deer hunters surveyed reported that encountering motorized vehicles off roads detracted from their hunting experience, and the highest ranked factor affecting hunt quality was encountering motorized vehicles off roads (McLaughlin et al. 1989) These findings were the same when analyzed at both the state-wide and regional (eastern Idaho) level
- 5 Considering archery antelope and spring black bear seasons, big game hunting occurs over a 10-month period, during which TNF offices would have to be open to dispense permits during evenings and weekends, to avoid waste of game,
- 6 The game retrieval exemption would create a major new administrative and enforcement burden for the TNF, and serious enforcement and public relations problems for IDFG
- 7 There is no reasonable or acceptable method to permit individual access behind closures that effectively restrict general public access. Assuming keys to gates would not be distributed to permit holders, options discussed to date by the TNF include a) installing new gates with openings 50 inches wide, presumably to be passed through only by permitted off-highway vehicles, and b) instructing permit holders to pioneer routes around otherwise effective closures. Either way, demand for closed road maintenance (downed log removal, etc.) will increase, and enforcement problems will increase.
- 8 Other state wildlife agencies and Forests are dissatisfied with the effects of game retrieval.

During public meetings, the TNF stated that permitted game retrieval would be proposed as an experiment to be closely monitored. A specific monitoring plan is neither proposed in the Plan nor apparently planned for in future budgets. The only

planned link we can speculate between this experiment and monitoring would be for the TNF to examine how well elk vulnerability objectives stated in the DEIS are being achieved. As long as the TNF will only include in the DEIS one of the four State of Idaho objectives for elk vulnerability (namely, bull:cow ratio on winter range), monitoring could be virtually worthless on most of the Forest. For the reason, see our comments under Needs For Change above.

4. Crucial Deer and Elk Winter Range =

a Winter Motorized Access

The TNF agreed on a delineation of crucial mid- to late-winter range for elk and deer. This is depicted on DFPR map no. 24. The TNF acknowledges these crucial winter ranges are the areas considered to be the determining factor in a population's ability to maintain itself at a certain level over the long term [DFPR III-92].

Available scientific literature and professional opinion clearly indicates that protection from disturbance during winter (primarily motorized disturbance) is a critical factor affecting individual survival and recruitment rates. However, DEIS table IV-6 indicates that alternative 3-M would permit cross-county snowmachine use on 66% of the crucial winter range, while also permitting designated motorized routes through all winter ranges.

The area proposed for winter range prescription 2.7 is even smaller than the area mapped by the TNF as crucial winter range under the current Land Management Plan.

The public lands coordinator of the largest snowmachine advocacy group in eastern Idaho indicated to IDFG staff and the Post-Register newspaper that they expected and preferred to be excluded from crucial big game winter ranges, both for the good of the animals and the image of the snowmachine users.

TNF research clearly indicates that snowmachine use is dramatically increasing (5 to 10% per year) on the Forest, and it is acknowledged in the DEIS that increasing development on adjacent private lands will increase the importance of TNF lands for winter range. Therefore, protection from motorized disturbance will become even more crucial for minimizing big game depredations on private property during winter and for maintaining current size of the public's deer, elk, and moose herds.

Given the above, we do not understand the rationale for the TNF's proposal to permit cross-country snowmachine use on 66% of crucial winter range, either from a biological or recreational perspective.

We recommend that all of the delineated crucial deer and elk winter range be protected from cross-country snowmachine use

If this protection is provided under management prescription 2.7, we recommend allowable summer motorized route densities ≤ 1 mile per square mile for those areas providing crucial winter range and summer habitat for deer or elk.

We recommend that areas of crucial winter range currently closed to snowmachines remain closed under the plan revision. The Palisades/South Fork Snake River and Kelly Canyon-Hawley areas are examples of areas that should remain closed to winter motorized cross-country use

b Winter Range Habitat:

The DFPR and DEIS make several references to improving habitat for big game on winter ranges through timber harvest prescriptions. However, specific habitat needs of wintering big game are not disclosed, nor are the proposals to supposedly improve winter habitat quality. We recommend this aspect of ecosystem management either be fully disclosed and justified by scientific evidence, or it be deleted from the plan until sufficient information is available to demonstrate a wildlife need for timber harvest on winter range.

Alternative 3-M does not adequately protect crucial deer and elk winter range areas and moose winter habitat along the South Fork Snake River and adjacent to Palisades Reservoir. In addition to cross-country snowmachine use being permitted, a significant portion of the area is proposed for management under a timber prescription that emphasizes extensive timber management under urban interface objectives.

Perhaps very narrow strips of fuel removal are justified adjacent to summer homes. However, the South Fork / Palisades Reservoir area is some of the best wildlife habitat remaining on the TNF. We recommend it be protected from extensive timber harvest and any road construction (including temporary roads), to protect valuable wildlife habitat. We recommend protection of a buffer strip extending one mile from the water's edge, giving emphasis to protection of old-growth Douglas-fir, Englemann spruce, and cottonwoods.

5. Elk Habitat Effectiveness

We recommend adding a wildlife standard to maintain an elk habitat effectiveness (EHE) value of at least 0.6 in each subwatershed (approx. 2,000 to 6,000 acres). This would provide an essential threshold indicator for elk and other wildlife species that require security cover and are sensitive to human disturbance during summer. Although moderately good to excellent elk summer habitat generally has EHE values

≥ 0.7 to 0.8, setting a minimum of 0.6 would assist meeting desired future conditions for well-distributed populations of wildlife sensitive to summer motorized travel disturbance.

6. Additional Access Management Issues

a Forest Use and Occupation, Access

The access goal (DFPR III-16) is not clear. What is meant by "emphasized"? Does this imply road density standards would be de-emphasized in all other areas? We recommend adding "big game summer range" and "big game winter range" to any list prioritizing or emphasizing implementation of motorized access targets.

Objective 2. We recommend revising as follows: Decrease elk vulnerability, increase elk habitat effectiveness, and increase grizzly bear security through effective road, trail, and cross-country motorized closures.

Objective 4. We recommend replacing "road density" with "motorized access". This objective should include time-specific statements for implementing the proposed motorized access plan. The need for implementing an improved motorized access plan is acknowledged to be perhaps the most important need for change in the plan revision. Therefore, it deserves a commitment to rapid, time-specific targets for implementation.

We recommend including a standard to implement the motorized access plan immediately upon signing of the record of decision, by approving and publishing the new travel plan for each district.

We recommend implementing construction of effective motorized road and trail closures on the ground within one year of the record of decision, and completing implementation within three years of that date.

We recommend the access program be adequately funded in annual budgets. As correctly stated in the DFPR Needs for Change, "The accelerated timber harvest over the past decade has created many roads, and clearcutting in the lodgepole pine component has reduced cover. This combination resulted in high vulnerability for elk" It is apparent that the purpose of revised motorized access standards is to mitigate for past roading and logging on the Forest. Therefore, we recommend funding and implementing the access plan as a project that stands on its own. We do not believe it is appropriate 1) to plan that implementation of this program will occur only (or mostly) as part of new timber sales in the future, or 2) to consider that implementation of this program (which is mitigation for past impacts) will be mitigation for future impacts of new timber sales.

b Forest Use and Occupation, Access Management Cumulative Effects

The DEIS (IV-39) states the following "A secondary effect of decreasing motorized access areas could be reduction of hunting and fishing opportunities. This may not be too significant except in alternatives 5 and 6." Although this may be correct for the physically challenged hunter, a more fair and balanced analysis would be to include the many increased or maintained hunting, fishing, and other recreational opportunities that will likely occur when the currently very high motorized access on the Forest is reduced.

The TNF predicts virtually no beneficial effects on fish, wildlife, water quality, recreation, or the local economy expected to result from the proposed access management program. This is a significant oversight in the DFPR and DEIS, and results in the appearance of an analysis prejudiced against wildlife and nonmotorized recreation and programmed to invite opposition or failure.

c Access Standards and Guidelines:

We recommend prohibiting cross-country snowmachine use in big game hunt areas during open seasons. This type of activity can cause undesirable rapid movement of animals to winter range and the perception of unethical hunting.

The conflicts we have identified include areas in the Palisades/Big Holes subsection.

7. Mountain Goat / Domestic Sheep Conflicts

Conflicts between mountain goats and domestic sheep have not been adequately addressed in the DFPR or DEIS. We are concerned about 1) the long-term impacts of the Palisades mountain goat herds being displaced to winter range by domestic sheep during summer months, and 2) the potential for disease transmission from domestic sheep to mountain goats.

High cirque basins are prime summer habitat for goats, which respond to grazing disturbance from sheep by moving onto poor condition winter range far sooner than under natural conditions. The most important basins where conflicts have occurred are Neeley Cove, the heads of Canyon Creek, Waterfall Canyon, Little Horn, and Hell's Hole, and the ridge between the heads of Waterfall Canyon and Little Elk Creek.

When domestic sheep and mountain goats share habitat, there is a threat of disease transmission from the sheep to the mountain goats. Although we are not aware of significant levels of disease in the goats at this time, other herds have suffered die-offs, and the threat of a similar situation exists in the Palisades area.

B. Wolvernes

In the past, a general lack of information on wolverine habitat and life history requirements has resulted in little management attention to potential land use impacts on wolvernes. A U.S. Forest Service / Idaho Department of Fish and Game cooperative study of wolvernes was recently completed in central Idaho (Copeland 1996). A primary finding of this research concerned impacts of human winter recreational activities on wolverne natal denning and kit rearing success. Consideration of these findings relative to the Forest Plan Revision, and adjustment of winter access management, appear to be necessary for wolverne presence and perpetuation on the Targhee Forest.

Female wolvernes den from late February to early March. Idaho wolvernes denned in high-elevation subalpine cirque basins, locating the den beneath the snow in the tunnels and chambers associated with big-boulder talus. Females may move the kits several times prior to weaning, which occurs when kits are 9 to 10 weeks old. The Idaho study found females sensitive to human activity near the dens. In 2 cases, human disturbance near maternal dens resulted in den abandonment by females and kits. Sensitivity to human presence near dens has also been documented in wolverne studies in Finland (Pulliainen 1968) and Norway (Myrberget 1968). Female offspring normally remain near their natal area at reproductive maturation, establishing their home range near that of their mother.

The subalpine cirque habitats selected by Idaho wolvernes for denning habitat are often preferred winter recreation sites for backcountry skiing and snowmachining. Human activities in these habitats during the denning and kit rearing period displace wolvernes into suboptimal denning sites, which may decrease reproductive success and kit survival. Persistent or traditional winter recreational use of denning habitat will remove habitat from potential use by wolvernes, thereby restricting normal population maintenance and growth processes.

Sites selected for natal and maternal dens by central Idaho wolvernes were specific to 4 habitat criteria:

- 1 Dens were situated above 8,000 feet in elevation. (This criterion identifies the demarcation between mid-elevation montane coniferous forest, primarily spruce-fir/lodgepole pine forest, and subalpine-alpine habitats. Although this elevational demarcation may vary throughout the wolverne's regional distribution, it is likely applicable within the Targhee National Forest.)
- 2 Within a north-northeast aspect range of $\geq 320^\circ$ to $\leq 130^\circ$.
- 3 Zero vegetative overstory - select for bare-exposed rock cover type.

4 Concave physiographic landscape feature of glacial cirque

High-elevation subalpine habitats provide seclusion and reduce vulnerability to kit predation prior to weaning. Boulder caves beneath deep snows likely provide a stable thermal environment for the protection and rearing of kits. Northeastly aspects and glacial cirques provide persistent snow coverage and den stability to the mid-May weaning period.

The above criteria could be readily adapted to GIS for development of a Forest-wide predicted wolverine denning habitat map coverage. Management to protect and perpetuate wolverines would exclude human recreational activities within an 8 km buffer of predicted wolverine denning habitat from January 1 to May 31. Recreational activities outside the restricted period would be managed for minimum intensity (e.g., skier/snowmachiner quotas, weekend closures).

The wolverine is identified as a management indicator species in 4 of 7 subunits described in the DEIS. The TNF may provide a critical link between Montana, central Idaho, and Wyoming wolverine populations. Protection of denning habitat may be critical for maintenance of this link and the health of the wolverine population throughout the ecosystem. Increased popularity of winter recreational activities will result in higher human densities within traditional winter sports areas. Technological improvements in winter sports equipment will enable recreationists to travel farther into backcountry environments. Historical winter recreation may have eliminated potential wolverine denning habitat from availability to parturient female wolverines.

C. Wildlife Surveys

We recommend mandatory surveys for important wildlife and habitats prior to any project or activity that could cause a significant impact. We recommend a forest-wide standard to require surveys to locate raptor nests, threatened and endangered species, candidate species, sensitive species, state species of special concern, caves, wetlands, etc.

D. Bats and Caves

We recommend that all abandoned mines on the TNF be protected as bat habitat and given the same management considerations as natural caves. We recommend that standards for bat management include the following provisions:

1. Due to potential disturbance, prohibit the use of heavy equipment above any cave or abandoned mine known or suspected to be bat habitat. Identify

season of bat use, and apply seasonal restrictions on nearby disturbance as necessary to protect caves or abandoned mines inhabited by bats.

2. Provide a buffer zone of 500-foot radius around all bat roosts, in order to not adversely impact direction and amount of air flow near cave mouths.

3. In order to minimize human disturbance of caves, do not improve access to caves.

E. Forest-wide Forage Utilization Standards

We do not believe the forest-wide forage utilization standards and guidelines are adequate to protect important habitats and areas susceptible to overgrazing. We are not aware of any scientific literature, nor is any presented in the DFPR or DEIS, that supports the levels proposed in Alternative 3-M. Utilization rates in Table 1 are 5 to 10% higher than recommended in the scientific literature. We recommend either reducing proposed utilization to levels supported by scientific literature, or providing site-specific evidence that the proposed levels will meet water quality, watershed, fisheries, and sagebrush-grassland ecosystem objectives.

F. Water Quality/Fisheries

1. Aquatic Influence Zone (AIZ)

a. Riparian Forage Utilization

We do not believe these standards, and the associated monitoring plan, will result in meeting the stated desired future condition of riparian/aquatic areas. Improving riparian areas and fisheries habitat is presented as one of the most important needs for change to achieve the Forest's Desired Future Condition. In most riparian situations, far greater riparian vegetation is present outside the hydric greenline (HGL) than is present between the line and the water's edge. When sediments are transported during high-water events, the entire riparian area is critical for flood velocity reduction and sediment filtration, not just the "belt of riparian vegetation found closest to the water's edge" (Glossary definition of HGL). We understand the TNF's working definition for HGL area is the strip of vegetation \leq the width of a researcher's foot adjacent to open water.

Scientific literature does not support the contention that a 4-inch residual stubble height at the water's edge and a 3-inch stubble height in all of the riparian area except at the water's edge is sufficient to provide either maintenance or improvement of degraded riparian habitat. Although the standard is proposed to be

monitored at the end of the grazing period, there is no provision within the DFPR that ensures adequate additional growth of stubble will occur between the end of the grazing period and the end of the growing season. The monitoring plan fails to ensure that riparian monitoring will either 1) be adequately funded, or 2) dictate when livestock are to be removed from riparian areas

The stubble height standard is not adequate to protect riparian vegetation, water quality, or the many species which are dependent upon riparian vegetation for forage, nesting cover, hiding cover, or other biological needs. The DEIS (IV-7) acknowledges that permitting this level of utilization will slow the rate of improvement of riparian areas that do not currently meet the desired condition

It is very important to note that monitoring of the HGL requires a water's edge. Therefore, even if it is adequately funded, no monitoring would occur in seeps, bogs, wet meadows, cottonwood forests, or other wetlands that do not have observable standing water at the end of the grazing period. These types of areas provide habitat values, and contribute to biodiversity, far greater than their relative occurrence on the Forest

The best available science regarding residual stubble height indicates a minimum of 4 to 6 inches needs to be retained over the entire riparian area. Even that is reported to maintain riparian health only on satisfactory or better range. Greater protection would be needed to improve the condition of unsatisfactory riparian pastures. The Forest Service's own research (Clary and Webster 1989) appears to be the best available science on this subject. It has not been superseded by other research or Forest Service policies to date. As such, Clary and Webster's riparian grazing standards should be implemented as standards for entire aquatic influence zones.

For the protection and perpetuation of cutthroat trout on the TNF, we recommend a minimum 6 inch stubble height for existing and potential cutthroat trout habitat, and for streams that affect cutthroat trout habitat in a watershed

We disagree with the TNF considering stubble height to be the only indicator of riparian health affected by grazing. In addition to an objective to establish a stream bank stability standard (DFPR III-21), other indicators such as plant density, plant composition, and litter should be used with standards assigned to each criterion

DFPR range objective number 4 states that a stream bank stability standard will be established within 5 years. It is noteworthy that the Forest Planning Team had this same objective 5 years ago, with a plan to have it completed for the Forest Plan Revision. Stream bank management and monitoring plans have already been developed on other Forests in the region. We recommend the TNF adapt one of those systems within a more aggressive time-frame such as 2 years

b. Monitoring

Monitoring is proposed to occur only at the hydric greenline. With the hydric greenline including only inches of the total riparian area, the vast majority of riparian vegetation will not be monitored for stubble height. We recommend that riparian grazing standards be monitored across riparian areas, not just at the water's edge

We also recommend that riparian area monitoring be assigned to the Priority 3 group, to ensure that stated grazing standards are met.

c. Cross-country Motorized Access:

We disagree that riparian desired future conditions will be met with essentially unregulated cross-country motorized access. This proposal (DFPR III-98) permits motorized vehicles of all sizes to travel cross-country in wetlands and riparian areas and across streams, provided the recreator is accessing a picnic or camping site

We recommend the TNF at least propose to 1) set a maximum distance that vehicles are allowed to travel cross-country from open roads and trails (other Forests set a 300-foot maximum), and 2) prohibit motorized vehicle crossings of streams and wetlands other than on system roads and trails (see Salmon NF travel plan restrictions).

In addition to the ALL, our comments and recommendations for stream and wetland protection also apply to prescriptions 4.3, 5.1.3(a), 5.1.4(a and c), 5.2.1, and 5.2.2.

d. Timber Harvest

In the DFPR and DEIS, the TNF asserts several times that unscheduled timber harvest may be necessary within the AIZ to meet riparian objectives and/or maintain ecological health. The argument that unscheduled timber harvest is necessary to restore or improve riparian "health" is one of the most disturbing contentions in the documents

We are not aware of any credible scientific research indicating that timber removal has improved riparian values relative to fish and wildlife habitat, biodiversity, streambank stability, sediment filtering, woody debris recruitment, groundwater recharge, flood desynchronization, or any value we would associate with riparian health. The vegetative removal and physical impacts associated with harvest have primarily negative consequences for riparian areas. We feel certain that the Forest does not have sufficient data from controlled silvicultural experiments to support this management proposal. Once such data are available, and are coupled with the final results of the landscape-level vegetation studies currently underway on the

Forest, this proposal can be reevaluated. If these proposals remain in the final Plan, more details must be provided as to exactly what set of circumstances would lead the Forest to propose commercial salvage, fuelwood cutting, or other manipulations.

2. Water Quality Limited Stream Segments

The Forest is correct in noting that stream segments listed as water quality limited under section 303(d) of the Clean Water Act (CWA) must have special BMP's and pollutant limits established" (DEIS III-22). However, it is unclear in the DFPR and DEIS how the Forest intends to meet its legal obligations under the federal Clean Water Act, State of Idaho Water Quality Standards, and NFMA requirements in managing water quality limited segments (WQLSs). The NFMA requires the Forest Service to comply with state and federal water quality requirements. NFMA regulations direct forest plans to provide for "compliance with requirements of the Clean Water Act, the Safe Drinking Water Act, and all substantive procedural requirements of Federal, State and local government bodies" (36C.F.R section 219.23(d)).

Currently, state water quality standards are not being met in 25 or more WQLSs located on the TNF (Appendix "C", 1994 Sec. 303(d) list for the State of Idaho, US EPA, Region 10). Inclusion on the WQLSs list means that a stream has already been degraded to the point of failing to support beneficial uses. The TNF acknowledges that Alternative 3-M will only "result in a moderate rate of recovery of degraded habitats ..." (DEIS IV-18).

State of Idaho water quality code provides that "existing beneficial uses of the waters of the state will be protected" (IDAPA 16.01 02050, 02 c.) Furthermore, the state's water quality standards prohibit sediment transport and deposition in "quantities that impair beneficial uses." Virtually all of the WQLSs on the Forest are on the 303(d) list because of sediment. In light of their existing degraded status, it appears the Forest Service may not permit additional loadings of pollutants (primarily sediment) to these streams.

The DFPR and DEIS appear deficient with respect to WQLSs. First, the impacts of Forest Service permitted activities are not disclosed or quantified for WQLSs, in terms of pollutants or beneficial uses. The Forest needs to address and disclose predicted impacts, and discuss how they will affect other related resources, such as fisheries, aquatic resources, T&E species, sensitive species, etc.

Secondly, the CWA prohibits deliberate violation of state water quality standards. "Each department, agency, or instrumentality of the executive [branch] ...shall be subject to, and comply with, all Federal, State, interstate, and local requirements, administrative authority, and process and sanctions respecting the control and

abatement of water pollution" (33 U.S.C. section 1323(a)).

Moreover, Idaho promulgated its antidegradation standard specifically to prevent further degradation of already-impaired stream segments: "...existing instream water uses shall be maintained and protected" (See IDAPA 16.01.02051,01). State antidegradation policies, at a minimum, shall prohibit "further water quality degradation which would interfere with or become injurious to existing instream water uses" (See 40 C.F.R. section 35.1550(e)).

It appears that until water quality standards are attained and beneficial uses restored on WQLSs, the Forest Service may not permit any project that further degrades these streams until "total maximum daily loads" (TMDLs) have been developed. Where water quality standards have not been attained for listed WQLSs, discharges are only permitted where the cumulative effect of all discharges will assure the attainment of water quality standards. (See 33U.S.C section 1313(d)(4)(A)).

G. Wild, Scenic, and Recreational Eligible Rivers

The Wild and Scenic Rivers Act of 1968 was intended to assure unimpaired flows and to preserve the outstanding scenic, recreational, geological, fish and wildlife, historic, and cultural values of stream reaches. The DEIS reports that 249 miles of rivers and streams were determined to be eligible, but that suitability studies have not been completed.

We recommend the TNF reevaluate eligibility based on the results of State of Idaho Comprehensive Basin Plans for the Henrys Fork and South Fork Snake River. The South Fork basin planning included a scientific evaluation of river and stream segments possessing outstanding fish and wildlife, scenic, and/or recreational values. The evaluation was reviewed and approved by a citizens' advisory group comprised of water managers, irrigators, local landowners, outfitters, sportsmen group members, and elected officials. Resource and land management agencies provided technical assistance to the group. The study determined that outstanding resources occurred on a far greater number and length of rivers and streams than the TNF's evaluation.

The State Basin Plan for the Henrys Fork was completed in 1992, and will be reviewed within 3 years. It appears appropriate that Forest Service wild and scenic river planning should take into consideration the Comprehensive Basin Plans of the state of Idaho.

Given that suitability evaluations by the TNF will take several years to complete, we recommend the Plan Revision ensure protection of the outstanding characteristics

of all eligible segments until the suitability studies are completed,

We recommend the Plan Revision clearly ensure the South Fork is managed in compliance with fish and wildlife and habitat provisions of the 1991 Snake River Activity/Operations Plan. We recommend the TNF respond to provisions of the Activity/Operations Plan and reduce grazing/riparian habitat conflicts on Forest Service land, as well as preventing trespass grazing on BLM land.

H. Biodiversity

1. Roadless Areas

Currently existing roadless areas provide crucial habitat for rare species and species sensitive to human disturbance. They provide a critical contribution to maintenance of biodiversity on the Forest. Existing roadless areas provide important habitat that, if protected, could contribute to meeting desired future conditions for 6 of the Forest's 7 "key indicators" identified as the purpose and need for a Forest Plan revision: Patch Size (these areas provide the large patch sizes that occur naturally), Riparian, Elk Security, Grizzly Bear, Access, and Roadless Area Management.

The roadless area analysis and presentation is unclear and confusing. The preliminary DEIS reported 879,000 acres of roadless areas exist on the Forest. The TNF roadless area process paper reported the existence of 871,000 acres of roadless areas. Then the DEIS reported 841,000 acres for existing roadless. Alternative 3-M is depicted in Table II-1 as protecting only 772,000 acres as roadless areas. Due to the changing numbers, it is unclear whether the TNF proposes to reduce roadless acreage on the Targhee by 69,000 or 107,000 acres. Regardless, the TNF's proposal appears contradictory to the desired future condition stated in the DEIS: "Roadless characteristics are preserved in existing roadless areas and proposed wilderness" (DFPR II-2).

We recommend this roadless management indicator be more clearly depicted by presenting acreages and maps showing existing delineated roadless areas and roadless areas proposed in the preferred alternative.

We believe a comprehensive analysis of the key indicators of biodiversity would clearly demonstrate the critical importance of roadless areas for the maintenance of fish and wildlife species that are rare and/or sensitive to human disturbance. Scientific literature indicates the most crucial component of biodiversity is number of species present with at least a viable population size. Most threatened, endangered, rare, and sensitive species of the intermountain west depend on extensive blocks of habitat relatively free from human disturbance. For many of those species, their future survival depends on protection of linkage habitat between those blocks of habitat.

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The value of roadless areas for fish and wildlife is indicated by one of the key conclusions in the Columbia River Basin Landscape Ecology Assessment (November, 1995): "Across BLM and Forest Service lands of the basin, as well as on other ownerships, there has been a substantial decrease from historic to current of: net primary productivity, native grasslands, shrublands, riparian channel and bank conditions, old forest multi-layer, old forest single layer, scattered residual large trees, large snags, and tree species that are resistant to insects, disease, stress, and fire mortality. In contrast, there has been a substantial increase from historic to current conditions of: water balance stress, exotic and noxious plants, range, woodlands, mid seral forests, forest canopy closure/density, small diameter trees, small snags, tree species susceptible to insect and disease, fire intensity, costs of fire suppression, fatalities and accidents related to fire suppression hazards, bare soil, and erosion rates. The decreases and increases are highest in human influenced management classes (areas with roads and time/grazing emphasis) as compared to naturally influenced management classes (areas without roads and wilderness/semi-primitive emphasis)."

We recommend full protection of the roadless characteristics of existing roadless areas on the Targhee Forest.

2. Rare Plant Communities

a. Wetlands,

Wetland plant communities are recognized as being extremely valuable for biodiversity, far in excess of their relative occurrence on the landscape. The Conservation Strategy for Henrys Fork Basin Wetlands (Jankovsky-Jones 1996) was completed very recently. It includes information and recommendations regarding the status and management of rare plant species and rare plant communities occurring in basin wetlands.

We recommend the TNF review this publication, and include in the Plan Revision standards that will fully protect the unique values of the identified significant sites.

b. Old-growth Forest.

We are unaware of any credible scientific evidence that justifies the TNF grouping into one age-class the broad range of "mature" to old-growth, especially considering the Forest's broad definition of "mature" forest. In fact, there is abundant scientific literature demonstrating the unique fish, wildlife, and ecosystem values of genuine old-growth forest. Identification, and planned protection, of old-growth forest on the TNF appears to be crucial under any analysis of biodiversity on the Forest.

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3. Sagebrush-Grassland Habitat

TNF sagebrush-grassland objectives and standards are estimated to result during the next decade in 20,755 acres of sagebrush being burned, 500 acres sprayed, and 1,300 acres rotobeat (DEIS IV-23). Many factors are adversely affecting sage grouse habitat in the general area, including extensive conversions and reductions in sagebrush on lands adjacent to the TNF. This has caused significant habitat reductions and fragmentation. Research also indicates that adequate cover and height of residual herbaceous cover is significantly correlated to nesting success (Connelly, et al. 1991; Gregg, et al. 1994).

Sage grouse populations in eastern Idaho are currently in a precipitous decline. Studies by several entities, including the Forest, are currently being conducted to address this problem. Until the causes of the problem are better understood, we recommend using extreme caution with any treatments that reduce or fragment sagebrush habitat.

Sage grouse are an excellent indicator species for the sagebrush-grassland guild of wildlife species, due to being dependent on sagebrush-grassland habitat for their survival. The long-term declining trend monitored for sage grouse should be considered to indicate similar trends for other wildlife species dependent on sagebrush-grasslands.

In order to reverse the declining trend for sage grouse, we recommend the following habitat treatment standards [Draft Idaho Sage Grouse Management Plan 1996-2000].

Vegetation manipulation (fire, herbicide, and mechanical treatments)

Low precipitation areas (< 11 inches)

No treatments in sage grouse habitat for 5 years

Higher precipitation areas (> 11 inches)

Allow treatments only if sagebrush canopy coverage (CC) is > 25%

Allow treatments only if < 500 acres and > 1.6 miles from existing treatments with < 15% CC

Do not reduce average sagebrush CC in herbicide or mechanically treated areas to < 15% CC in winter, brooding, or nesting habitats.

Grazing management

To improve spring breeding habitat, manage for a healthy understory of

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perennial grasses and forbs and fall stubble height of ≥ 7 inches.

To improve brood rearing habitat, manage to produce a fall stubble height of ≥ 4 inches.

Fire management and fire rehabilitation

Make protection of important sage grouse habitat a priority for wildfire suppression

Include sagebrush, forbs, and native grasses in fire rehabilitation seeding mixtures.

I. Ecosystem Management

1. Forested Habitat

In our opinion, the single most glaring flaw in the DFPR and associated DEIS analysis is proposing unlimited allowance of Forest vegetation manipulation under the guise of ecosystem management, while providing virtually no analysis of the potential environmental consequences of what could be an extensive logging program.

Management indicators are displayed and analyzed throughout the DECS with logging effects based solely on scheduled timber harvest on suited lands. There is no quantitative disclosure of, or limits to, logging and other projects that are expected to occur as "unscheduled" projects and/or on unsuited lands. The Forest's study of range of natural variability is not complete for the sagebrush-grassland ecosystem, yet the DEIS states to the nearest acre the projects planned for the next decade. Why no similar treatment of the forested component of ecosystem management? There is already one written ecosystem management proposal to log (in the next decade) 7.2 million board feet of mature Douglas-fir and mixed coniferous forest, directly affecting 2,876 acres, on only 3 of 5 subwatersheds in the Camas Creek watershed (only one of 45 watersheds on the Forest). The TNF has stated these aspen enhancement treatments need to be very large in scale, partly in order to continue livestock grazing in the treatment areas. The DEIS (Alt 3-M) analyzes 37 million board feet of scheduled timber harvest on an estimated 11,430 acres over the next decade. The DEIS does not disclose or analyze the fact that the TNF intends to conduct timber harvest on tens of thousands of acres in the name of aspen enhancement and other ecosystem management.

The DFPR Biodiversity Objective No. 5 is to treat aspen plant communities, but no

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standards, guidelines, or other information is presented for reviewers to understand or analyze the scope of potential impacts that implementing this objective may cause

Extensive aspen enhancement and other ecosystem management should either be disclosed and analyzed in this EIS, or it should not be permitted until analyzed in its own EIS. Habitat manipulation across entire landscapes appears to be a major federal action worthy of environmental analysis.

We recommend that ecosystem management utilizing timber harvest not be included as part of the Plan Revision until the TNF landscape / range of natural variability analysis is completed and reviewed by the scientific community, the TNF has developed appropriate management strategies, and the process has been subjected to thorough public review and comment.

2. Ecosystem Management Summary

We have reviewed the ecosystem management section of the June 20, 1996 letter from the Greater Yellowstone Coalition (GYC) to you regarding the Draft Plan Revision and DEIS. The analysis and summary of scientific literature and other information presented in their section on Applying Ecosystem Management to the Forest Plan Revision appears to be accurate and reflective of our opinions on the subject. Their analysis (and associated recommendations) incorporated the opinions of numerous research and management professionals from both outside and within the Forest Service. We agree with the concerns expressed and support the recommendations presented in the Applying Ecosystem Management to the Forest Plan Revision section of GYC's comment letter.

J. Monitoring / Budgets

These sections are critical for 1) indicating whether action items in the Plan Revision will be implemented, and 2) conducting an analysis of TNF management impacts on Forest resources. A determination that the Plan Revision will not cause significant environmental impacts should require assurance that 1) planned fish, wildlife, and habitat enhancement projects will be conducted, and 2) authorized actions that may adversely affect natural resources will be effectively monitored.

The proposed plan does not adequately provide that assurance. Given the uncertainty of future budgets, we recommend a stated percentage of funding be allocated to the TNF programs (timber, range, fish and wildlife, recreation, etc.) if equitably allocated, the programs could be implemented at rates that complement each other. This could prevent limited budgets from being used to fund some programs at high levels while sacrificing necessary monitoring and mitigation for the

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traditionally under funded programs of fish, wildlife, soils, and watersheds

K Attitudes, Beliefs, and Values

We will have considerable difficulty working effectively with the Targhee National Forest until readjustment of the attitude of Plan Revision authors conveyed by the following statement in the DEIS, p IV-50 'As the numbers assigned to the alternatives increase, the alternatives move consistently toward Less accommodation of those who feel the Forest's resources should be used for the benefit of humans.' This clearly conveys the authors' opinions that 1) the Targhee Forest does not consider fish, wildlife, hunting, fishing, water quality, outfitting, recreation, visual aesthetics, etc to be Forest resources and 2) anyone who benefits from those is not human.

In fact, recent public opinion surveys by both the State of Idaho and the U S Forest Service indicate a large majority of Idahoans and Americans support the protection of fish, wildlife, and habitat, and the recreational opportunity those natural resources provide.

In closing, we hope you will utilize our comments during formulation of the final Plan and EIS. If the Targhee Forest requires any additional information or clarification to implement our recommendations, my staff and I are available to answer questions or provide the necessary assistance. Literature references are available on request.

Sincerely,



Don E. Wright
Regional Supervisor
Upper Snake Region

DW RM

cc Natural Resources Policy Bureau
USFWS, Pocatello

24

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Congress of the United States

House of Representatives

Washington, DC 20515-1202

March 8, 1996

COMMERCIAL HAZARDOUS MATERIALS ENERGY AND POWER OVERSIGHT AND INVESTIGATIONS AGRICULTURE COMMITTEE SUBCOMMITTEES RESOURCE CONSERVATION RESEARCH AND FORESTRY DEPARTMENT OPERATIONS NUTRITION AND FOREIGN AGRICULTURE

HOUSE REPUBLICAN LEADERSHIP 100 CLASS LEADER DEPUTY WHIP WESTERN UNITED STATES REPUBLICAN POLICY COMMITTEE REEF CAUCUS, CO-CHAIRMAN CONGRESSIONAL RURAL CAUCUS CONGRESSIONAL SPORTSMEN'S CAUCUS CONGRESSIONAL WATER CAUCUS

Mr Jerry Reese Forest Supervisor Targhee National Forest P.O. Box 208 St Anthony, ID 83445

Dear Jerry:

Many of my constituent have raised concerns regarding the Draft Forest Plan Revision for the Targhee National Forest I am in receipt of the Draft and am currently reviewing the alternatives outlined in the Draft Environmental Impact Statement

Thank you for your efforts in educating me and my staff on this proposal I appreciate your efforts to educate and involve the public in the development of the various alternatives and request that this effort continue.

Notwithstanding my appreciation of your help, I must bring to your attention concerns raised by my constituents regarding the potential road closings in the preferred alternative Idahoans rely on many different methods of transportation to experience and enjoy outdoor Idaho I am concerned that the preferred alternative will severely impact the multiple-use industry as well as motorized access and recreational use to the very people who choose to live in Idaho. In addition to this concern, many constituents have contacted me regarding reduction in AUM units, potential wilderness designation and reduced elk hunting areas

I request that in your evaluation of the forest plan revision alternatives you take into consideration the economic and recreational needs of the affected communities and those who frequent this area I am concerned that the preferred alternative does not adequately address the concerns raised in this letter. I look forward to working with you to produce a forest plan that fits the needs of all involved

Sincerely,

Michael D. Crapo Member of Congress

MDC/wj

TA N.E. DISTRICTS 1 2 3 4 5 MR 12 '95

- WASHINGTON DC 437 CANNON BUILDING ROOM 225 WASHINGTON DC 20515 12021 225-5531
304 NORTH 8th STREET BOISE ID 83702 12081 334-1933
2539 CHANNING WAY SUITE 230 POCAHELLO ID 83201 12081 523-6701
FEDERAL BUILDING 250 SOUTH 4th ROOM 220 POCAHELLO ID 83201 12081 236-6734
TWIN FALLS ID 83401 12081 734-7218

United States Senate

WASHINGTON DC 20510-1203

July 3, 1996

1389

Craig, Larry

RECEIVED
JUL 10 1996

Jerry Reese, Forest Supervisor
Targhee National Forest
P O Box 208
St Anthony, ID 83445

Dear Supervisor Reese

Thank you for the opportunity to comment on the draft Environmental Impact Statement and draft management plan revision for the Targhee National Forest. I appreciate the time you have taken to brief my staff and provide information that I've requested.

The Targhee Forest Plan revision is very important to Idahoans and others who use the forest and to the local communities which depend on goods and services flowing from the forest. The draft plan signals some major changes in philosophy which have caused many constituents to contact me. As I have indicated to you, I am concerned about certain provisions contained in Alternative 3M, the preferred alternative in the DEIS.

Obviously, there are many other aspects of the proposed plan which I find suitable and in accord with my views about national forest management. I commend you and the planning team for your effort in reaching this stage of the planning process.

Based on my comments which follow, I am asking that you seriously consider making critical changes before adopting a final forest plan. I cannot support Alternative 3M as currently formulated. I strongly support Alternative 2, as modified by Citizens for a User-Friendly Forest. Following are the concerns I have with the DEIS in general, and Alternative 3M in particular.

Goshawk

The DEIS places undue significance on preservation of goshawk habitat. The Goshawk is doing quite well on the Targhee with 49 pairs identified. This species has never been listed as threatened or endangered under the Endangered Species Act. Moreover, the U.S. Fish & Wildlife Service has even dropped it from the ESA candidate list. In fact, USF&W recently pared its candidate list in Idaho by 107 plant and animal species.

Based on the USF&W decision, I suggest the Targhee NF re-evaluate the role of sensitive species in its forest plan revision. Information you sent me indicates the plan revision placed a strong reliance on the fact that the candidate list on the Targhee NF increased from 12 to 47 species since the current forest plan was adopted. That is the reason given for proposing new and more restrictive standards, guidelines and constraints for (former) candidate species like the goshawk. Reason follows that restrictions on other national forest uses could be greatly reduced, now that the number of candidate species are even fewer than when the current plan was prepared.

The Forest Service has made a practice of classifying candidate species as sensitive species for purposes of the National Forest Management Act. Now that there remain only 4 Idaho species on the candidate list, and the goshawk is not one of them, I suggest you re-examine the prominence you have given to habitat constraints related to sensitive species. Since all DEIS alternatives include an extensive network of goshawk habitat which constrains other activities, I would expect to see substantial relief from constraints in the final forest plan based on a re-evaluation of the goshawk.

Hydrologic Disturbance Constraint

I believe the 30 percent cap placed on watershed disturbance is too restrictive in several respects. In your model, any forest stand which has been harvested and regenerated triggers the cap until the young trees reach a size of 4-5 inches in diameter [late sapling stage]. This approximates a 20 year recovery period in your assumptions.

My understanding of watershed recovery is that the preponderance of effects, such as runoff and sedimentation, can be expected to have dissipated within about 10 years after regeneration is established. Your criteria may be unnecessarily restrictive, especially in the relatively dry and gentle terrain in lodgepole pine forests.

There is something unsettling about leaving unmanaged for a decade 70 percent of your lodgepole pine stands, all of which are at or nearing maturity. We can predict with some certainty that much of the untouched lodgepole forest will deteriorate and burn while the hydrologic disturbance constraint holds management in abeyance. I don't find that an acceptable alternative. I recommend that added flexibility for vegetative management and timber harvest be built into your plan, particularly in lodgepole types.

Also, I wonder whether your DEIS has properly assessed the risks and costs of fighting wildfire which might have been prevented through vegetative management. The risk of hydrologic disturbance from wildfire must be examined in the same light as

the risk from timber harvest. If the risks are similar, then the difference may be that harvesting creates jobs and income while suppressing fire creates a huge drain on the federal and state treasuries.

Elk Vulnerability Model

As I understand it, the elk vulnerability model is a device to limit motorized access and thereby control hunting pressure. If it were applied only during the hunting season, I could at least understand the rationale.

However, it appears that Alternative 3M proposes to apply it year-round, causing a tremendous reduction in motorized recreation opportunities. The mileage of official and unofficial OHV trails would decline drastically. The miles of system roads and two-track roads to be closed numbers 828. Bear in mind these would not be the first closures on the Targhee NF. Over a thousand miles of roads and trails have already been gated and closed under the existing plan. The cumulative effect would be devastating to motorized recreation users.

The need for these reductions is not immediately obvious. The Analysis of the Management Situation documents increased deer, elk and bear populations. Summer habitat is not a limiting factor for these species, and elk, in particular, are at or near record levels. Winter habitat is a critical factor for elk, and it is dealt with in other provisions of Alternative 3M.

I suggest that the elk vulnerability model be applied as a temporary measure only during the elk hunting season. Its use at other times of the year cannot be justified, at least: not at the same standard of a maximum one mile of road/trail per square mile. This added flexibility would fit the circumstances to a greater degree and would relieve the Forest Service of the need to make extensive trail and road closures except where some other problem, such as severe erosion, is documented and cannot be repaired.

Plateau Bear Management Unit (BMU)

After having examined a number of issues related to the Plateau BMU over the past few years, I have come to the conclusion that it is such poor grizzly habitat that it should never have been included as part of the grizzly recovery zone. It should be dropped since it is ignored by the bears and a source of continuing strife for my constituents.

On a scale of 0 to 1 reflecting the quality of grizzly bear habitat, the Plateau BMU rates only 0.8 - by far the lowest rating of any BMU. Now, Alternative 3M worsens an already illogical land allocation by proposing extraordinary land use restrictions to see whether, in the next ten to fifteen years, grizzlies can be lured into using the Plateau BMU. Alternative

3

3M calls for new, protected core areas within the Plateau BMU as an enticement to the bears. At the same time, human use is discouraged, motorized trails and roads are closed, timber harvest is virtually eliminated, several sheep grazing allotments are cancelled and spring cross-country snowmobiling is prohibited.

All this mayhem is proposed as a ten to fifteen year experiment to see if a female grizzly with cubs can be tempted to use this sub-par habitat. The Plateau BMU is not needed. The grizzly population is doing well enough throughout the rest of the recovery zone to warrant delisting. None of these proposals in the Plateau BMU should be enacted in the final plan. If this is an example of the over-reaching land use regulations which will be necessary to obtain clearance from the USF&W, then I am afraid my position against further grizzly introduction in Idaho will harden considerably. I will communicate my position in a separate letter to USF&W.

Seasonal Cross-Country Travel Snowmobile Closure

The proposed new snowmobile cross-country closure in all bear management units from April 1 to December 15 each year is not necessary and should not be included in the final plan. This proposal is a classic example of over-regulation to achieve an objective. The objective is to protect grizzly leaving their dens far lower elevations in the spring.

The cross-country closure would cover 431,000 acres of prime spring riding terrain. On the one hand, the Forest Service cites this type of recreation opportunity as needed to serve a growing constituency in the future, but on the other hand, the agency incrementally eliminates such opportunities with proposals like this, and proposals for wilderness additions.

As I understand it, there are very few known grizzly denning sites anywhere on the Targhee NF, and there has never been a recorded case of snowmobile conflict with a bear. Protection of bears leaving dens could be accomplished with much more site-specific and time-specific measures rather than the wholesale prohibition which is proposed.

Allowable Sale Quantity

The Targhee National Forest makes an unfortunate statement by proposing an ASQ of only 3.7 million board feet of timber harvest from 487,000 acres of suitable forest land in the preferred alternative. This is an embarrassingly small volume from such an extensive and productive land base.

This suitable forest land base currently holds 1.6 billion board feet of merchantable timber which is growing at the rate of 54 MMBF per year. Yet, the Targhee NF proposes to harvest only 3.7 MMBF per year - only 7 percent of the net annual growth on

4

merchantable trees

The public has become much more concerned about sustainable forestry in recent years, and rightfully so. Table IV-19 reveals that the Long Term Sustained Yield (LTSY) capacity of the suitable lands in the preferred alternative is 27.6 MMBF. Even that figure is only half of actual net growth, and it seems suspiciously low given the net growth data. However, even then, the ASQ is not calculated on this LTSY figure. The LTSY's in Table IV-19 were all substantially reduced by a method of field validation which is not revealed in the DEIS. The LTSY for Alternative 3M was reduced to 14.9 MMBF by a process which is not documented in the DEIS and not available for comment by the public. Subsequently, the ASQ's in Table IV-21 were built from the lower LTSY figures.

The data and how it has been used to calculate ASQ raise serious questions. Given the standing volume and the solid growth rate (which doesn't even account for growth on young timber stands), it appears the LTSY should be higher. Beyond that, it is not clear how the FORPLAN results for LTSY were field-validated. Some downward adjustment of ASQ is appropriate to account for on-ground conditions which aren't reflected in the model, but a 50 percent reduction as we see occurring in the preferred alternative seems excessive. Such a large adjustment calls into question formulation of the model in the first place.

The Targhee NF should be able to support a far larger annual timber harvest on a sustainable basis than is documented in the DEIS. I am asking that you re-examine your data and your process for arriving at LTSY and the proposed ASQ.

Setting those matters aside, timber harvest on the Targhee NF would not even reach the LTSY level until the sixth decade in Alternative 3M. In Alternative 2 the LTSY would not be reached until the ninth decade. Obviously, the ASQ has been severely capped by the various constraints discussed in my comments. It is my sincere hope that a re-examination of the constraints, as I have suggested above, would point the way toward a higher and more credible timber output in this plan period. That end could be partly met by pulling more harvest volume into the first decade of the plan so as to create a smoother transition toward LTSY in future decades.

Community Needs

In my view, insufficient attention has been paid in the DEIS to the economic needs of the local community and to the possibility of offering a timber sale program which would sustain the local forest products industry at its current level (about 20 MMBF). The preferred alternative will supply only 21 percent of the local demand for forest products, though it has the potential to

5

do far more. It appears that one constraint is piled on another, and when all is said and done, only a tiny amount of timber harvest is found to be permissible, irrespective of the very clear and forceful statement of needs being voiced by several counties and the communities which are inseparable from the Targhee National Forest.

The voices of these governments and citizens were heard through the unusual step they took to place a ballot initiative in local elections amounting to a referendum on forest plan alternatives. That referendum soundly rejected the preferred alternative and endorsed Alternative 2. It is my opinion that the best decisions on land management matters are likely to result from a broad-based consensus of local participants. In this case, the local citizens and communities have spoken, and I hope the Targhee NF has listened and will act accordingly in the final plan revision.

Finally, I note that a selection criterion designed to meet the needs of the local communities appears nowhere among the priorities used to select the preferred alternative. Instead, the most important criterion in the selection was assigned to "Ecological process and patterns as measured by patch size limitations." Only an insider would understand what this means. Perhaps in the selection of the final forest plan, the needs of people could be given more prominence.

Summary

In summary, I've related a number of my concerns and I ask that you consider them in drafting your final documents. The revision of the forest plan is a complex undertaking with many legitimate forces at play, and I commend you and the Forest Planning Team for your sincere efforts to follow the science, and yet, reach an appropriate balance where you have discretion to do so.

This public comment period on the DEIS is the appropriate time to question application of the science and make needed changes in the flow of products and opportunities which the draft plan proposes. I am pleased to be able to offer my views and comments, and if any questions arise, I would be happy to discuss them further with you.

Sincerely,


LARRY E. CRAIG
United States Senator

6

LENORE HARDY BARRETT
DISTRICT 26
LARK CUSTER JEFFERSON
& LEMHI COUNTIES

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143 WEST PLEASANT
PO BOX 347
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RES (208) 879 2797



COMMITTEES
REVENUE & TAXATION
TARGHEE N1
DISTRICT 1 VICE CHAIRMAN
LOCAL GOVERNMENT

JUL 16 '96

House of Representatives
State of Idaho

July 8, 1996

Mr Jerry Reese
Forest Supervisor
Targhee N F
P O Box 208
St Anthony, Idaho 83445

RE TARGHEE FOREST PLAN REVISION (3M)

I write in opposition to the proposed Targhee Forest Plan Revision

1. The decision is skewed toward environmental factors. There are no decision criteria to evaluate loss of jobs and diminished revenue return to local economies. Economic and social effects are basically ignored in 3M.
2. The grizzly bear strategy is a flawed strategy with no scientific basis.
3. A proposed additional 125,000 acres of wilderness is just another "land grab".
4. Further reduction of grazing and logging does not produce long-term forest health and development. "No use" does not automatically translate into "wise use".
5. Ecosystem management is a vague, undefined concept whose only purpose is to further bind local control with federal control.
5. In the matter of road closure, closing roads without action by the county commissioners will violate RS 2477 and state law.

On April 9 at a meeting in Idaho Falls called by the Fremont Commissioners to discuss your proposed revision, you indicated in response to my question that the current plan was working well enough, but that a lawsuit settled with an environmental group directed further downsizing of activity on the Targhee.

Furthermore, those of us who have submitted to this process time after time after time, are fully aware that USFS alternatives align themselves into the good, the bad and the ugly. We know we aren't going to get the "good", we certainly don't want the "ugly", so process of elimination leaves us with the "bad" (3M). This is not acceptable.

Page 2
Mr Jerry Reese
Targhee Forest Plan Revision

The CUFF alternative is at least livable for now, even though the whittling will continue. With no other sensible alternative available and with no chance of leaving well enough alone, I support the CUFF alternative.

With CUFF we can make some progress. Things will get worse at a slower rate!

Sincerely,

Lenore Hardy Barrett

lb

cc Governor Phil Batt
Idaho Congressional Delegation
Neal Christiansen, Fremont Commissioner

ROBERT R. LEE
DISTRICT 27
FREMONT &
MADISON COUNTIES

HOME ADDRESS
1330 BARNEY DAIRY ROAD
REXBURG, IDAHO 83440
HOME (208) 356 9506



COMMITTEES
VICE CHAIRMAN
AGRICULTURAL AFFAIRS
HEALTH & WELFARE
RESOURCES & ENVIRONMENT

Idaho State Senate

State Capitol Building
PO Box 83720
Boise Idaho 83720 0081

688 - Lee, Robert

June 25, 1996

Mr. Jerry Reese
Forest Supervisor
Targhee National Forest
Box 208
St. Anthony, Idaho 83445

RECEIVED
JUN 26 1996

Dear Mr. Reese:

Thank you for the opportunity to comment on the draft Targhee Forest Plan. At the outset I want to express my opposition to the Forest Service's preferred Alternative 3H and give my support to the CUFF Alternative 2. Details of my position follow.

First, let me say that as a State Senator from District 27, I represent the people of Madison County and six precincts in Fremont County including Island Park. In the May 28th Primary election a nonbinding referendum was on the ballot giving voters an opportunity to choose between Alternative 3H and the CUFF Alternative 2. The voters in District 27 chose CUFF Alternative 2 by a 3-1 margin as did the voters in the other counties. I urge you to follow the will of the people in this very important matter instead of bowing to pressure from special interest groups such as the Yellowstone Coalition.

I believe the referendum says to the Forest Service that the people are pretty well pleased with past management of the Targhee National Forest. The bug-killed lodgepole pine needed to be harvested, the numbers of elk have increased dramatically, prime trout fishing streams have been protected by the State, snow machining and other recreational opportunities have been greatly improved and trout fishing in the region's rivers and streams is unsurpassed. Counties have benefitted from Forest Service payments.

But the proposed Targhee Forest Plan Alternative 3M places severe restrictions on the use of the Targhee National Forest by the public by reducing timber harvest far below a sustainable yield

by 125,000 acres. The people want less government control in their lives not more regulations!

It has been said, and I've heard you agree, that the Targhee Forest Plan Alternatives are being driven by grizzly bear recovery goals. But those goals make little sense along the west boundary of Yellowstone Park because studies show it is not good grizzly bear habitat and few bears have been observed in the area. There have been very few grizzly bear sightings in the Plateau BHN in Yellowstone Park even though timber harvesting, grazing, snow machining and ORV use are prohibited. Why then should grizzly bear recovery drive the planning process? I can tell you this, the Idaho Legislature and most of the citizens of Idaho are opposed to grizzly bear reintroduction in central Idaho and they are equally opposed to their introduction into the Island Park area.

Finally, you should know that although the Idaho Legislature cannot submit a resolution to you by June 27, 1996, there will likely be one forthcoming in early 1997. I can assure you that such a resolution will support a Targhee Forest Plan that closely follows the CUFF Alternative 2 Plan.

Sincerely,

Robert R. Lee
State Senator, District 27

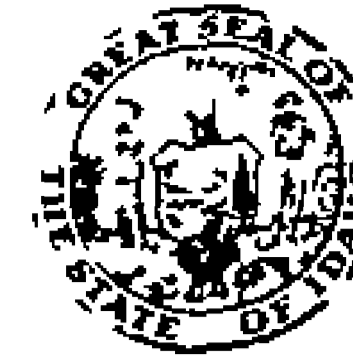
cc: Madison County Commissioners
Fremont County Commissioners
Mayors of Rexburg, Sugar City, St. Anthony,
Ashton and Island Park

GOLDEN C LINFORD
DISTRICT 27
MADISON &
FREMONT COUNTIES
HOME ADDRESS
2120 WEST 4200 SOUTH
REXBURG IDAHO 83440
(208) 356 7220



COMMITTEES
CHAIRMAN
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REVENUE & TAXATION

MAX C MORTENSEN
DISTRICT 28
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(208) 624 3379



COMMITTEES
EDUCATION
HUMAN RESOURCES
AGRICULTURAL AFFAIRS

House of Representatives
State of Idaho

14478 Linford, Golden

House of Representatives
State of Idaho
July 19, 1996

#1456 Mortenson, Max

July 12, 1996

Mr. Jerry Reese
Forest Supervisor, Targhee N F
P O Box 208
St. Anthony, ID 83445

RECEIVED
JUL 15 1996

Dear Jerry

I have been hearing from many of my constituents and others expressing frustration, deep concern and down right anger over the preferred alternative 3 M Forest Plan being proposed. You of course are hearing from these same folks plus many others

I will not rehearse the reasons of concern in this letter as you no doubt have them memorized from all you have been hearing and reading

Let me just say, that in spite of the constraints that you are operating under, such as the Grizzly Bear issue, the 3 M plan seems to go way beyond the mark and I hope you will adopt a plan closer to the CUFF Alternative 2

Sincerely,

Golden C Linford
Representative Dist 27

Mr. Jerry Reese
Forest Supervisor, Targhee N.F.
P.O. Box 208
St. Anthony, ID 83445

Dear Jerry:

Over the past few weeks I have received a considerable number of letters relative to the "3M Targhee Forest Plan Revision." All of these letter express strong opposition.

The most significant opposition has come from those who represent the vast majority of the citizens on a local level...The County Commissioners, elected by the voice of the people.

Letters to me indicate that the County Commissioners of Eastern Idaho unanimously reject the Forest Service Alternative 3M Plan.

The County Commissioners recommend a similar plan to the "CUFF Alternative 2"...one that harvest about 20 MMBF per year, leaves grazing at the existing level, leaves most of the areas open to summer cross-country motorized use that are open now, and one that does not restrict cross-country snowmobile use after April 1. We also object to more areas recommended as wilderness! We have 4 million acres of wilderness in Idaho, more than any other state besides Alaska and California, and there are 6 million acres of designated wilderness in the Greater Yellowstone Region. That is enough!"

I strongly believe, as did the Founding Fathers, that the further government is from the people (either in distance of ideology), the more absurd are its regulations and decrees.

In our representative system of government, how can you overlook the officials elected who are closest to the people?

Sincerely,

Max C. Mortensen, Representative, District 28

CC: Sen. Kempthorne & Craig, Rep. Crapo, Gov. Batt
All County Commissioners and others expressing concern.

DIANA S RICHMAN
DISTRICT 27
MAISON FREMONT
COUNTIES
HOME ADDRESS
3381 N 5000 E AS1
SUGAR CITY IDAHO 83448
RES 12081 458 4149



House of Representatives
State of Idaho

COMMITTEES
EDUCATION
HEALTH & WELFARE

RECEIVED
JUN 26 1996

664 - Rickman, Diane

many of these, that's dangerous
'sanger, Richard
PO Box 208
St Anthony, Idaho 83445

When the House
I would like to give my support +
the progress made by the CUFF people, regarding
the new forest plan

I'm not going into details because you are
getting them from the many individuals that
are working, but I do believe the area will be
a very successful 3M plan as accepted
I believe that the private arrangements
groups have had to work in and out the local
of area to have their concerns given equal
weight.

I'm introducing a copy of Resolution No. 1
that the Republican Bill Commission adopted last
Wednesday at Thomas Idaho

I do agree with the approach that the forestry
plan given the local citizens to voice their concerns
and I know you have approved it I come by with
Sincerely, Diane S. Richman

DIANA S RICHMAN
3381 N 5000 E
SUGAR CITY IDAHO 83448

Whereas environmentally appropriate management practices are in the best interests
of the resource industries and the multiple use concept

THEREFORE BE IT RESOLVED that the Idaho Republican Party supports
environmentally sound development and management of our natural resources

6 Proposed Forest Revision Plan

Whereas the Tarheel Forest Plan Revision currently proposed by the Tarheel
Forest will reduce travel, reduce timber harvest below sustainable levels, gradually reduce
(eliminate) grazing, institute ecosystem management, expand grizzly bear habitat,
increase wilderness designation and have a negative fiscal impact on local
economies and local governments, and

Whereas Congress passed a Revised Statute 2477 to allow public access across
public domain lands before these lands became national forest and closing them
without action by the County Commissioners will violate state law, and

Whereas the Tarheel approach to address ecosystem management is a vague,
undefined concept that will elude any meaningful contribution to the process other
than pseudo-science, conflict and confusion, and

Whereas the additional 125,000 acres recommended for wilderness is neither
needed nor justified, and

Whereas the "grizzly bear strategy" is a flawed term for "land grab" with no
scientific basis, and

Whereas PILT payments will be substantially reduced, and

Whereas NEPA procedures are only nominally adhered to, and

Whereas three counties within the Tarheel National Forest overwhelmingly voted
against the Forest Service's plan in an advisory election in May, and

Whereas a less disagreeable alternative is proposed by local resource users,
including a group called Citizens for a User-Friendly Forest (CUFF),

THEREFORE BE IT RESOLVED that the Idaho Republican Party officially
 comment in opposition to the Proposed Forest Revision Plan (3M) and direct this
 opposition to Jerry Reese, Forest Supervisor, Targhee National Forest, P O Box
 208, St Anthony, Idaho 83445, and
 BE IT FURTHER RESOLVED that this opposition be directed to the Secretary of
 Agriculture, the Idaho Congressional Delegation, the Governor of Idaho and the
 Idaho State Land Board

We have voiced opinions and concerns from time to time and attended some of the meetings
 for the Targhee Forest 10 year plan. We would like to make the following comments on the
 Draft Proposal. The 10-year plan has used much information that was derived from
 "Impian" economic model. This model has used information for jobs, income,
 etc. which has been used over a region-wide basis or the upper South-east Idaho area that
 the Targhee Forest lies in. In Clark County, we have found first of all that the "Impian"
 model is quite flawed and we are extremely wary of any numbers or trends that are
 predicted from the use of Impian generated data. We have found gross mistakes in the
 information generated for us by the University of Idaho, Agriculture Economic Dept. when
 Impian was used. We complained and still, nobody has given us a good reason why the
 numbers on cattle feedlot operations are 40-50 times the employment for range-fed cattle
 operations in Clark County. Dale Pekar did better than anyone else by far. He's the
 sharpest person we've found on explaining Impian so far. But the numbers are still wrong.
 Not only are we being viewed with poor numbers, but we've been thrown in with the entire
 "ecosystem" as everyone likes to put it. These are separate counties and for good reason.
 Were not like West Yellowstone or Driggs and we will not be thrown in on a regional basis
 when our economies are at stake. We don't get the hundreds of thousands of tourists, nor
 do we want them! PILT payments are made on a county-to-county basis and we are
 penalized by our low population, so at least give us the same treatment now.

The closure of roads and restriction of travel has adversely affected our historical custom
 and culture. We want mountains and valleys protected, not closed and padlocked. We
 have, as a county filed RS-2477 right-of-way, and those seem to be lost in the shuffle or
 else covered up by a big cat. We cannot believe that the Fish and Game has the Forest
 Service doing their "dirty work," that is trying to give some protection to the game while
 they continue to sell more licenses, extend seasons, and do nothing themselves to control
 pressure on the animals. Road restrictions and closures alone will not work! On the
 grazing issue, we need to recognize the grazing as a useful tool in fire suppression and
 maintenance of our plant communities. We also need to recognize grazing as part of the
 heritage (custom and culture) and the economic importance to Clark County, whether of not
 the rest of Southeastern Idaho counties care about it. The value added to Clark County (and
 others) is VERY significant, especially when you have over 100,000 AUMS and a value of
 \$1040 per annual unit per year established by the IRS. We are also opposed to any
 reduction in the amount of mineral entry lands available. This may be one of the most

To US Forest Service - Targhee Forest Supervisor
 Targhee 10 Year Forest Plan
 420 N Bridge
 St Anthony, ID 83445

June 25, 1996

Clark County Idaho
Board of County Commissioners
 P O Box 205 - 320 W. Main
 Dubois, ID 83423
 (208)374-5304
 Fax (208)374-5609
 JUN 26 1996




1-6-1-1-5
 Clark County
 Commissioners

reducing mineral entry we limit economic diversity, revenues and economy and add to the import-export deficit of the nation as a whole

We hope that these comments will be taken seriously and that there will be changes made in the Final Plan

Sincerely,

Clark County Commissioners


Charles R. Vadnaas

Steven R. Gilger

Charles E. Wilson

City of Island Park Planning and Zoning Commission
c/o Margo Freeman, Secretary
PO Box 226
Macks Inn, ID 83433

JERRY B. REESE, Forest Supervisor
Targhee National Forest
PO Box 208
St Anthony, ID 83445

#723 - Hiestand, Mahlon M.D.

RECEIVED
JUN 24 1996

RE Comments on the Forest Plan Revision

June 19 1996

Dear Mr Reese

The City of Island Park Planning and Zoning Commission has proposed the following policy which will probably become part of the Fremont County Comprehensive Plan in the near future

Nonregulatory strategies B

"The City of Island Park should work with Fremont County, the Targhee National Forest, and the Idaho Department of Lands to promote public acquisition of environmentally sensitive lands via exchange for national forest or state lands that can appropriately be managed as private forest or grazing lands, or developed" [Fremont County Comprehensive Plan, page 30 of proposal]

Please note that in the existing Fremont County Comprehensive Plan, Policy 5 [page 11], it states.

"It shall be Fremont County's policy to encourage land exchanges that place stream and lakeshore corridors, wetlands, wildlife habitat, and other critical areas in public ownership, while placing state and federal lands that are suitable for development in private ownership. The county also recognizes the possibility that state lands may be leased or sold for development. Development resulting from state or federal land exchanges, leases, or sales must comply with this plan and the *Fremont County Development Code*. This policy does not apply to land exchanges between public agencies, for instance an exchange between the Bureau of Land Management and the Idaho Department of Lands."

We would request that the Forest recognize this policy in the Forest Plan Revision and include similar language in the Plan. This could be a way of increasing critical winter



MADISON COUNTY

PO BOX 389
REXBURG IDAHO
83440

3-PP-Reserv
102 - Madison County

wildlife range critical wetlands, and other items of concern in the Plan. On the other hand, forest land that adjoins the Commercial Nodes being created in Island Park by the city and county planning and zoning commissions might become available to increase the area of these nodes while preventing "strip" development. Commercial development is necessary to provide the goods and services needed by the growing population of Island Park, but it must be kept orderly and concentrated to maintain the appealing character of Island Park.

Respectfully submitted,

Mahlon Hiestand, M.D., Chair
City of Island Park Planning & Zoning Commission

JUNE 24, 1996

RECEIVED
JUN 25 1996

JERRYB REESE
FOREST SUPERVISOR
TARGHEE NATIONAL FOREST
P.O. BOX 208
ST. ANTHONY, IDAHO 83445

Dear Jerry

Thank you for the opportunity to comment on the Draft Revised Forestland the Draft Environmental Impact Statement. The following are the comments of the Madison County Commission, representing the majority of the residents of Madison County.

During the Primary Election, the Madison County Commission conducted a straw poll on two alternatives, the results of this poll were:

CUFF (Citizens for a User Friendly Forest) ALTERNATIVE 2	2442
TARGHEE FOREST ALTERNATIVE 3M	783
Ballots where the voters declined to participate	487

A copy of this ballot is attached to this comment letter.

We believe that the message from this poll is very clear, that the residents of Madison County are definitely in favor of more access, timber cutting, grazing, and accessibility to the Targhee Forest.

We recognize 86.5 MMBF ASQ established in the current plan was not sustainable however we feel that a realistic environmental analysis under the guidelines of NEPA and NFMA should recognize an ASQ of 20 MMBF per year. The Range of the ASQ in the seven alternatives evaluated is from a low of 0 MMBF to a high of 6 MMBF. For all practical purposes this range is the same. None of these alternatives would sustain a viable timber industry in southeastern Idaho which has a economic

effect on our community as a whole

Security for elk is a key indicator in the Targhee Plan. The Forest Service essentially agreed to meet the goals of the Idaho Fish and Game Department without the consideration of other multiple uses and the resulting economic effect. We feel that agreeing to meet the goals of a single agency without consideration of multiple uses is a violation of the Forest Service multiple-use mandate. This agreement has resulted in a dramatic reduction in the ASQ as well as access. We believe that these goals are unsubstantiated due to the increase in the elk population over the last 10 years. The number of elk counted on the winter range in 1996 is more than what the winter range can support in a typical heavy snow year. The Elk numbers have increased substantially in those years when cover was at a minimum. As long as the numbers of elk remain high the argument for limited access and 50 to 60% of the water shed set aside for cover is a moot point!

The indicator for grizzly bear management uses open road and motorized trail route densities as the basis for eliminating all of these forms of access.

We believe that the agreement on management is counter to the best available scientific evidence. (Intervenors Reply to Plaintiffs' and Federal Defendants', United States District Court, Case No. 93-303-E-HLR)

1. The Ban of commercial timber harvesting will not accomplish the goal of grizzly bear recovery in the Greater Yellowstone Ecosystem.

2. The major cause of mortality to the Grizzly Bear population is access to BMUs by humans with firearms.

3. Commercial timber harvesting does not by itself reduce the amount of food and cover habitat to prevent the MI recovery goals of the Grizzly Bear Recovery Plan as set forth by the Interagency Grizzly Bear Study Team.

4. The use of the Plateau by the grizzly bear is questionable even under the terms of the settlement and the Plateau management strategy.

5. Research has shown that when the grizzly comes out of hibernation that there is little if any food in the upper elevations. This forces the bear to lower elevations where there is a vegetation base. Limiting access to these upper elevations for snowmobilers where the bear can not exist is not warranted.

With the revisions of Range Management Plans over the last 20 years the Range on the Targhee Forest is in better condition than it had been in 50 years. Further reductions in Grazing are unwarranted and are solely the political agenda of self-serving parties. We believe that there should be no further reduction.


We believe that the Economic Analysis is inadequate, doesn't take into consideration the effect of the decisions that have been made since 1985, the closure of four major sawmills and loss of almost all timber cutting jobs. In their analysis they refer to the increase in tourism to make up for the loss of these jobs, but the seven proposals severely limits the access to the forest for all motorized transportation. If people don't have access to recreate they will take those tourist dollars somewhere else.

The residents of Madison County have made it clear that they believe that the proposed alternatives are too restrictive and limit access to the forest. They believe that the DEIS and the Draft Forest Plan has been prepared for political purposes, bowing to those who threaten to sue, ignoring the best available science.

Therefore we as commissioners of Madison County request that an alternative be considered that is based upon science, considers the Unique ecosystem of the Targhee National Forest, and displays the economic consequences of the other seven alternatives. We recognize that a supplemental Environmental Impact Statement will be necessary for consideration of this alternative. But we believe that this will be best for all of those that are involved in the process.

RESPECTFULLY YOURS


GERALD LEE JEPPESEN (CHAIRMAN)


BROOKE PASSEY


MARLIN HILL

CITY OF IRWIN
P O Box 148
Irwin Idaho
83428

#1244 - Blomquist, Philip

June 25th 1998

RECEIVED
JUN 27 1998

Targhee National Forest
Mr Jerry B Reese
Forest Supervisor
P O Box 208
St Anthony, Idaho
83445

RECEIVED
JUN 27 1998

Dear Mr Reese

The Mayor and the members of the Irwin City Council appreciate the informational efforts of the Targhee National Forest. Our city periodically receives up-to-date accounts of projects and other efforts taking place on nearby public lands. As part of that continual process, we appreciate the opportunity to comment in writing on the **Draft Environmental Impact Statement and Forest Plan Revision** for the Targhee National Forest. The City of Irwin would acknowledge that the Palisades Ranger District is of immediate concern while policies throughout the forest also affect our "city impact" area.

The City is in agreement that a new plan is desired for managing these public lands. The old Forest Plan of 1985 is now outdated and the reasons thus delineated in Chapter 1 of the Draft Environmental Impact Statement. The National Forest Management Act (NFMA) of 1976 is an example of a good law. It requires 10 year, integrated land management plans for all National Forests with public involvement and comment.

Controversy is certainly generated with any proposed change and particularly so when governmental jurisdictions are involved. The City of Irwin has thus received various "points-of-view" from different "special interest" groups regarding the forest plan. The greatest concerns seem to be centered with **Key Issue 5 Access** and **Key Issue 7 Timber Harvest**.

Discussion of the Alternative Continuum has been narrowed in public comments to the preferred **Alternative 3-M** (Proposed Programmatic Action and Preferred Alternative) and **Alternative 2** as promoted by the Citizens for a User Friendly Forest (CUFF) and the Blue Ribbon Coalition. The City of Irwin would ask that all comments received from the public be reviewed and incorporated where possible. With that idea, the City of Irwin would support a **Final Environmental Impact Statement and Forest Plan** for the Targhee National Forest that finds middle ground between **Alternative 3-M** and **Alternative 2**.

Other comments concerning the proposed actions follow

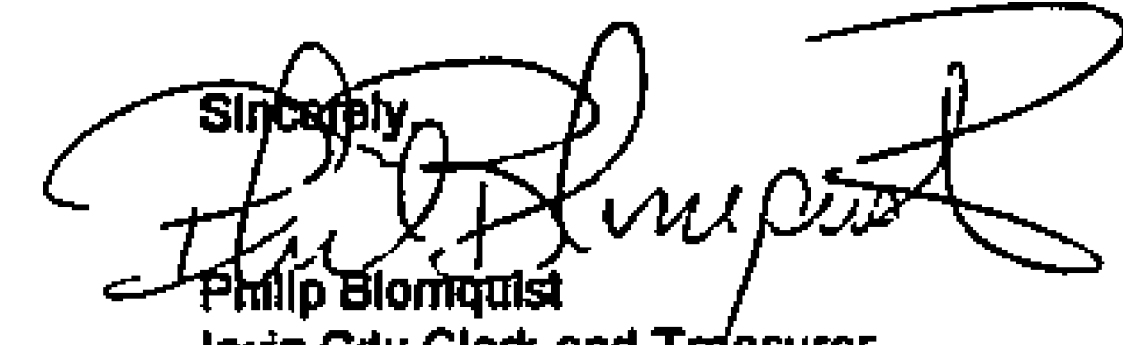
The Targhee National Forest is somewhat unique in that logging has occurred beyond sustainable levels for many years. The 1998 Forest Plan must address this issue. While we agree that allowable cuts are necessary, these must be reviewed to also address local economic concerns. In some cases, these drastic reductions in board feet will allow increased logging in future years. The City of Irwin supports this management strategy.

Stubble height is another concern addressed by several residents in Irwin. We agree recovery rates in grazing allotments should be measured. The 1985 plan used a two to three inch stubble height which will be changed to four inches in the 1998 plan. We support this change. The 1998 revision also allows managers to impose a six-inch stubble height if necessary in some riparian units. If this management criteria is selected, it should be employed only in an extreme scenario. Other measures for rate of recovery should be explored.

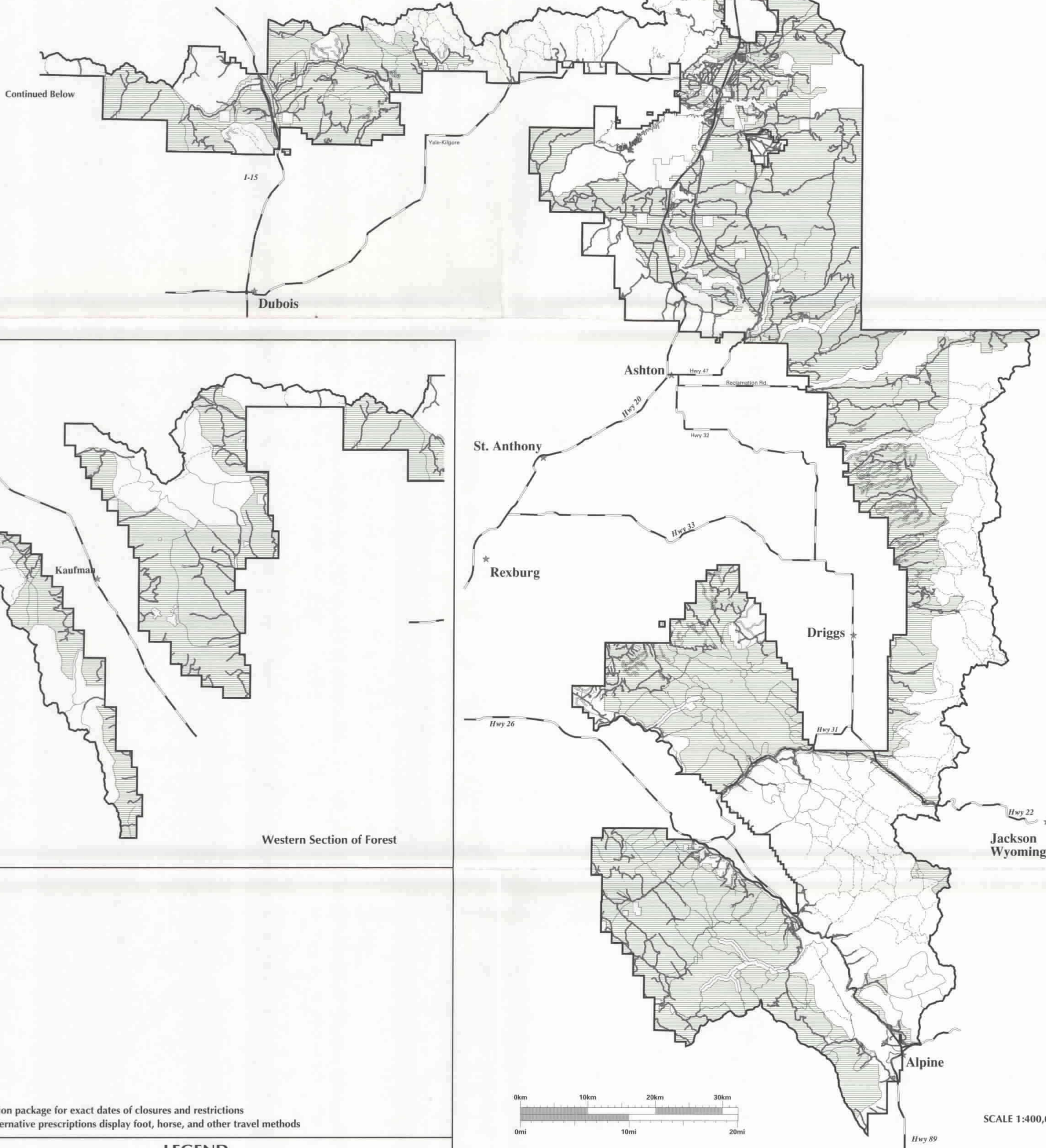
The City of Irwin concurs with habitat protection for the native cutthroat trout. The fine-spotted cutthroat is valuable in the Palisades region both for aesthetic and economic reasons.

Access to the Forest road system needs to be carefully reviewed. While certain road closures are a benefit to wildlife, they have constantly been abused in the past. The 1985 plan closed 1600 miles of primarily timber access roads. Many of these road closures have unfortunately been ignored by the public. More education and public involvement is needed to determine the extent of road closures. Restricting ORVs to certain roads, trails and off-road areas seems reasonable.

The new plan calls for an increase in groomed snowmobile trails. The 1998 plan would designate 658 miles of groomed winter trails. The 1985 plan had only 450 miles. We support the increase.

Sincerely,

Philip Blomquist
Irwin City Clerk and Treasurer

Summer Transportation Alternative 1



See prescription package for exact dates of closures and restrictions
Individual alternative prescriptions display foot, horse, and other travel methods

LEGEND

- Roads Open to Motorized Access
- Roads on Which Motorized use is Restricted
- Trails Open to Motorized Access
- Trails on Which Motorized use is Restricted
- Areas Open to Cross-Country Off-Highway Vehicle Travel
- Areas Closed to All Motorized Cross-Country Travel

Forest Plan Revision Targhee National Forest Idaho and Wyoming



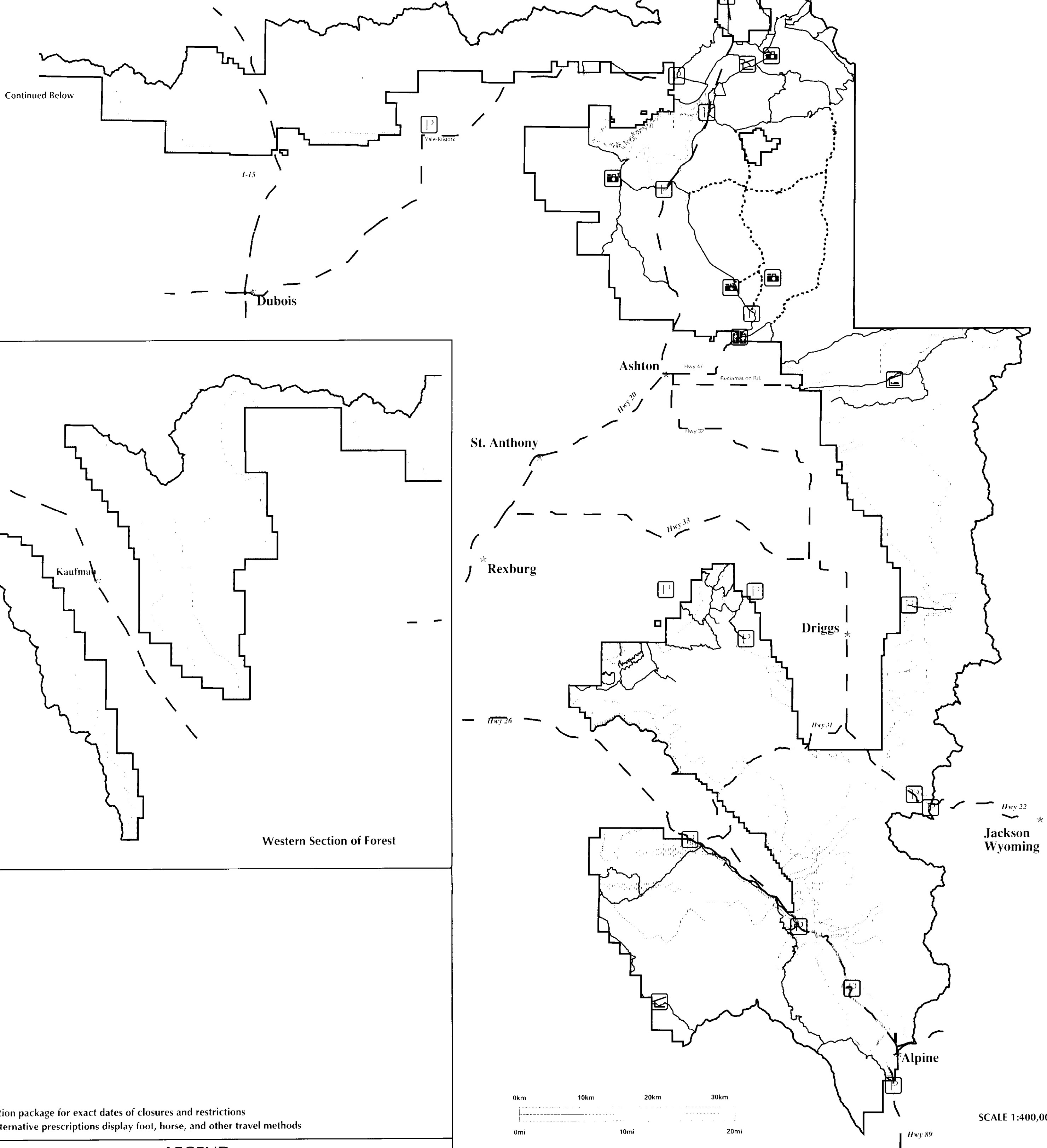
**Intermountain Region
USDA Forest Service**



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April 1997

SCALE 1:400,000

Winter Transportation Alternative 1



Continued Below

West Yellowstone
Montana

Yale-Kilgore

I-15

Dubois

Ashton

Hwy 47

Reclamation Rd

St. Anthony

Hwy 20

Hwy 32

Hwy 33

*Rexburg

Driggs

Hwy 26

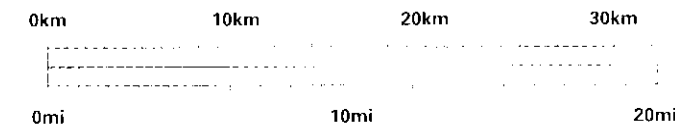
Hwy 31

Hwy 22

Jackson
Wyoming

Alpine

Hwy 89



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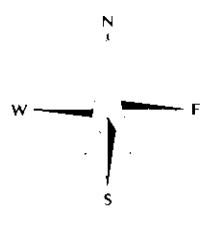
See prescription package for exact dates of closures and restrictions
Individual alternative prescriptions display foot, horse, and other travel methods

LEGEND

- | | |
|-----------------------|--|
| Information Center | Areas Closed to Snow Machine Use
(wildlife winter range, ski areas, wilderness) |
| Parking Areas | Areas Open to Snow Machine Use |
| Proposed Parking Area | Ski Trail (nonmotorized) |
| Rental Cabin | Planned Marked-Groomed GYAWVUM |
| Rest Rooms | Groomed Snow Machine Routes |
| Scenic Points | Marked Snow Machine Routes |
| Trail Head | Occasional Access-Sparse Snow |
| Warming Hut | Designated Winter Range Routes |

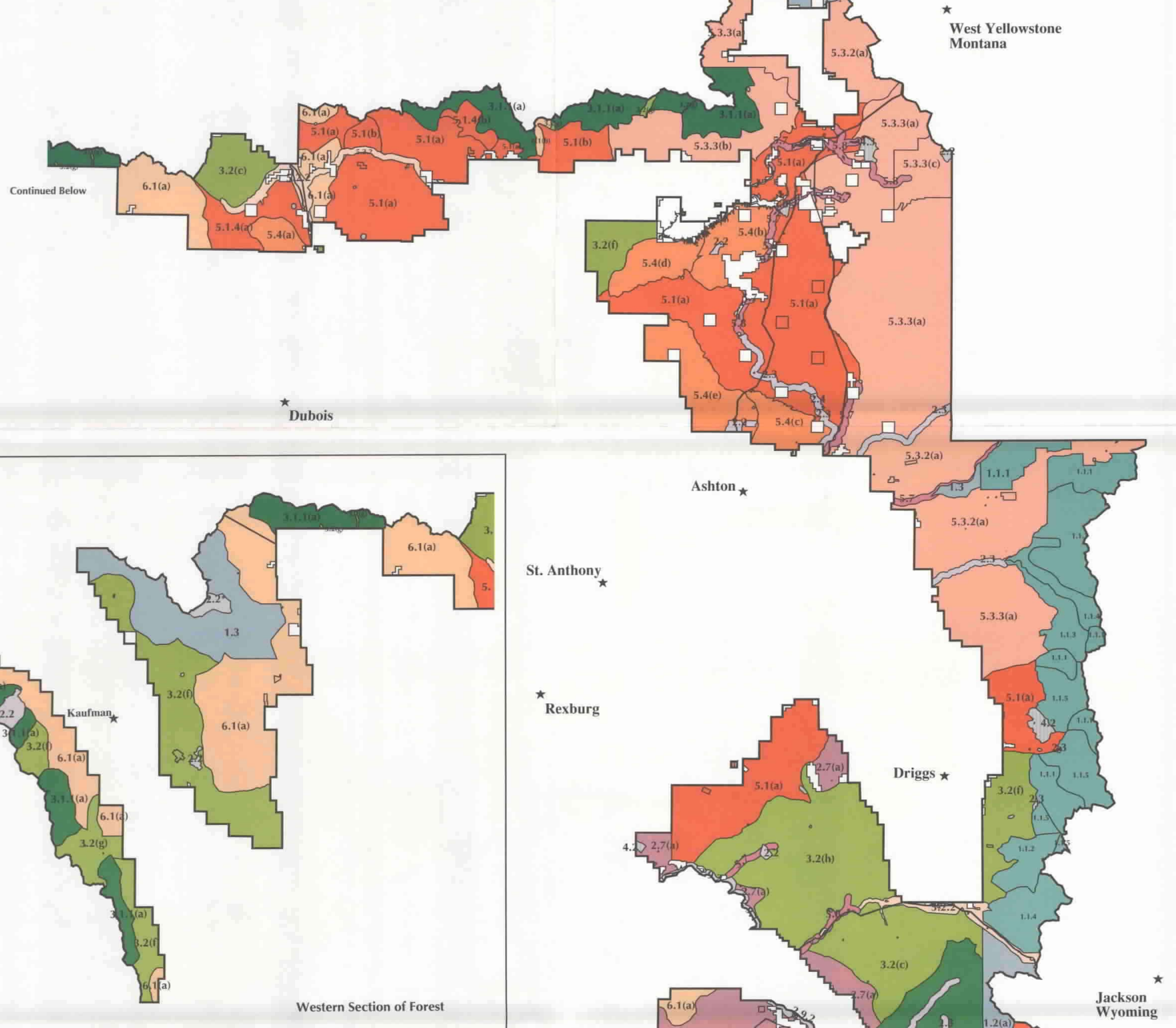
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April 1997

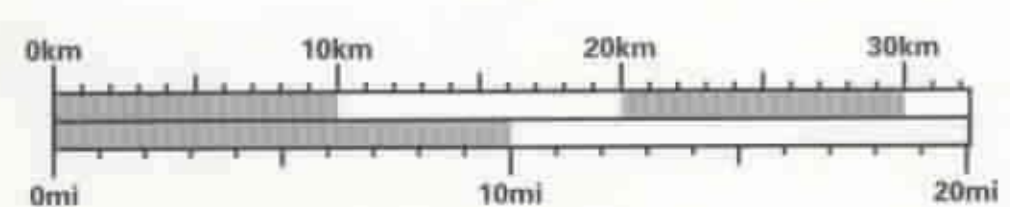
Alternative 1 Prescriptions



LEGEND

- 1.1.1 Designated Wilderness - Trailless
- 1.1.2 Designated Wilderness - Primitive
- 1.1.3 Designated Wilderness - Low Use
- 1.1.4 Designated Wilderness - Moderate Use
- 1.1.5 Designated Wilderness - High Use
- 1.2(a) Wilderness Study Area
- 1.3 Recommended/Proposed Wilderness
- 2.1 Special Management Areas
- 2.2 Research Natural Areas
- 2.3 Eligible Wild River
- 2.4 Eligible Scenic River (No ASQ)
- 2.7(a-c) Elk and Deer Winter Range
- 2.9.1 South Fork Snake River Eligible Scenic River
- 2.9.2 South Fork Snake River Eligible Recreation River
- 3.1.1(a-d) Non-Motorized
- 3.2(a-g) Semi-Primitive Motorized
- 4.1 Developed Recreation Sites
- 4.2 Special Use Permit Recreation Sites
- 4.3 Dispersed Camping Management
- 5.1(a-b) Timber Management
- 5.1.4(a-b) Timber Management (Big Game Security Emphasis)
- 5.2.2 Visual Quality Maintenance
- 5.3.2(a-b) Grizzly Bear Habitat (Situation 1)
- 5.3.3(a-c) Grizzly Bear Habitat (Situation 2)
- 5.4(a-e) Elk and Deer Summer Range
- 5.7 Eligible Scenic River
- 5.8 Eligible Recreation River
- 2.9.1 Aquatic Influence Zone (ASQ) (not shown on this map)
- 6.1(a-b) Range Management
- 8.1 Concentrated Development Areas
- Non-Forest Service Lands

* These areas are also Recommended Wilderness or Wilderness Study Areas
Riparian prescription 5.9.1 not shown on map

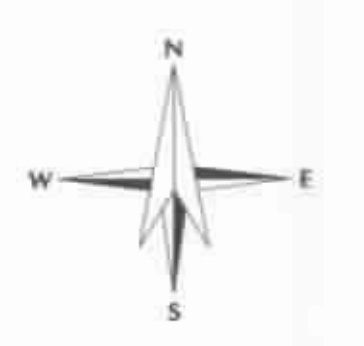


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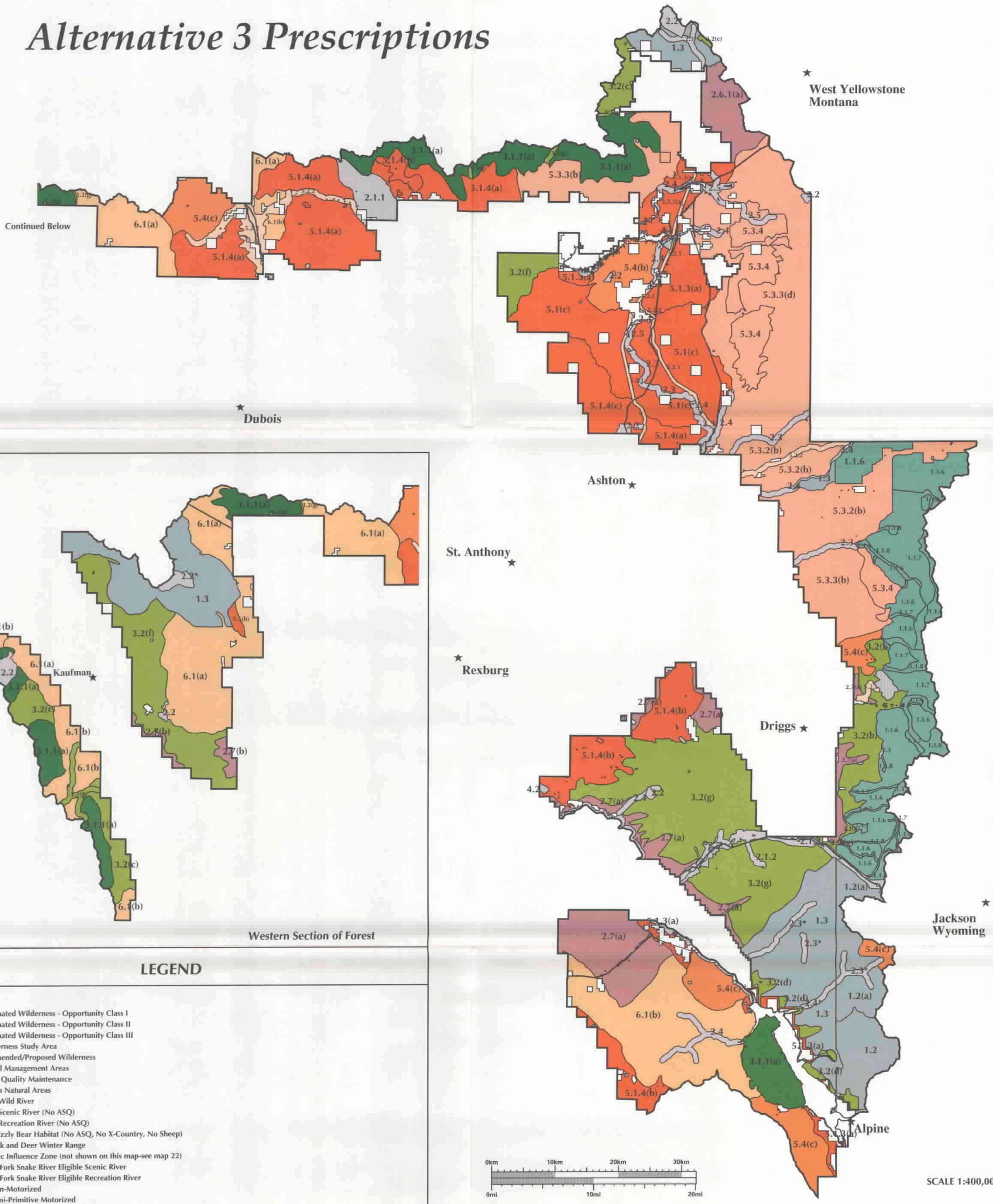


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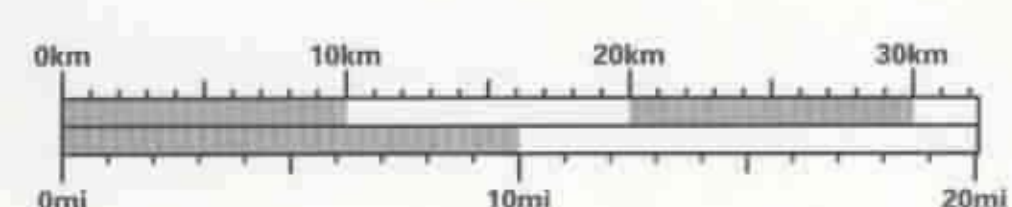
Alternative 3 Prescriptions



LEGEND

- 1.1.6 Designated Wilderness - Opportunity Class I
- 1.1.7 Designated Wilderness - Opportunity Class II
- 1.1.8 Designated Wilderness - Opportunity Class III
- 1.2(a) Wilderness Study Area
- 1.3 Recommended/Proposed Wilderness
- 2.1.1 Special Management Areas
- 2.1.2 Visual Quality Maintenance
- 2.2 Research Natural Areas
- 2.3 Eligible Wild River
- 2.4 Eligible Scenic River (No ASQ)
- 2.5 Eligible Recreation River (No ASQ)
- 2.6.1(a) Grizzly Bear Habitat (No ASQ, No X-Country, No Sheep)
- 2.7(a-b) Elk and Deer Winter Range
- 2.8.2 Aquatic Influence Zone (not shown on this map-see map 22)
- 2.9.1 South Fork Snake River Eligible Scenic River
- 2.9.2 South Fork Snake River Eligible Recreation River
- 3.1.1(a) Non-Motorized
- 3.2(a-g) Semi-Primitive Motorized
- 4.1 Developed Recreation Sites
- 4.2 Special Use Permit Recreation Sites
- 4.3 Dispersed Camping Management
- 5.1(a-c) Timber Management
- 5.1.3(a) Timber Management (No Clearcutting)
- 5.1.4(a-c) Timber Management (Big Game Security Emphasis)
- 5.2.1 Visual Quality Improvement
- 5.2.2 Visual Quality Maintenance
- 5.3.2(b) Grizzly Bear Habitat (Situation 1)
- 5.3.3(b-d) Grizzly Bear Habitat (Situation 2)
- 5.3.4 Grizzly Bear Habitat (Situation 2)
- 5.4(a-e) Elk and Deer Summer Range
- 6.1(a-b) Range Management
- 8.1 Concentrated Development Areas
- 8.2 Proposed Concentrated Development Areas
- Non-Forest Service Lands

* These areas are also Recommended Wilderness or Wilderness Study Areas
Riparian prescription 2.8.2 not shown on map



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Forest Plan Revision Targhee National Forest Idaho and Wyoming



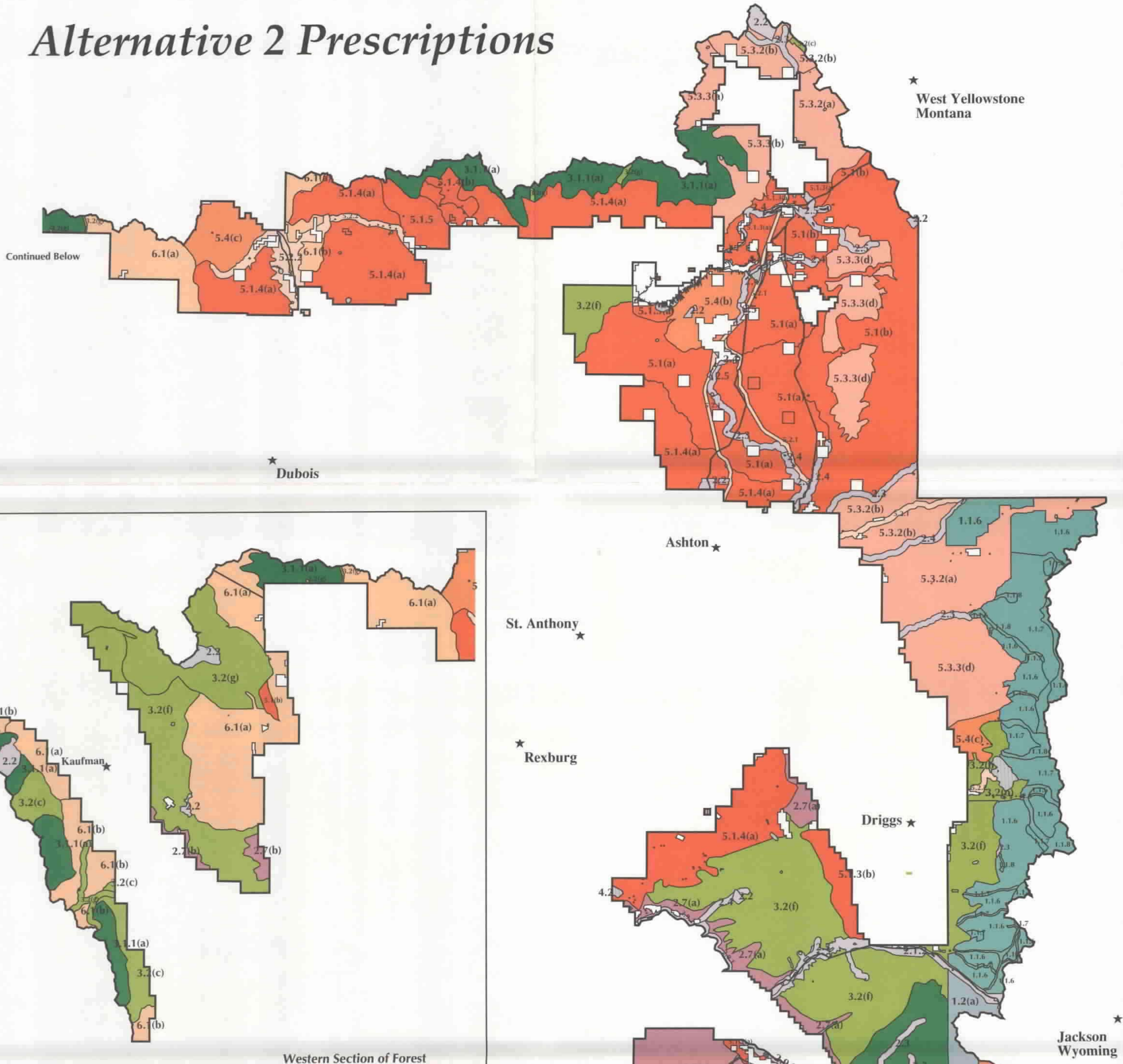
**Intermountain Region
USDA Forest Service**



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April 1997

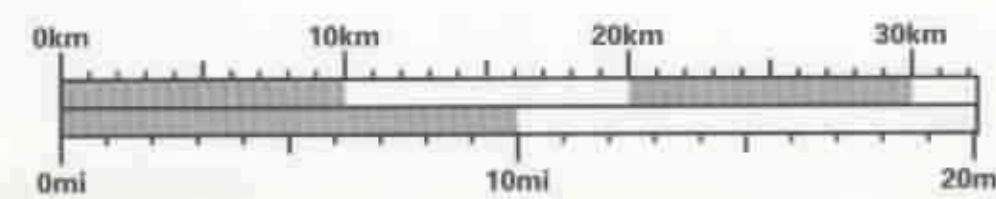
Alternative 2 Prescriptions



LEGEND

- 1.1.6 Designated Wilderness - Opportunity Class I
- 1.1.7 Designated Wilderness - Opportunity Class II
- 1.1.8 Designated Wilderness - Opportunity Class III
- 1.2(a) Wilderness Study Area
- 2.1.1 Special Management Areas
- 2.1.2 Visual Quality Maintenance
- 2.2 Research Natural Areas
- 2.3 Eligible Wild River
- 2.4 Eligible Scenic River (No ASQ)
- 2.5 Eligible Recreation River (No ASQ)
- 2.7(a-c) Elk and Deer Winter Range
- 2.9.1 South Fork Snake River Eligible Scenic River
- 2.9.2 South Fork Snake River Eligible Recreation River
- 3.1.1(a) Non-Motorized
- 3.2(a-g) Semi-Primitive Motorized
- 4.1 Developed Recreation Sites
- 4.2 Special Use Permit Recreation Sites
- 4.3 Dispersed Camping Management
- 5.1(a-c) Timber Management
- 5.1.3(a-b) Timber Management (No Clearcutting)
- 5.1.4(a-b) Timber Management (Big Game Security Emphasis)
- 5.1.5 Timber Management (Heritage Resource Emphasis)
- 5.2.1 Visual Quality Improvement
- 5.2.2 Visual Quality Maintenance
- 5.3.2(a-b) Grizzly Bear Habitat (Situation 1)
- 5.3.3(a-d) Grizzly Bear Habitat (Situation 2)
- 5.4(a-e) Elk and Deer Summer Range
- 5.9.2 Aquatic Influence Zone (ASQ) (not shown on this map)
- 6.1(a-b) Range Management
- 8.1 Concentrated Development Areas
- 8.2 Proposed Concentrated Development Areas
- Non-Forest Service Lands

* These areas are also Recommended Wilderness or Wilderness Study Areas
Riparian prescription 5.9.2 not shown on map

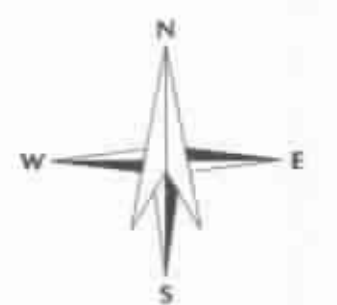


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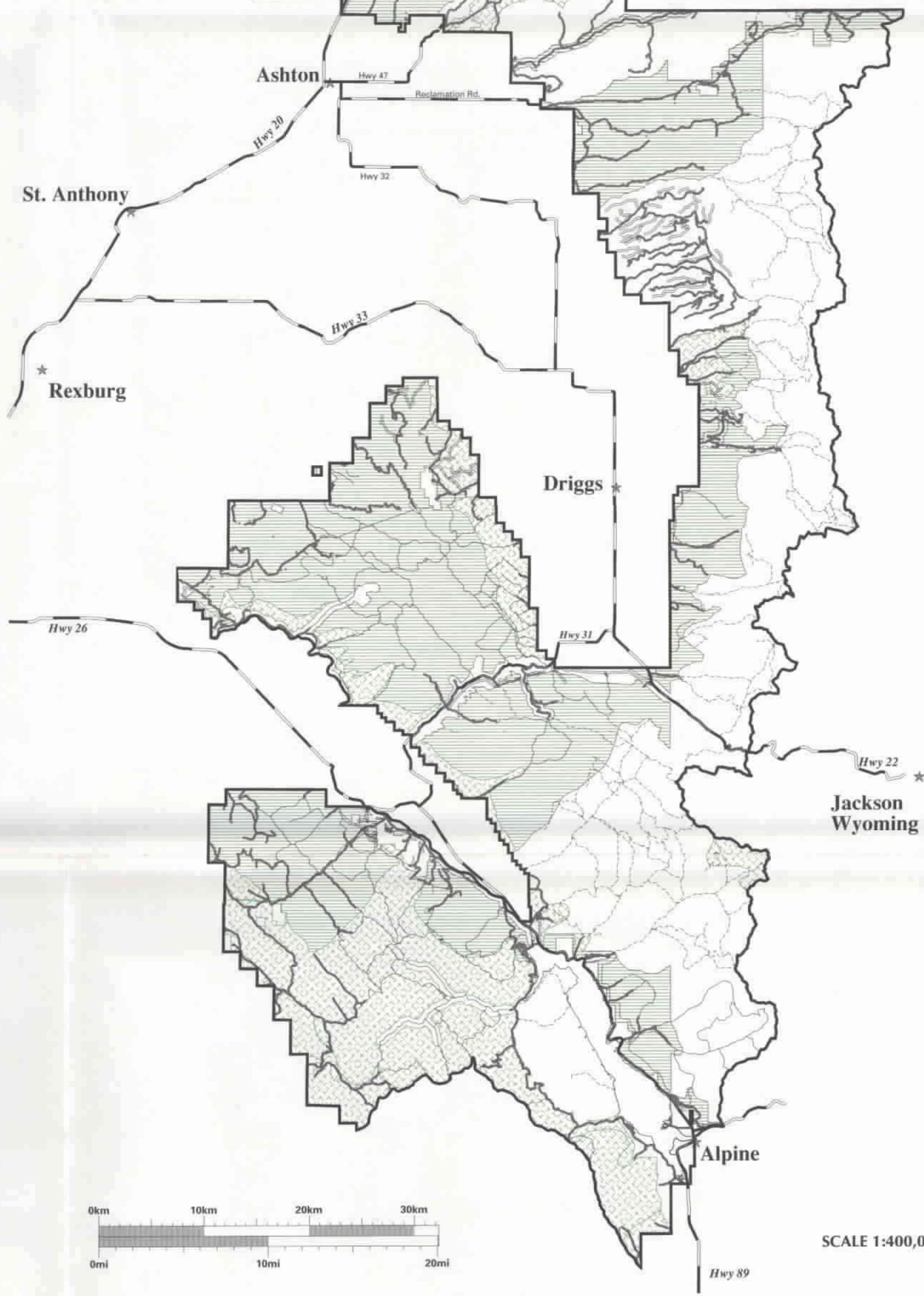
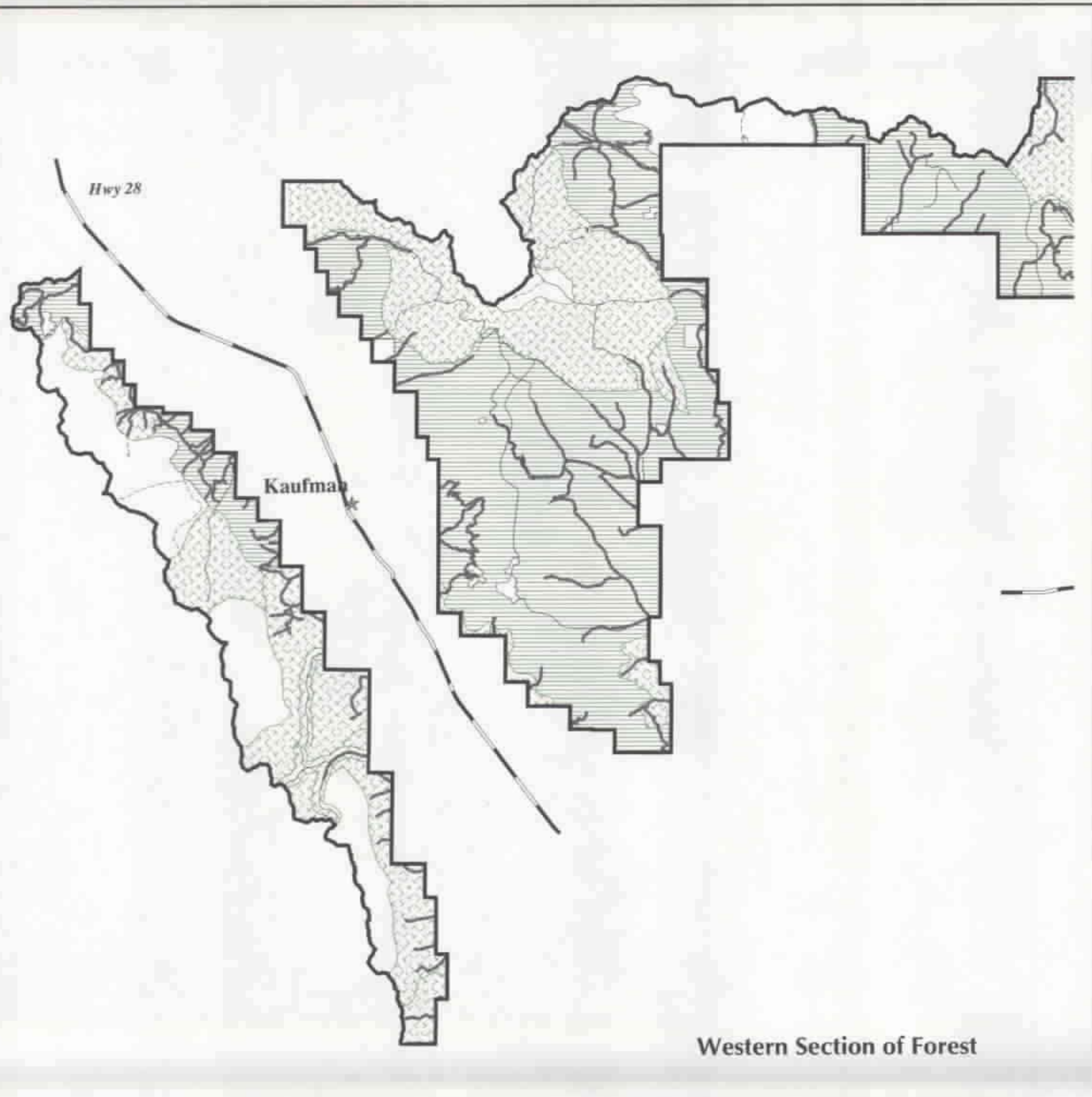
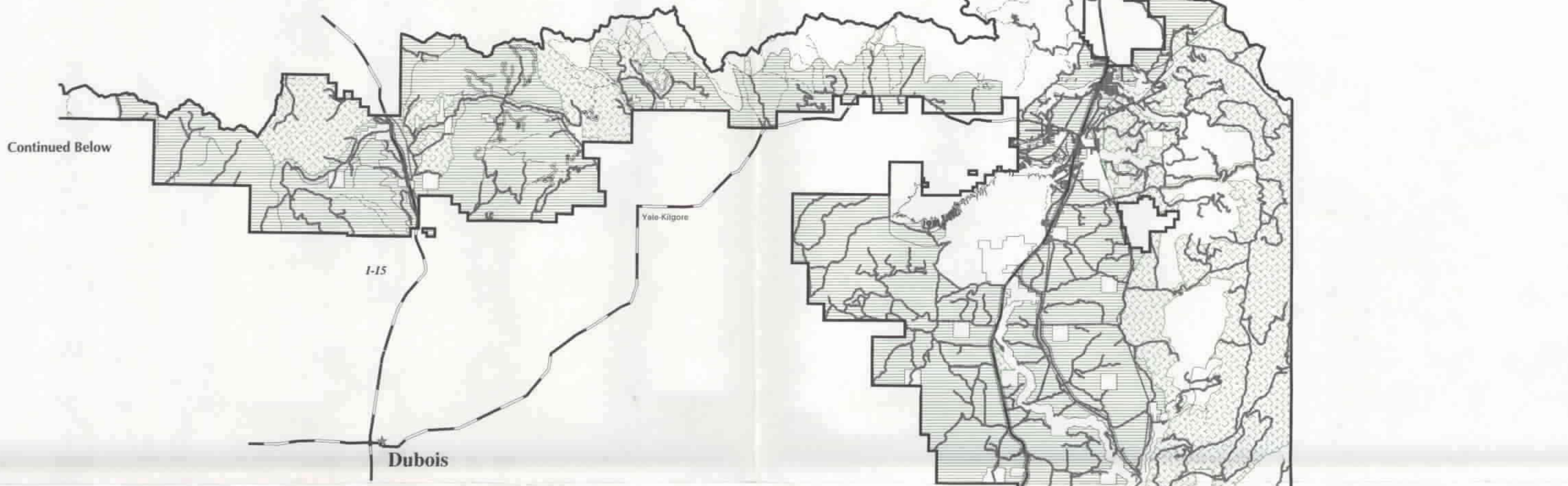
**Intermountain Region
USDA Forest Service**



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April 1997

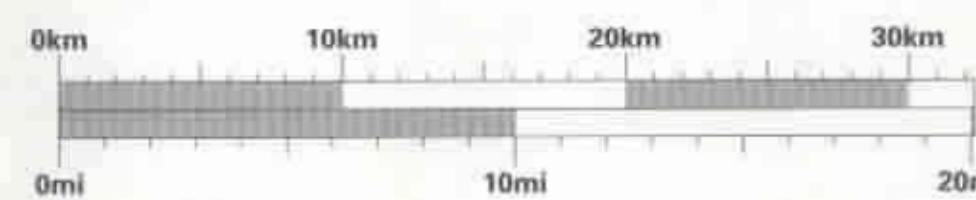
Summer Transportation Alternative 2



See prescription package for exact dates of closures and restrictions
Individual alternative prescriptions display foot, horse, and other travel methods

LEGEND

- Roads Open to Motorized Access
- Roads on Which Motorized use is Restricted
- Trails Open to Motorized Access
- Trails on Which Motorized use is Restricted
- Areas Open to Cross-Country Off-Highway Vehicle Travel
- Areas Closed to Cross-Country, but Game Retrieval Allowed
- Areas Closed to All Motorized Cross-Country Travel

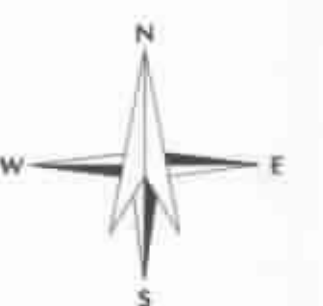


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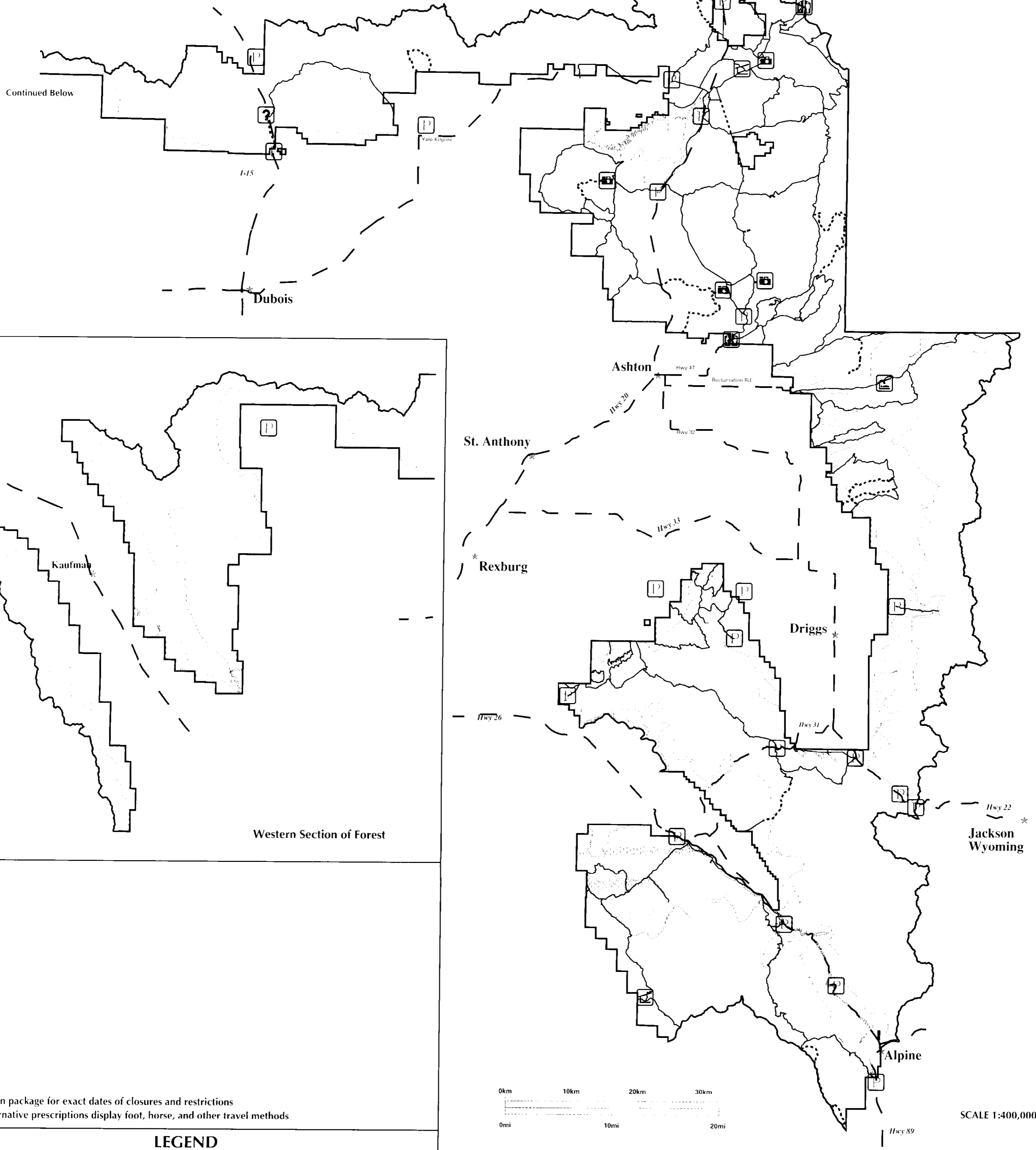
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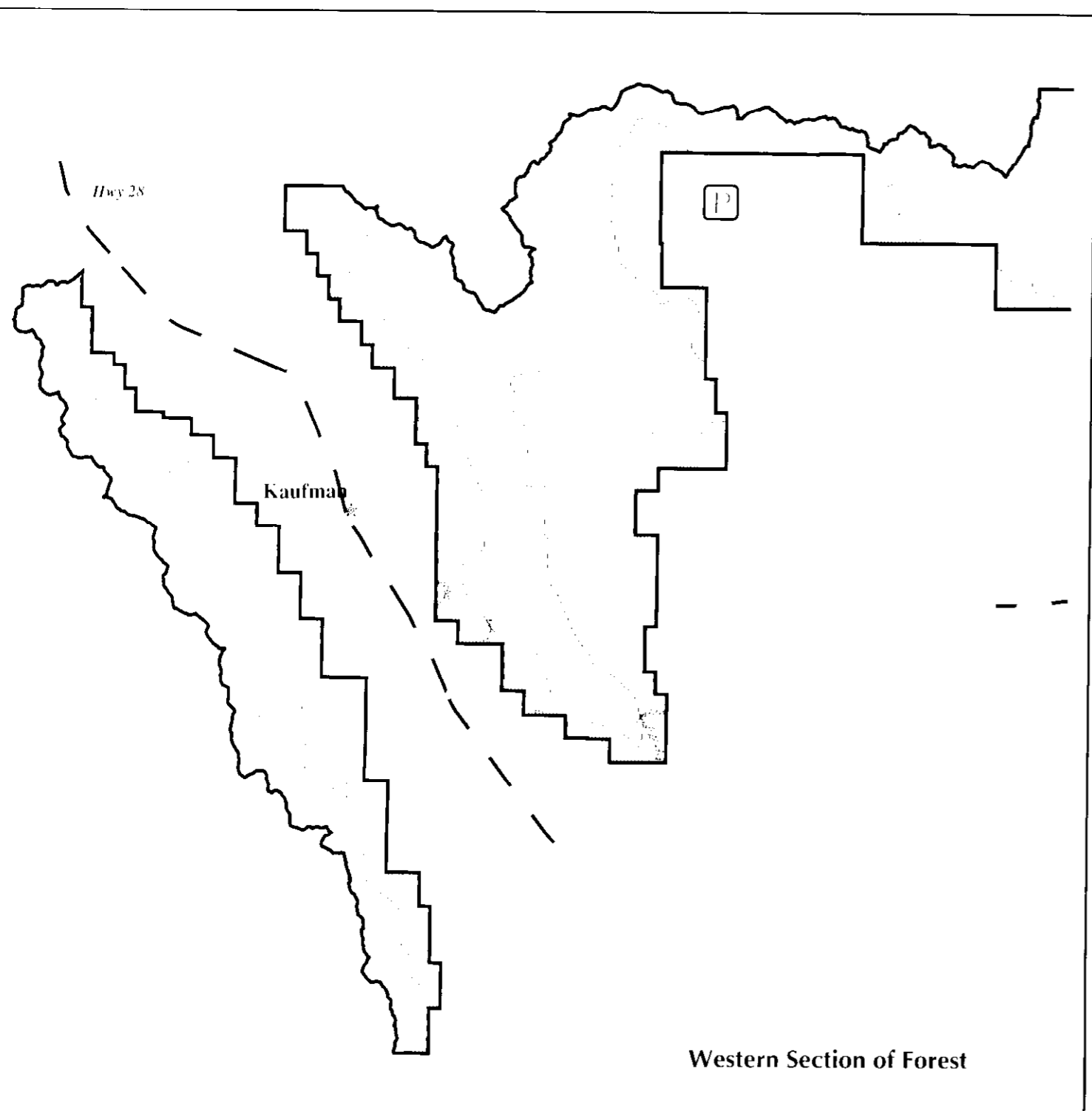
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EIS**

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Winter Transportation Alternative 2



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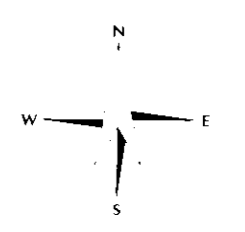
See prescription package for exact dates of closures and restrictions
Individual alternative prescriptions display foot, horse, and other travel methods

LEGEND

- | | |
|-----------------------|---|
| Information Center | Areas Closed to Snow Machine Use (wildlife winter range, ski areas, wilderness) |
| Parking Areas | Areas Open to Snow Machine Use |
| Proposed Parking Area | Ski Trail (nonmotorized) |
| Rental Cabin | Planned Marked-Groomed GYAWVUM |
| Rest Rooms | Groomed Snow Machine Routes |
| Scenic Points | Marked Snow Machine Routes |
| Trail Head | Occasional Access-Sparse Snow |
| Warming Hut | Designated Winter Range Routes |

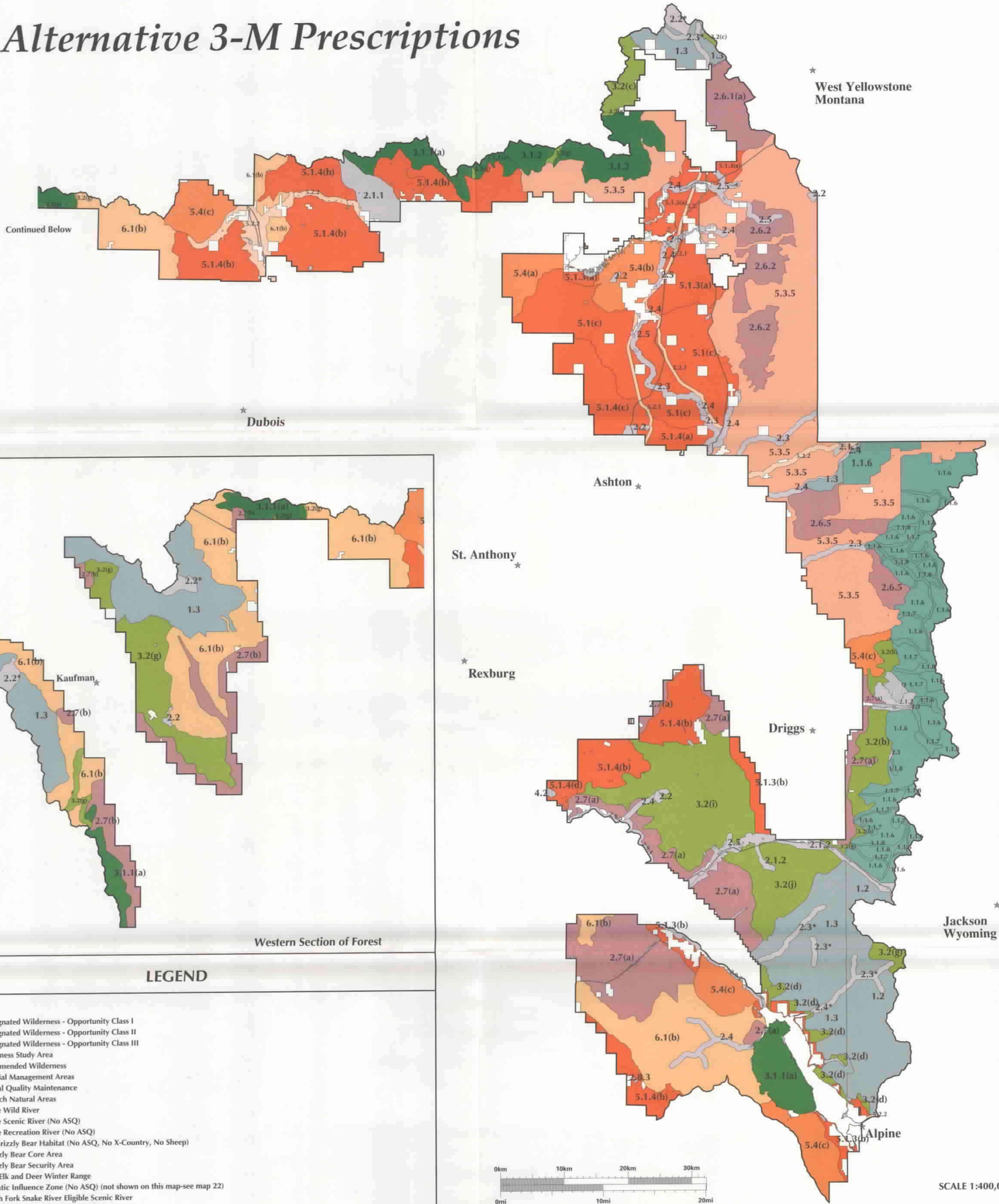
Forest Plan Revision Targhee National Forest Idaho and Wyoming

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USDA Forest Service



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EIS
April 1997

Alternative 3-M Prescriptions



LEGEND

- 1.1.6 Designated Wilderness - Opportunity Class I
- 1.1.7 Designated Wilderness - Opportunity Class II
- 1.1.8 Designated Wilderness - Opportunity Class III
- 1.2 Wilderness Study Area
- 1.3 Recommended Wilderness
- 2.1.1 Special Management Areas
- 2.1.2 Visual Quality Maintenance
- 2.2 Research Natural Areas
- 2.3 Eligible Wild River
- 2.4 Eligible Scenic River (No ASQ)
- 2.5 Eligible Recreation River (No ASQ)
- 2.6.1(a) Grizzly Bear Habitat (No ASQ, No X-Country, No Sheep)
- 2.6.2 Grizzly Bear Core Area
- 2.6.5 Grizzly Bear Security Area
- 2.7(a-c) Elk and Deer Winter Range
- 2.8.3 Aquatic Influence Zone (No ASQ) (not shown on this map-see map 22)
- 2.9.1 South Fork Snake River Eligible Scenic River
- 2.9.2 South Fork Snake River Eligible Recreation River
- 3.1.1(a) Non-Motorized
- 3.1.2 Non-Motorized
- 3.2(a-j) Semi-Primitive Motorized
- 4.1 Developed Recreation Sites
- 4.2 Special Use Permit Recreation Sites
- 4.3 Dispersed Camping Management
- 5.1(c) Timber Management
- 5.1.3(a-b) Timber Management (No Clearcutting)
- 5.1.4(a-d) Timber Management (Big Game Security Emphasis)
- 5.2.1 Visual Quality Improvement
- 5.2.2 Visual Quality Maintenance
- 5.3.5 Grizzly Bear Habitat
- 5.4(a-e) Elk Summer Range
- 6.1(a-b) Range Management
- 8.1 Concentrated Development Areas
- Non-Forest Service Lands

* These areas are also Recommended Wilderness or Wilderness Study Areas
Riparian prescription 2.8.3 not shown on map

Forest Plan Revision Targhee National Forest Idaho and Wyoming



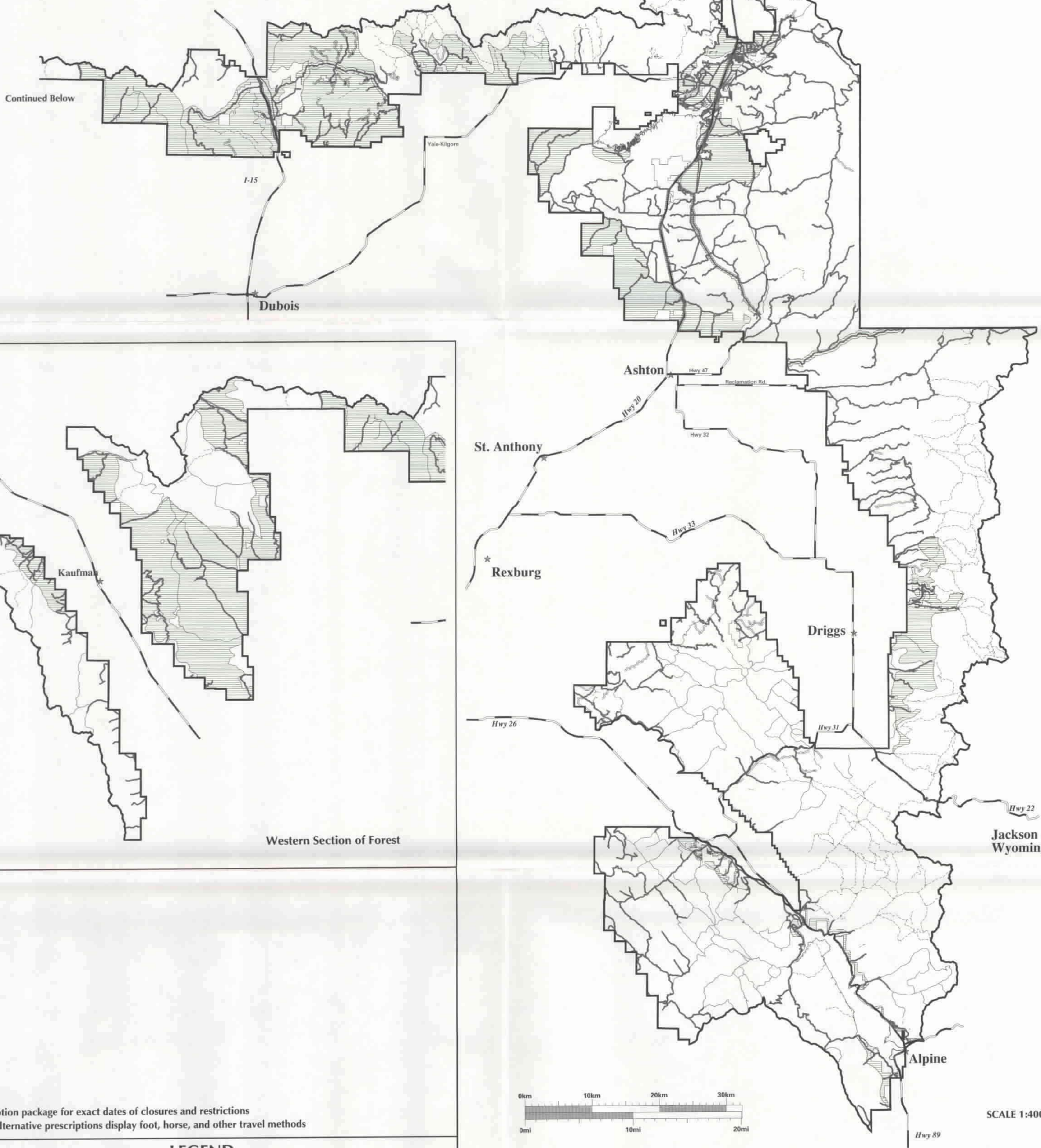
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SCALE 1:400,000

Summer Transportation Alternative 3



See prescription package for exact dates of closures and restrictions
Individual alternative prescriptions display foot, horse, and other travel methods

LEGEND

- Roads Open to Motorized Access
- Roads on Which Motorized use is Restricted
- Trails Open to Motorized Access
- Trails on Which Motorized use is Restricted
- Areas Open to Cross-Country Off-Highway Vehicle Travel
- Areas Closed to All Motorized Cross-Country Travel

Forest Plan Revision Targhee National Forest Idaho and Wyoming

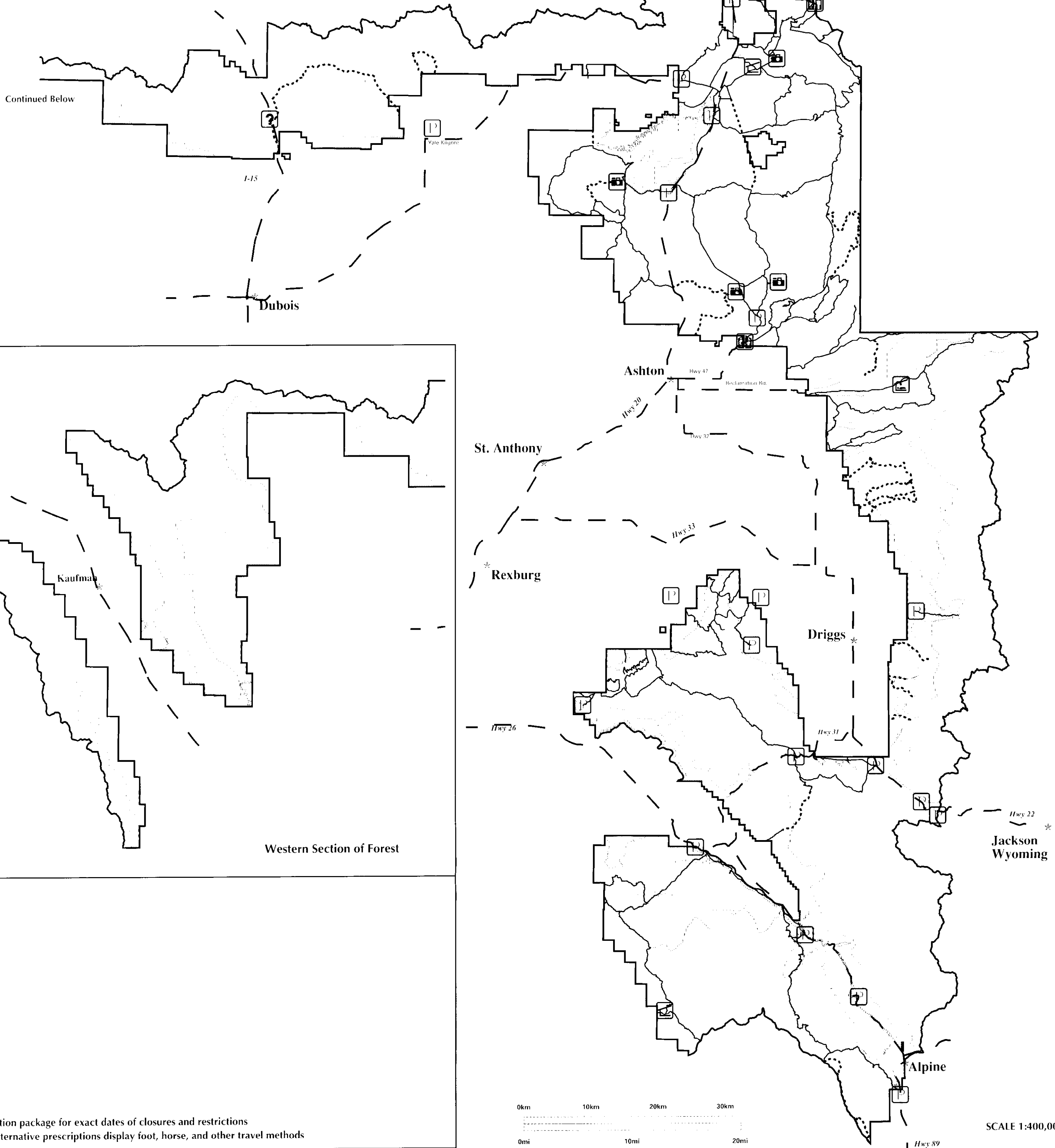


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Winter Transportation Alternative 3



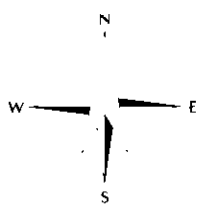
See prescription package for exact dates of closures and restrictions
Individual alternative prescriptions display foot, horse, and other travel methods

LEGEND

- | | |
|-----------------------|--|
| Information Center | Areas Closed to Snow Machine Use
(wildlife winter range, ski areas, wilderness) |
| Parking Areas | Areas Open to Snow Machine Use |
| Proposed Parking Area | Ski Trail (nonmotorized) |
| Rental Cabin | Planned Marked-Groomed GYAWVUM |
| Rest Rooms | Groomed Snow Machine Routes |
| Scenic Points | Marked Snow Machine Routes |
| Trail Head | Occasional Access-Sparse Snow |
| Warming Hut | Designated Winter Range Routes |

Forest Plan Revision Targhee National Forest Idaho and Wyoming

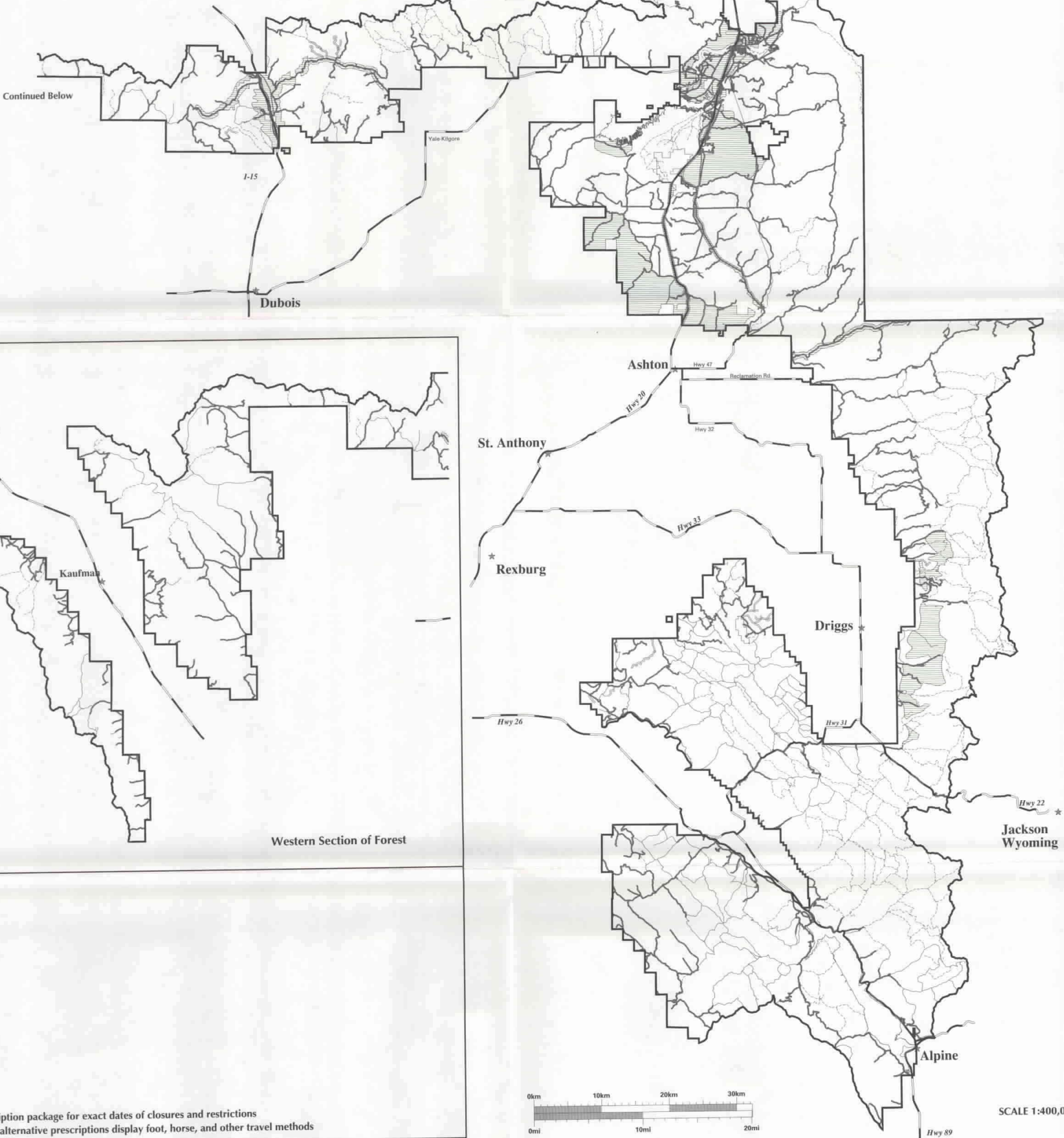
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Summer Transportation Alternative 3-M



See prescription package for exact dates of closures and restrictions
Individual alternative prescriptions display foot, horse, and other travel methods

LEGEND

- Roads Open to Motorized Access
- Roads on Which Motorized use is Restricted
- Trails Open to Motorized Access
- Trails on Which Motorized use is Restricted
- Areas Open to Cross-Country Off-Highway Vehicle Travel
- Areas Closed to All Motorized Cross-Country Travel



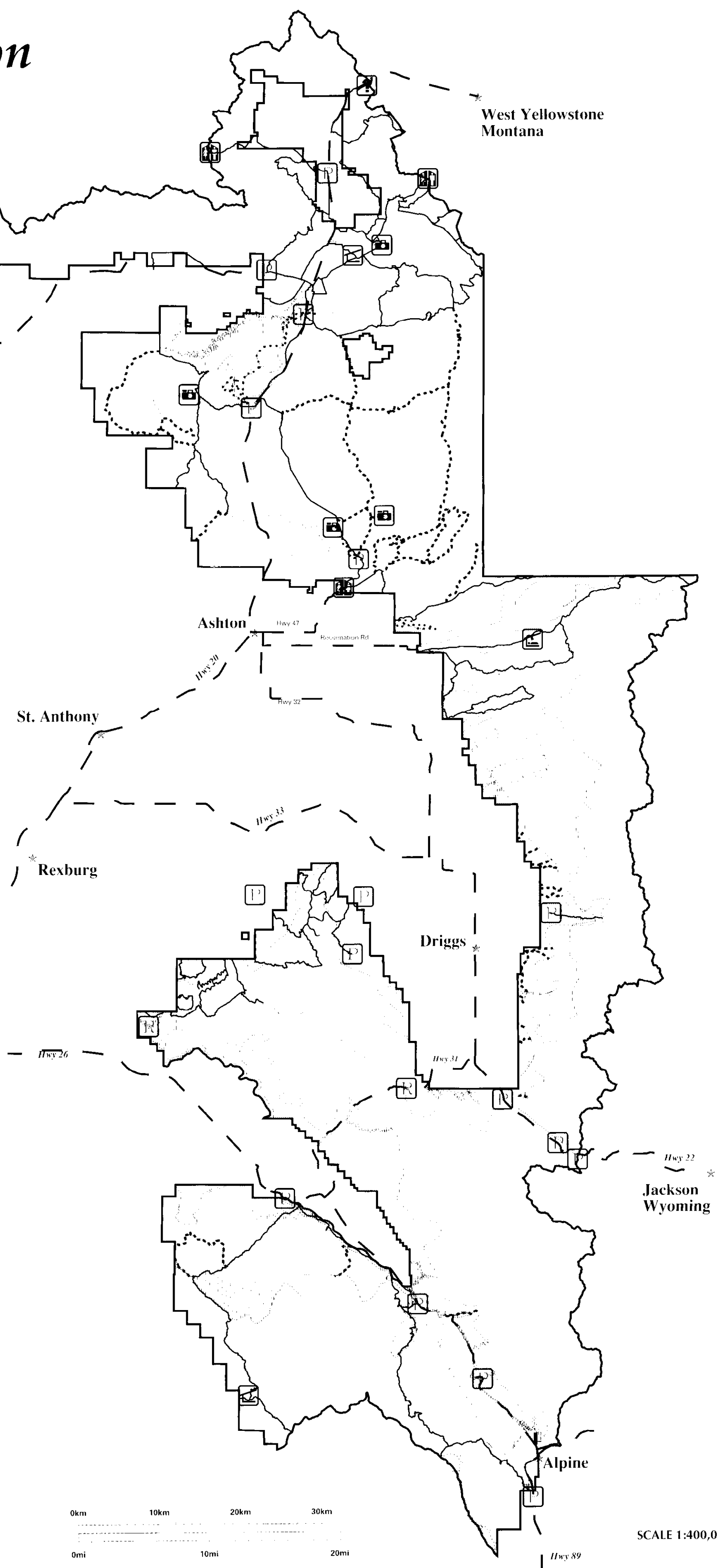
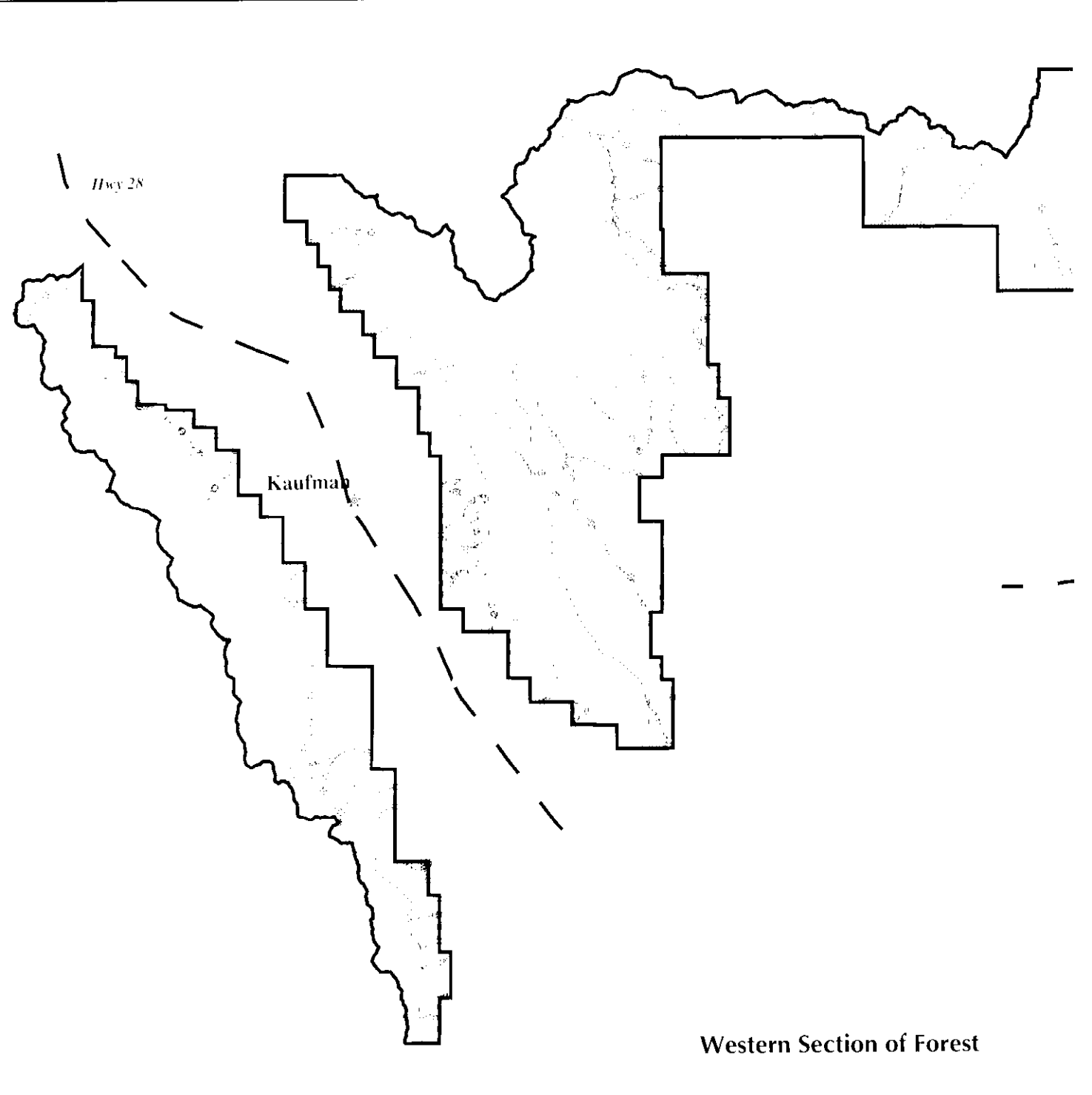
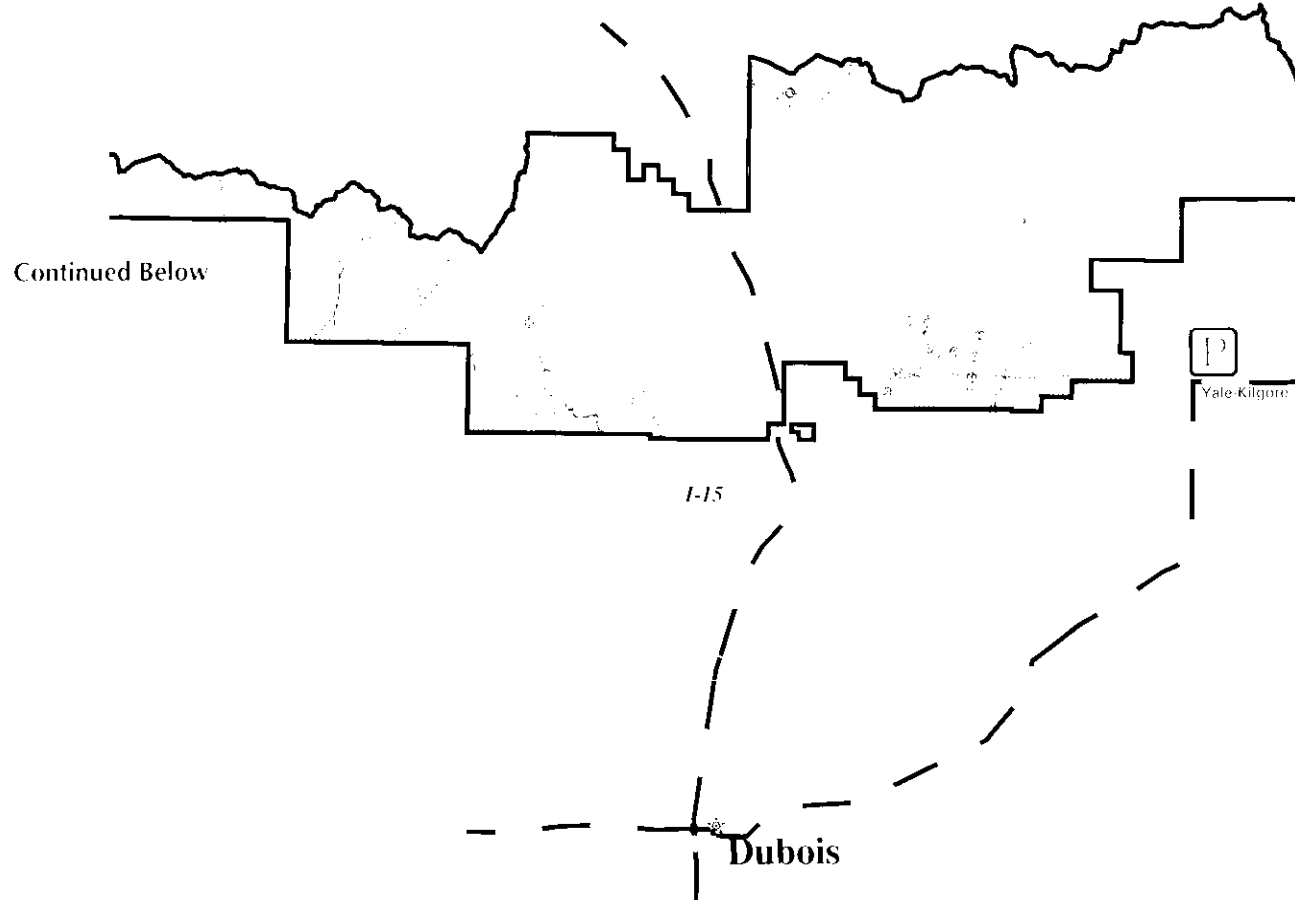
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Winter Transportation Alternative 3-M



West Yellowstone
Montana

St. Anthony

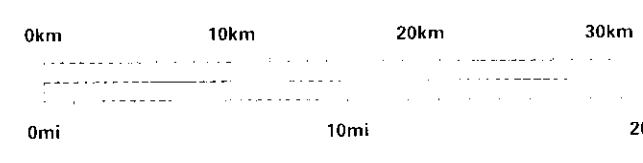
Rexburg

Driggs

Jackson
Wyoming

Alpine

See prescription package for exact dates of closures and restrictions
Individual alternative prescriptions display foot, horse, and other travel methods



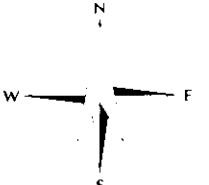
SCALE 1:400,000

LEGEND

- | | |
|-----------------------|---|
| Information Center | Areas Closed to Snow Machine Use (wildlife winter range, ski areas, wilderness) |
| Parking Areas | Areas Open to Snow Machine Use |
| Proposed Parking Area | Ski Trail (nonmotorized) |
| Rental Cabin | Planned Marked-Groomed GYAWVUM |
| Rest Rooms | Groomed Snow Machine Routes |
| Scenic Points | Marked Snow Machine Routes |
| Trail Head | Occasional Access-Sparse Snow |
| Warming Hut | Designated Winter Range Routes |

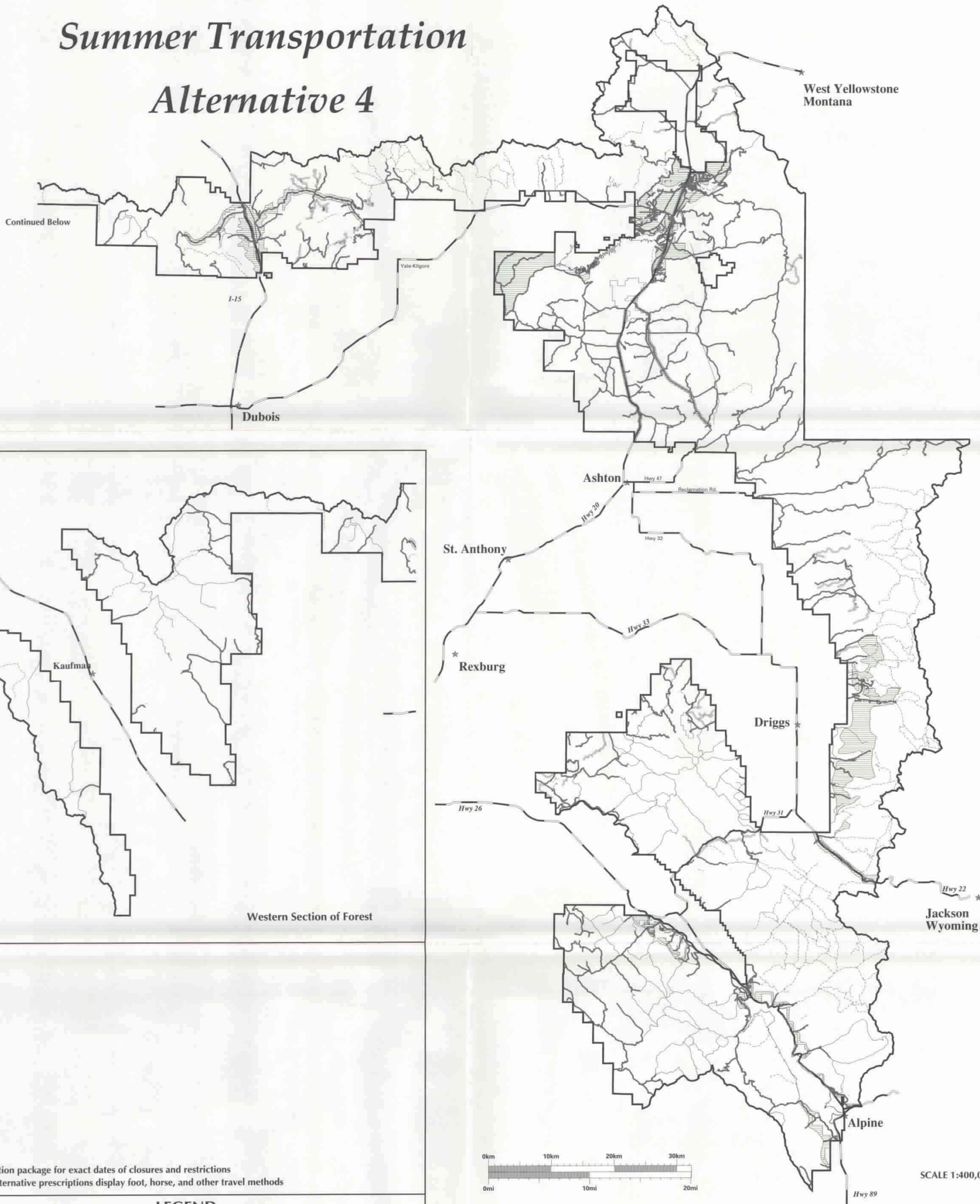
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Summer Transportation Alternative 4



See prescription package for exact dates of closures and restrictions
Individual alternative prescriptions display foot, horse, and other travel methods

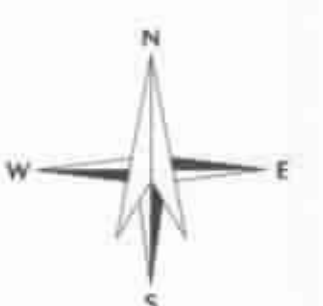
LEGEND

- Roads Open to Motorized Access
- Roads on Which Motorized use is Restricted
- Trails Open to Motorized Access
- Trails on Which Motorized use is Restricted
- Areas Open to Cross-Country Off-Highway Vehicle Travel
- Areas Closed to All Motorized Cross-Country Travel

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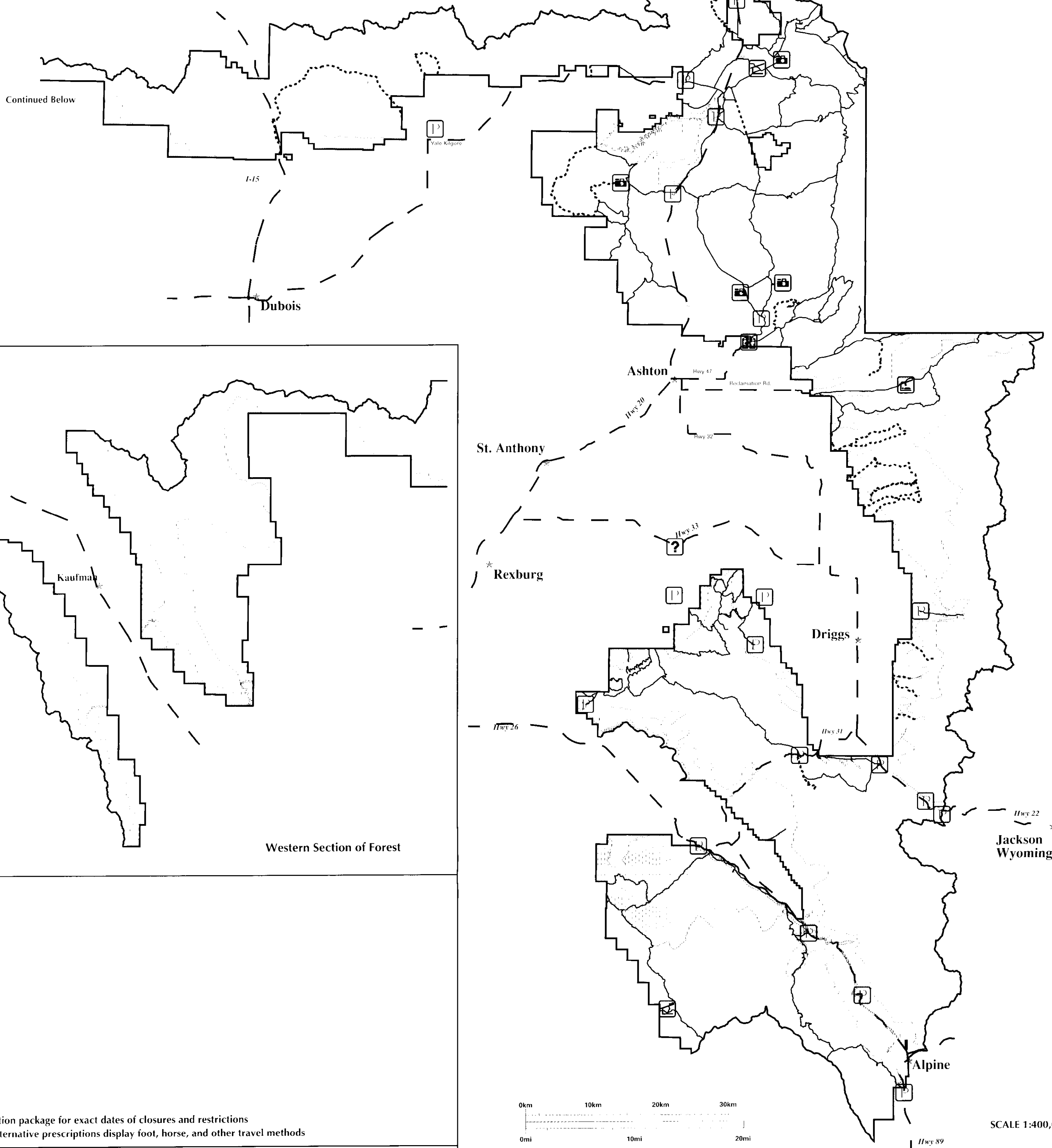


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SCALE 1:400,000

Winter Transportation Alternative 4



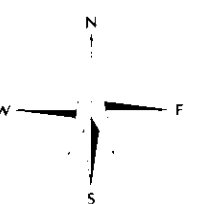
See prescription package for exact dates of closures and restrictions
 Individual alternative prescriptions display foot, horse, and other travel methods

LEGEND

- | | |
|-----------------------|---|
| Information Center | Areas Closed to Snow Machine Use (wildlife winter range, ski areas, wilderness) |
| Parking Areas | Areas Open to Snow Machine Use |
| Proposed Parking Area | Ski Trail (nonmotorized) |
| Rental Cabin | Planned Marked-Groomed GYAWVUM |
| Rest Rooms | Groomed Snow Machine Routes |
| Scenic Points | Marked Snow Machine Routes |
| Trail Head | Occasional Access-Sparse Snow |
| Warming Hut | Designated Winter Range Routes |

Forest Plan Revision Targhee National Forest Idaho and Wyoming

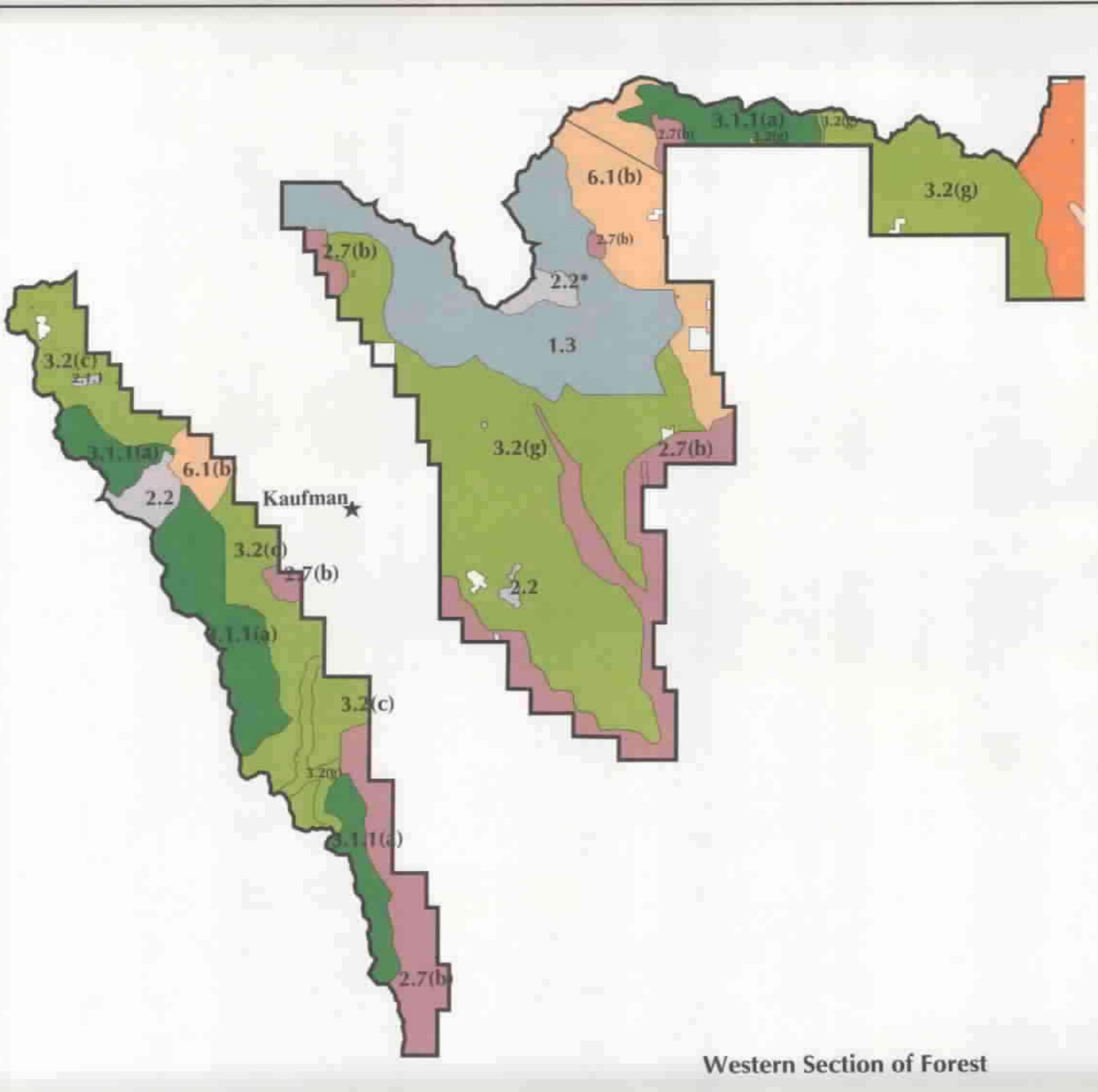
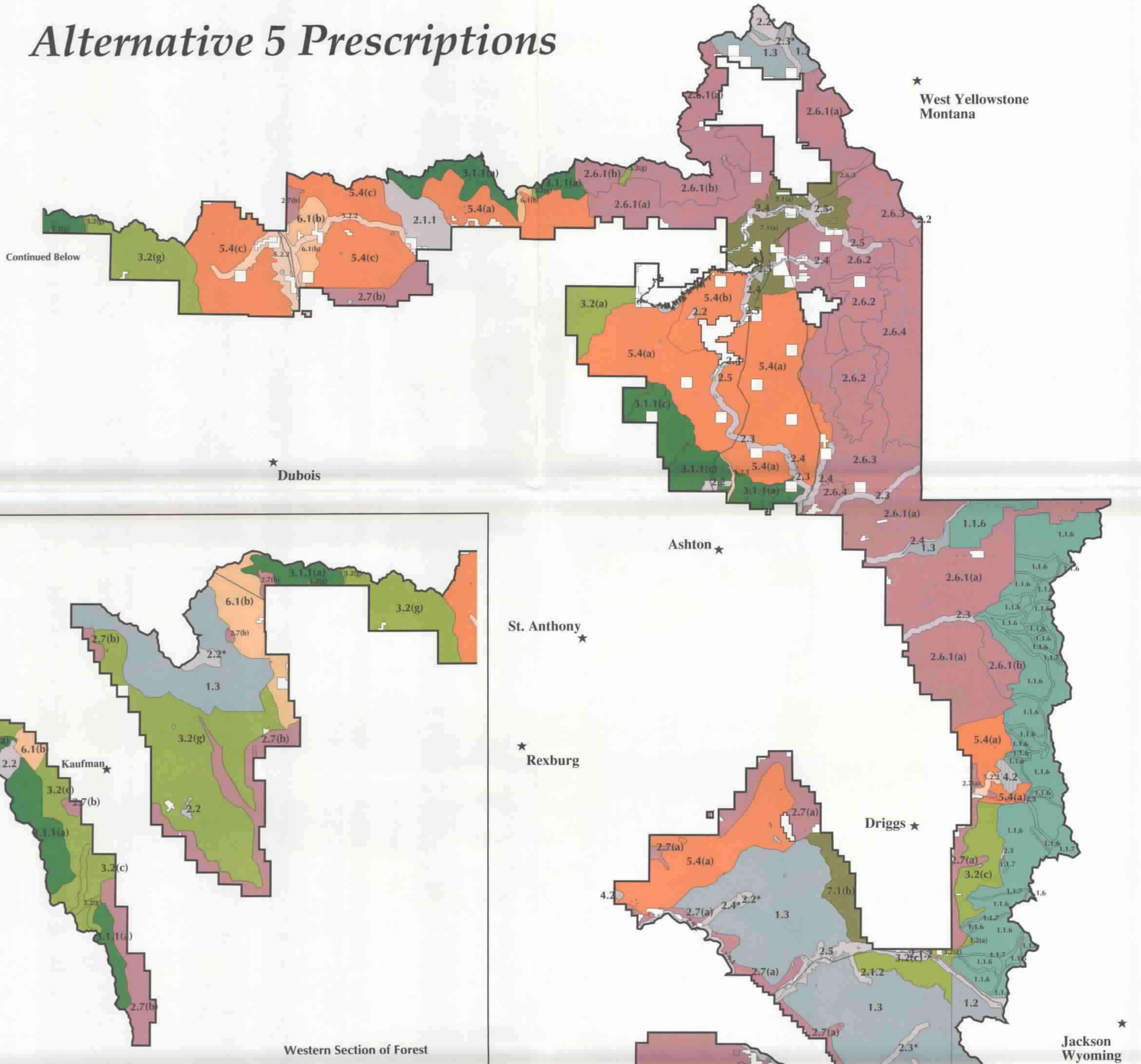
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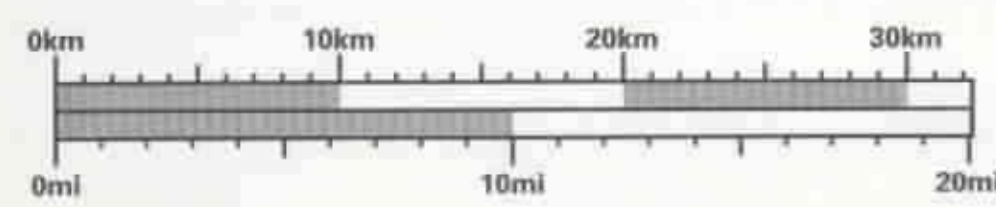
Alternative 5 Prescriptions



LEGEND

- 1.1.6 Designated Wilderness - Opportunity Class I
- 1.1.7 Designated Wilderness - Opportunity Class II
- 1.2 Wilderness Study Area
- 1.3 Recommended/Proposed Wilderness
- 2.1.1 Special Management Areas
- 2.1.2 Visual Quality Maintenance
- 2.2 Research Natural Areas
- 2.3 Eligible Wild River
- 2.4 Eligible Scenic River (No ASQ)
- 2.5 Eligible Recreation River (No ASQ)
- 2.6.1(a-b) Grizzly Bear Habitat (No ASQ, No X-Country, No Sheep)
- 2.6.2 Grizzly Bear - Plateau BMU Direction - Core Area
- 2.6.3 Grizzly Bear - Plateau BMU Direction - Security Area
- 2.6.4 Grizzly Bear - Plateau BMU Direction - Non-Security Area
- 2.7(a-b) Elk and Deer Winter Range
- 2.8.1 Aquatic Influence Zone (not shown on this map-see map 22)
- 2.9.1 South Fork Snake River Eligible Scenic River
- 2.9.2 South Fork Snake River Eligible Recreation River
- 3.1.1(a-c) Non-Motorized
- 3.2(a-g) Semi-Primitive Motorized
- 4.1 Developed Recreation Sites
- 4.2 Special Use Permit Recreation Sites
- 4.3 Dispersed Camping Management
- 5.2.1 Visual Quality Improvement
- 5.2.2 Visual Quality Maintenance
- 5.4(a-c) Elk and Deer Summer Range
- 6.1(b) Range Management
- 7.1(a-b) Intermingled Public/Private Lands
- 8.1 Concentrated Development Areas
- Non-Forest Service Lands

* These areas are also Recommended Wilderness or Wilderness Study Areas
Riparian prescription 2.8.1 not shown on map



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Forest Plan Revision Targhee National Forest Idaho and Wyoming



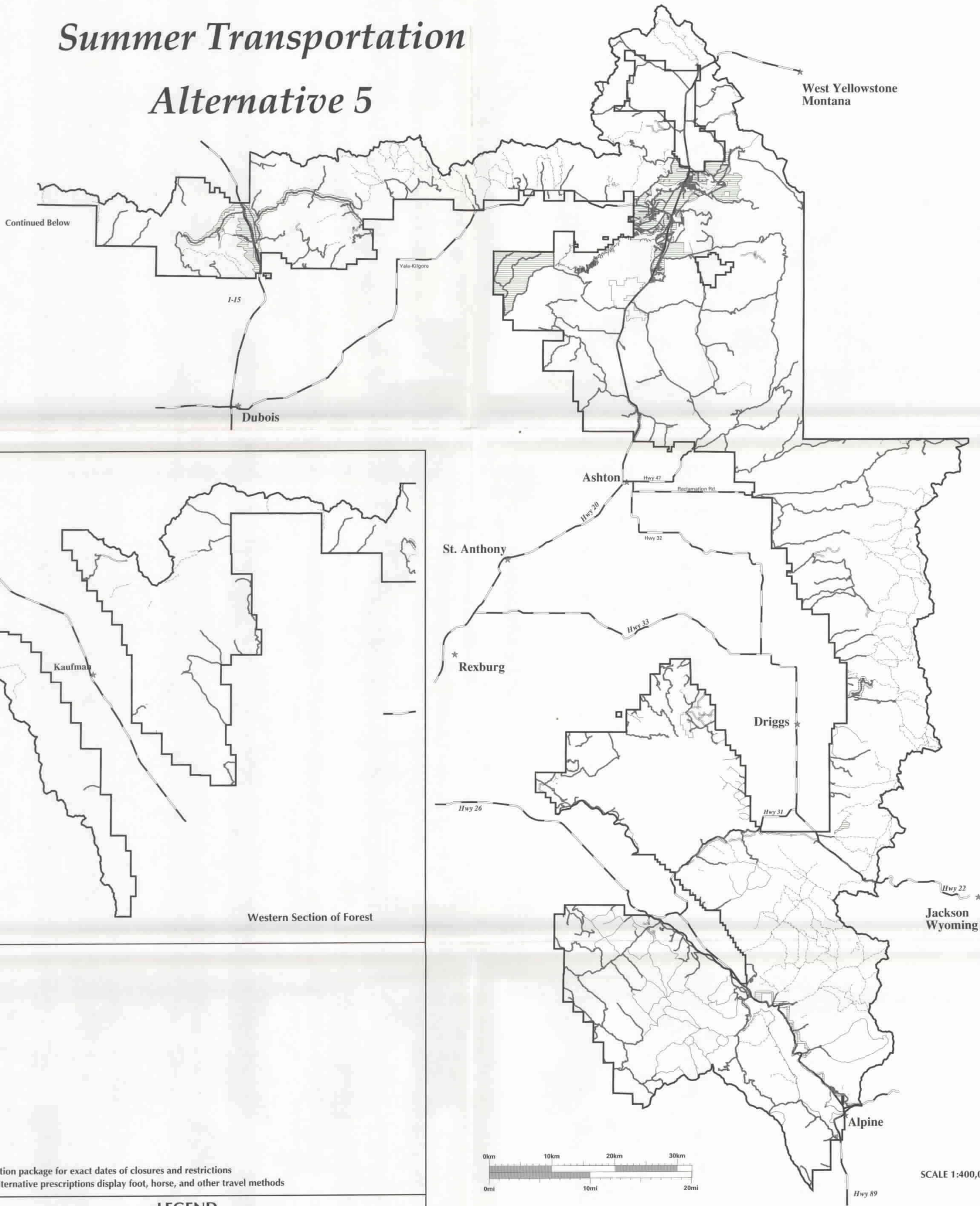
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Summer Transportation Alternative 5



Western Section of Forest

See prescription package for exact dates of closures and restrictions
Individual alternative prescriptions display foot, horse, and other travel methods

LEGEND

- Roads Open to Motorized Access
- Roads on Which Motorized use is Restricted
- Trails Open to Motorized Access
- Trails on Which Motorized use is Restricted
- Areas Open to Cross-Country Off-Highway Vehicle Travel
- Areas Closed to All Motorized Cross-Country Travel

Forest Plan Revision Targhee National Forest Idaho and Wyoming



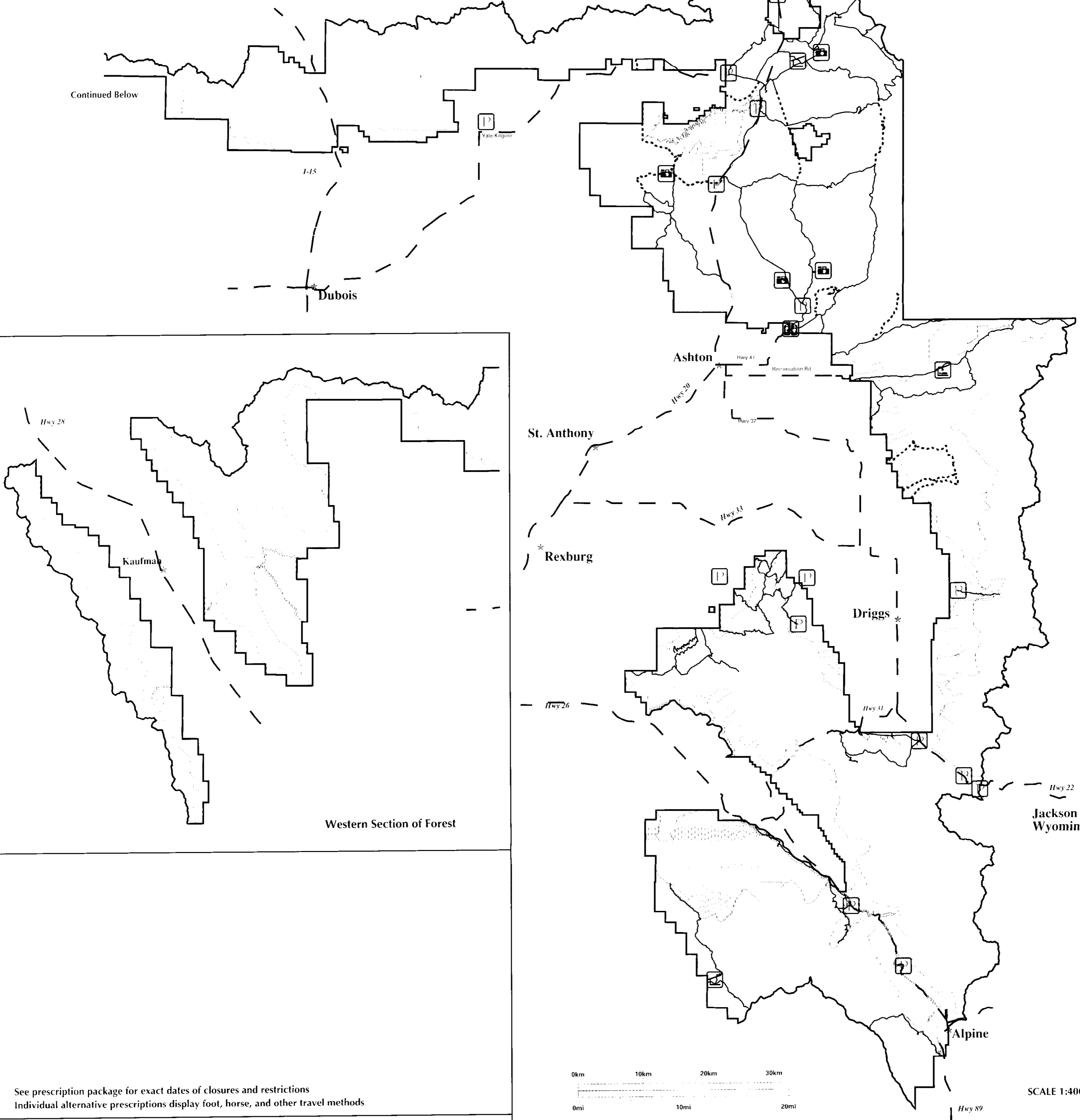
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Winter Transportation Alternative 5

Continued Below



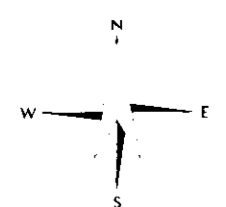
See prescription package for exact dates of closures and restrictions
Individual alternative prescriptions display foot, horse, and other travel methods

LEGEND

- Information Center
- Parking Areas
- Proposed Parking Area
- Rental Cabin
- Rest Rooms
- Scenic Points
- Trail Head
- Warming Hut
- Areas Closed to Snow Machine Use (wildlife winter range, ski areas, wilderness)
- Areas Open to Snow Machine Use
- Ski Trail (nonmotorized)
- Planned Marked-Groomed GYAWVUM
- Groomed Snow Machine Routes
- Marked Snow Machine Routes
- Occasional Access-Sparse Snow
- Designated Winter Range Routes

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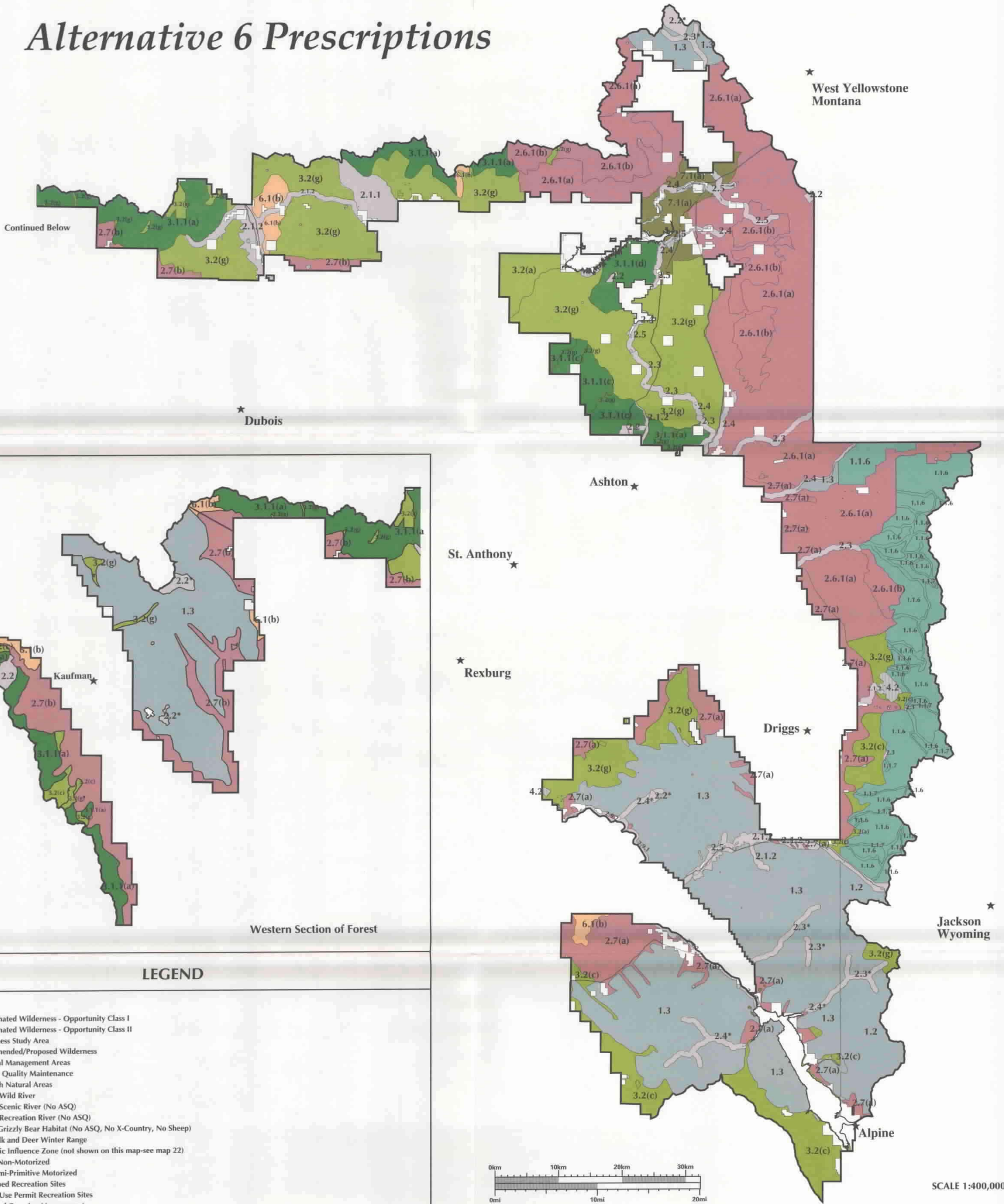
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Alternative 6 Prescriptions



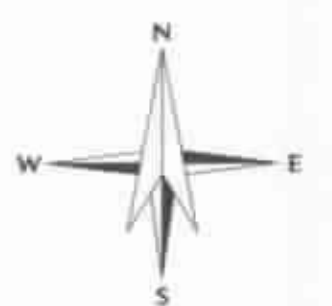
LEGEND

- 1.1.6 Designated Wilderness - Opportunity Class I
- 1.1.7 Designated Wilderness - Opportunity Class II
- 1.2 Wilderness Study Area
- 1.3 Recommended/Proposed Wilderness
- 2.1.1 Special Management Areas
- 2.1.2 Visual Quality Maintenance
- 2.2 Research Natural Areas
- 2.3 Eligible Wild River
- 2.4 Eligible Scenic River (No ASQ)
- 2.5 Eligible Recreation River (No ASQ)
- 2.6.1(a-b) Grizzly Bear Habitat (No ASQ, No X-Country, No Sheep)
- 2.7(a-b) Elk and Deer Winter Range
- 2.8.1 Aquatic Influence Zone (not shown on this map-see map 22)
- 3.1.1(a-d) Non-Motorized
- 3.2(a-g) Semi-Primitive Motorized
- 4.1 Developed Recreation Sites
- 4.2 Special Use Permit Recreation Sites
- 4.3 Dispersed Camping Management
- 6.1(a-b) Range Management
- 7.1(a-b) Intermingled Public/Private Lands
- 8.1 Concentrated Development Areas
- Non-Forest Service Lands

* These areas are also Recommended Wilderness or Wilderness Study Areas
Riparian prescription 2.8.1 not shown on map

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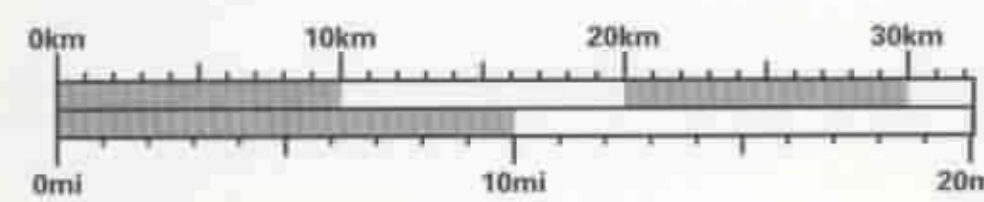
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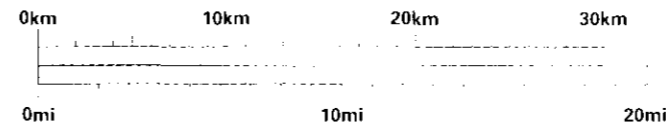
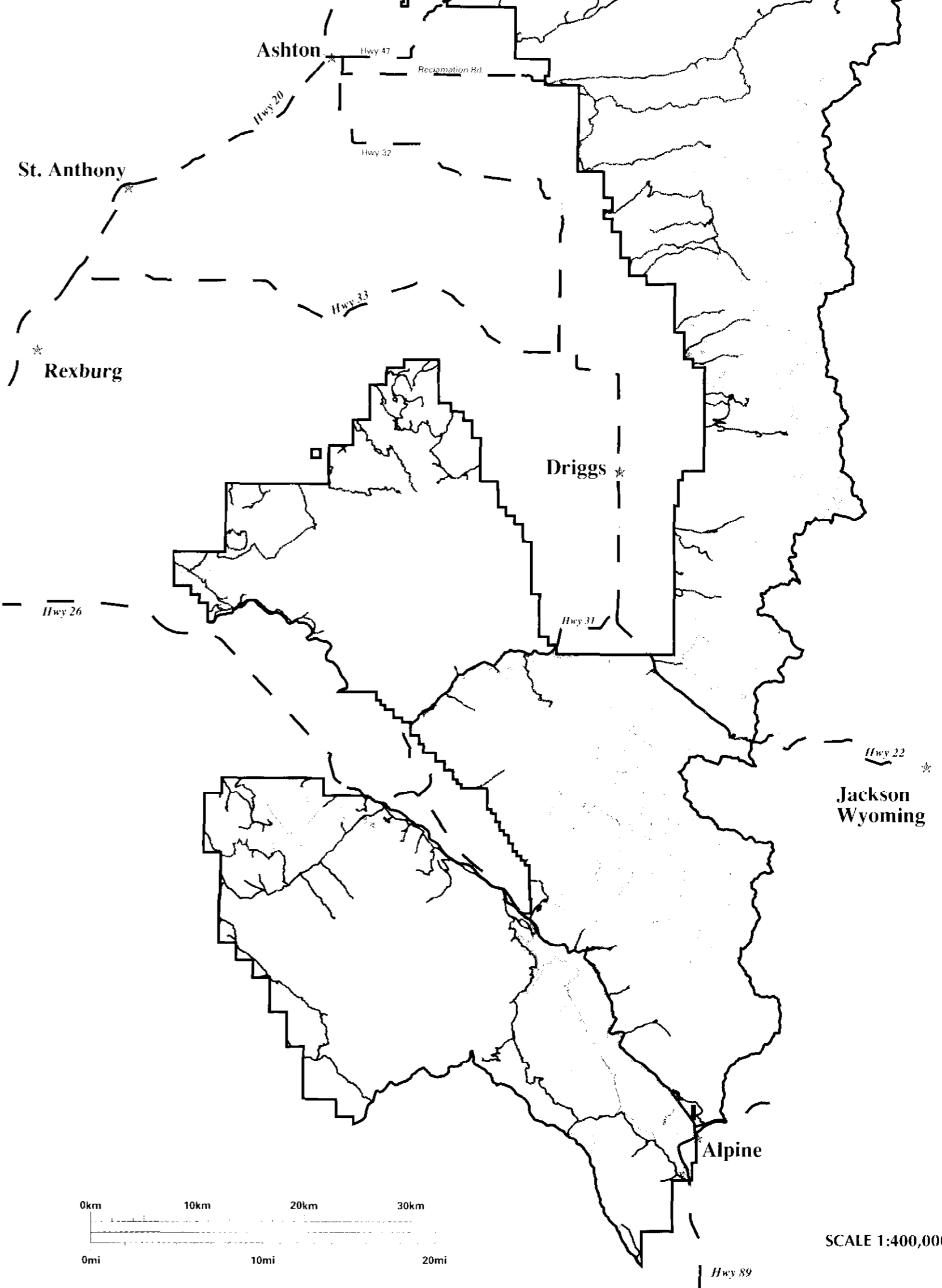
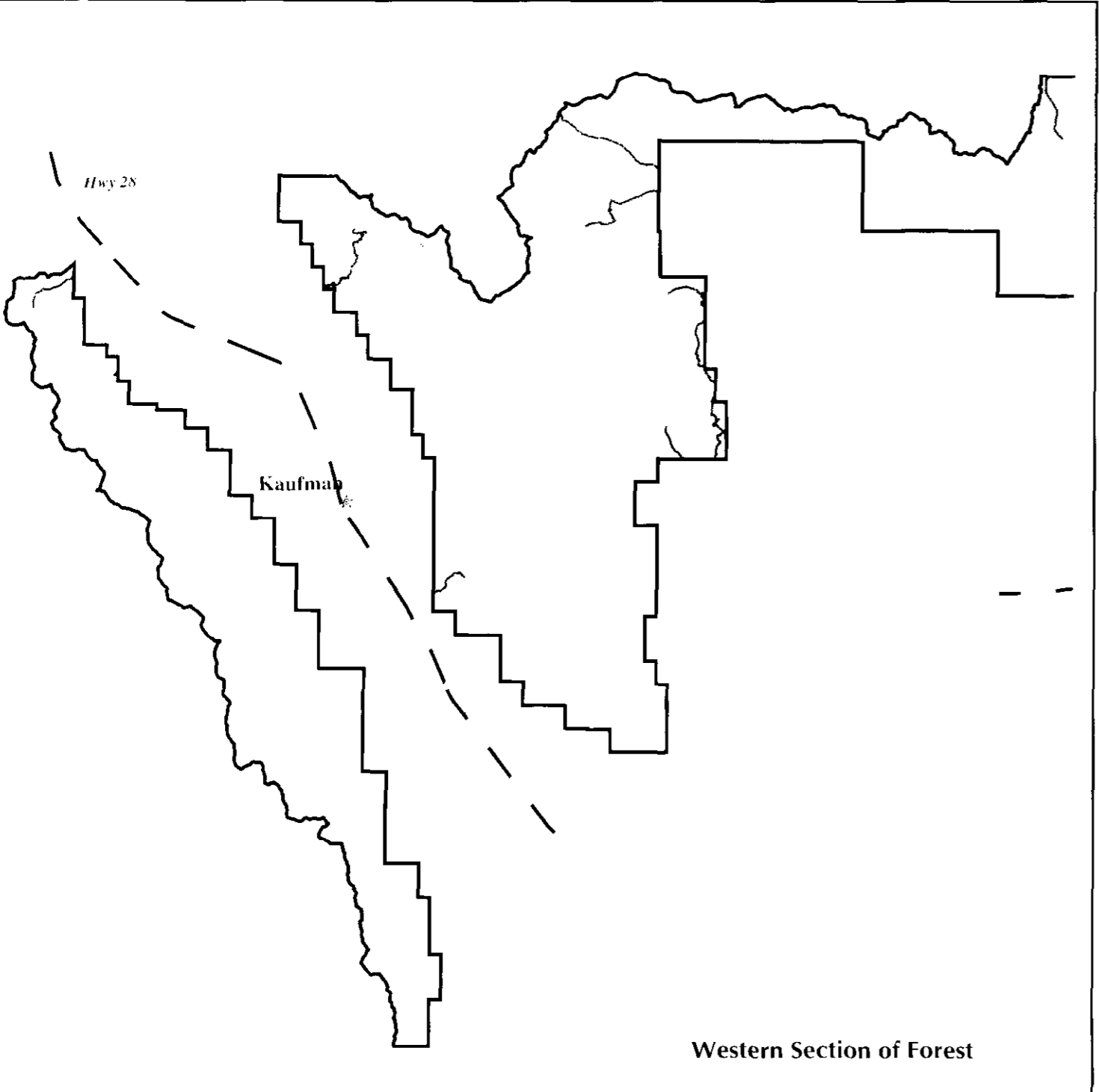
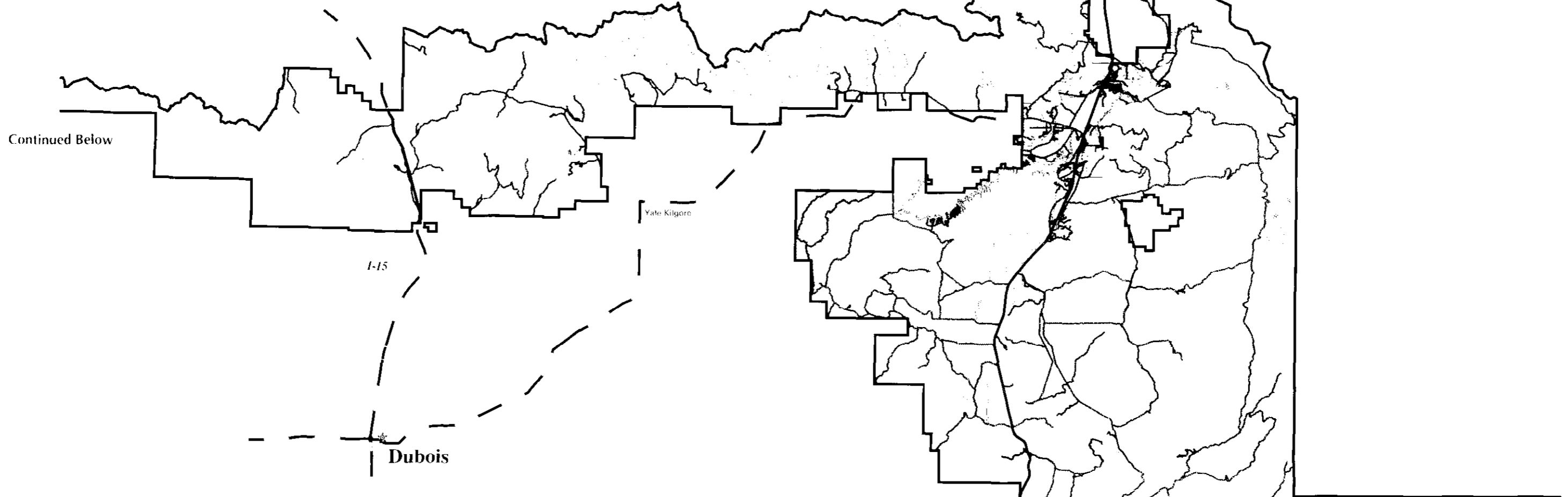
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SCALE 1:400,000



Summer Transportation Alternative 6



SCALE 1:400,000

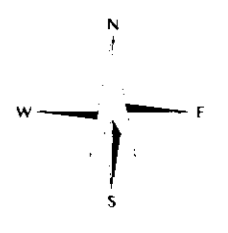
See prescription package for exact dates of closures and restrictions
Individual alternative prescriptions display foot, horse, and other travel methods

LEGEND

- Roads Open to Motorized Access
- Roads on Which Motorized use is Restricted
- Trails Open to Motorized Access
- Trails on Which Motorized use is Restricted
- Areas Open to Cross-Country Off-Highway Vehicle Travel
- Areas Closed to All Motorized Cross-Country Travel

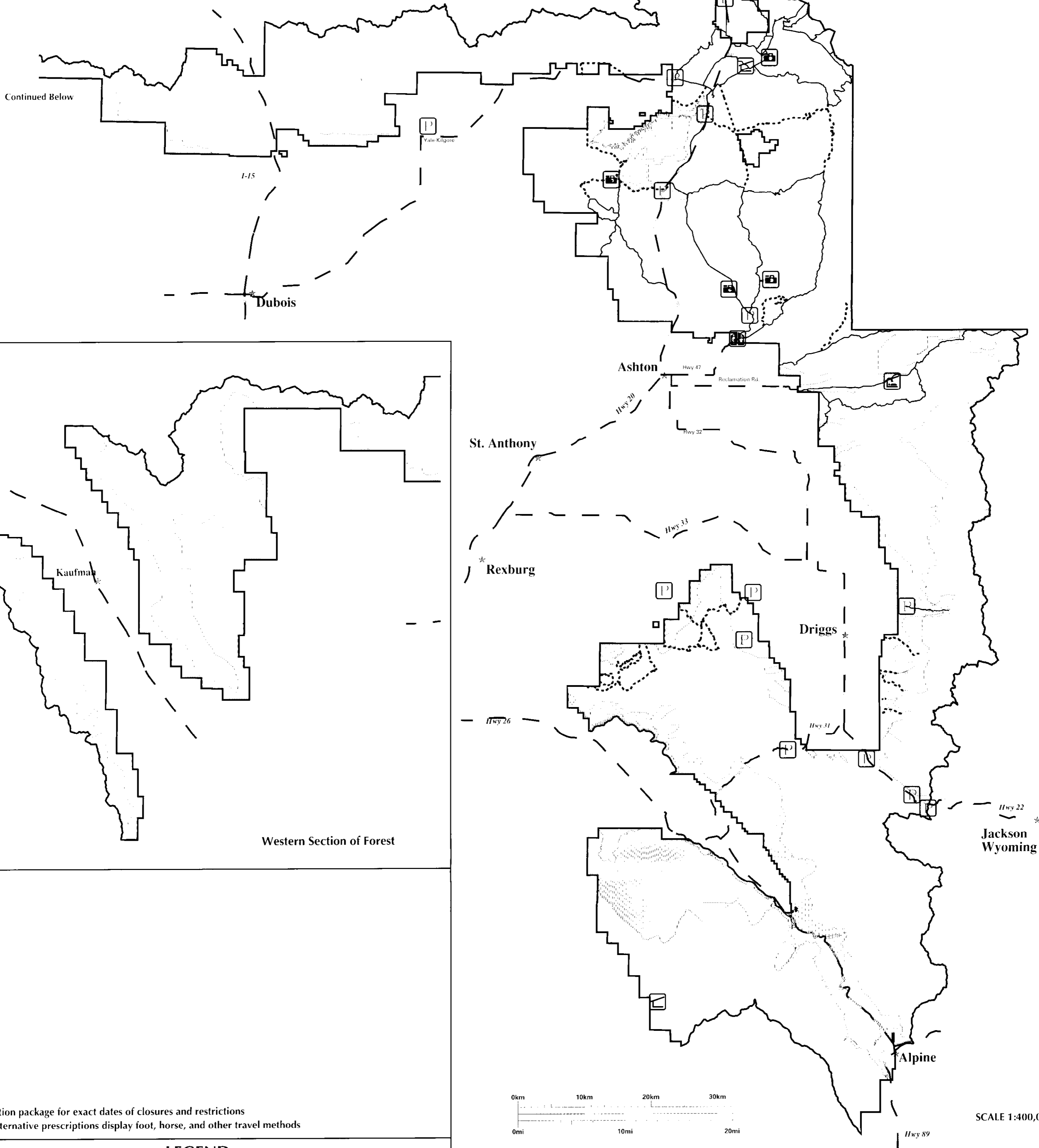
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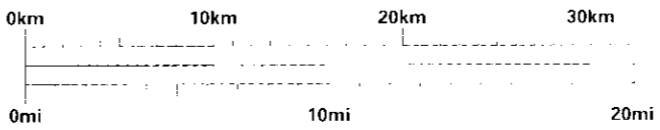


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Winter Transportation Alternative 6



See prescription package for exact dates of closures and restrictions
Individual alternative prescriptions display foot, horse, and other travel methods



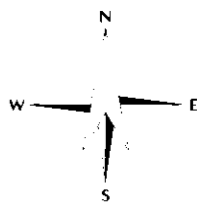
SCALE 1:400,000

LEGEND

- Information Center
- Parking Areas
- Proposed Parking Area
- Rental Cabin
- Rest Rooms
- Scenic Points
- Trail Head
- Warming Hut
- Areas Closed to Snow Machine Use (wildlife winter range, ski areas, wilderness)
- Areas Open to Snow Machine Use
- Ski Trail (nonmotorized)
- Planned Marked-Groomed GYAWVUM
- Groomed Snow Machine Routes
- Marked Snow Machine Routes
- Occasional Access-Sparse Snow
- Designated Winter Range Routes

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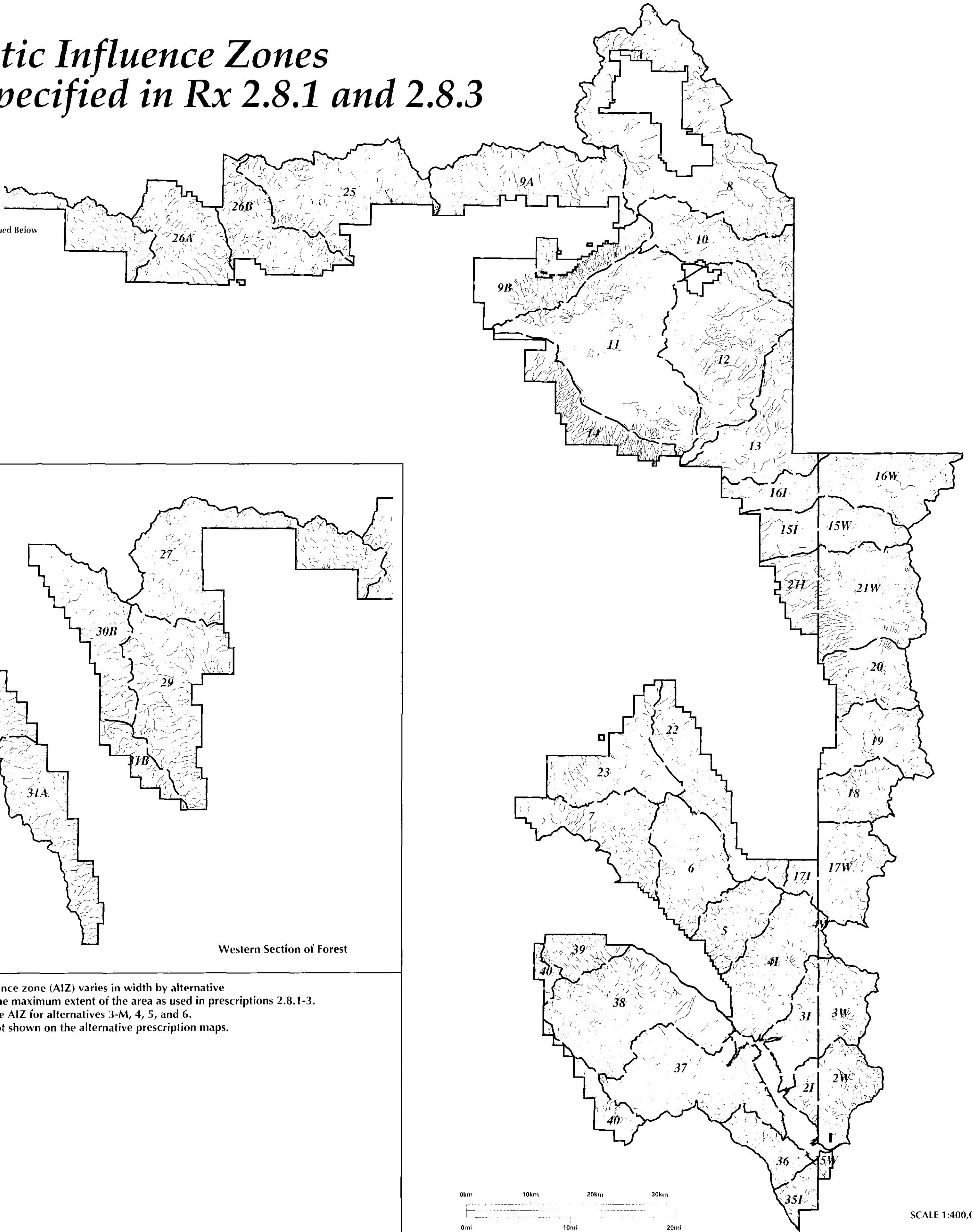


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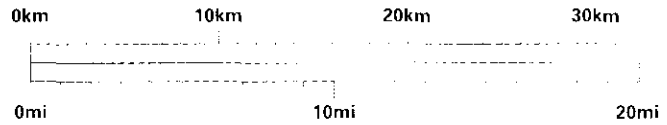
Aquatic Influence Zones As Specified in Rx 2.8.1 and 2.8.3

Continued Below



Western Section of Forest

The aquatic influence zone (AIZ) varies in width by alternative
This map shows the maximum extent of the area as used in prescriptions 2.8.1-3.
This represents the AIZ for alternatives 3-M, 4, 5, and 6.
This is the area not shown on the alternative prescription maps.



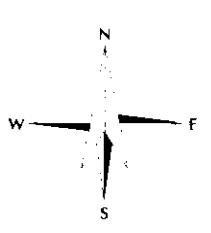
SCALE 1:400,000

LEGEND

- Aquatic Influence Zones
- National Forest Watersheds

Forest Plan Revision Targhee National Forest Idaho and Wyoming

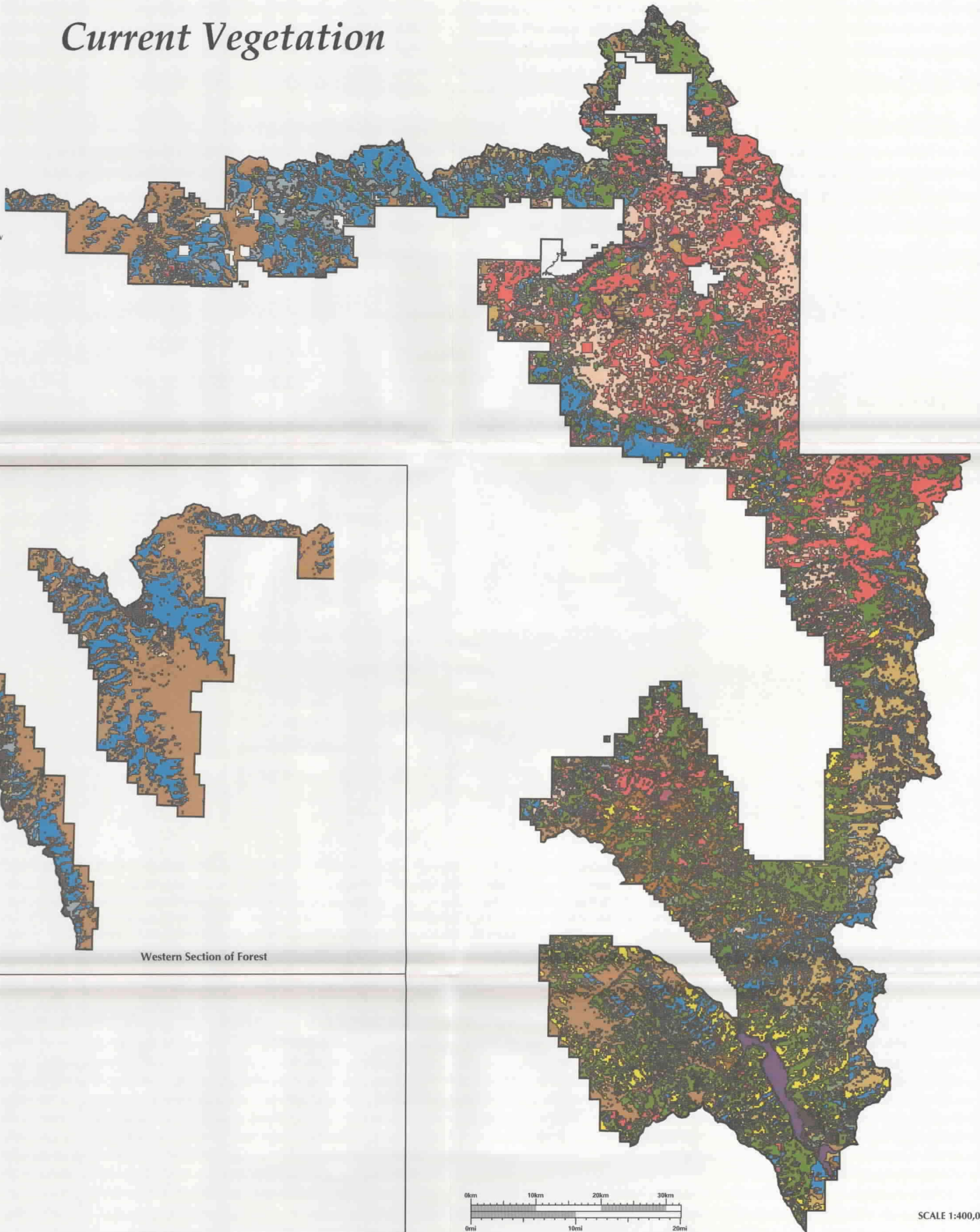
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Current Vegetation

Continued Below



Western Section of Forest

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LEGEND

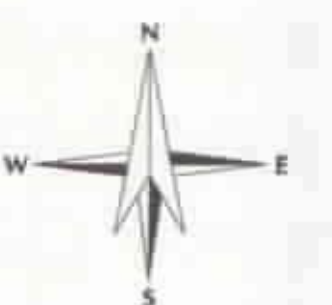
- | | |
|----------------------------|--------------------------------|
| State or Private Lands | Late Seral Mixed Conifer |
| Herbaceous/Grasslands | Early Seral Mixed Conifer |
| Sagebrush | Late Seral Douglas-fir |
| Mountain Brush | Early Seral Douglas-fir |
| Late Seral Aspen | Subalpine Fir/Englemann Spruce |
| Early Seral Aspen | Whitebark Pine or Limber Pine |
| Late Seral Lodgepole Pine | Riparian/Aquatic |
| Early Seral Lodgepole Pine | Rock or Talus Slopes |

** Vegetation has been generalized

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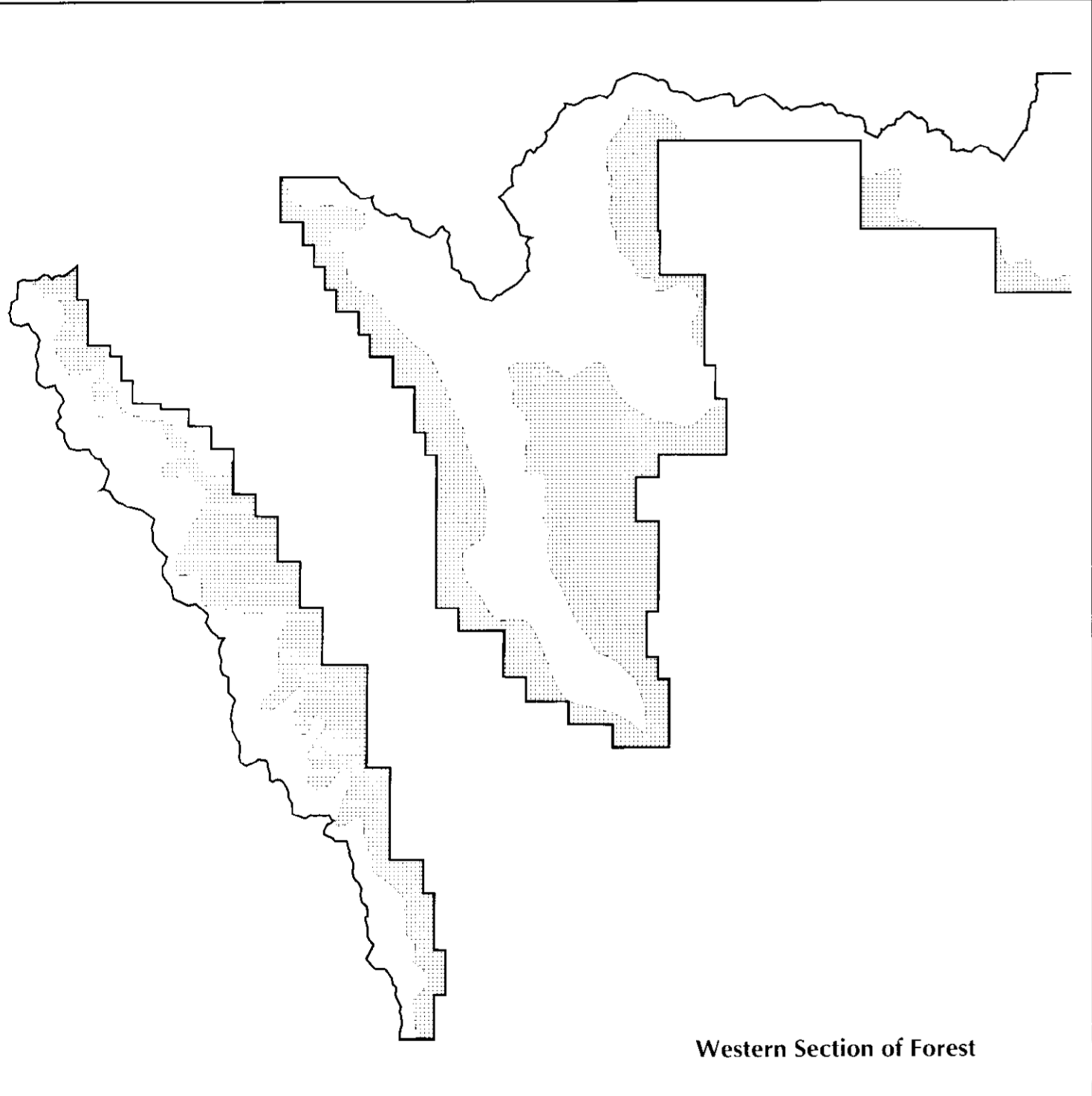


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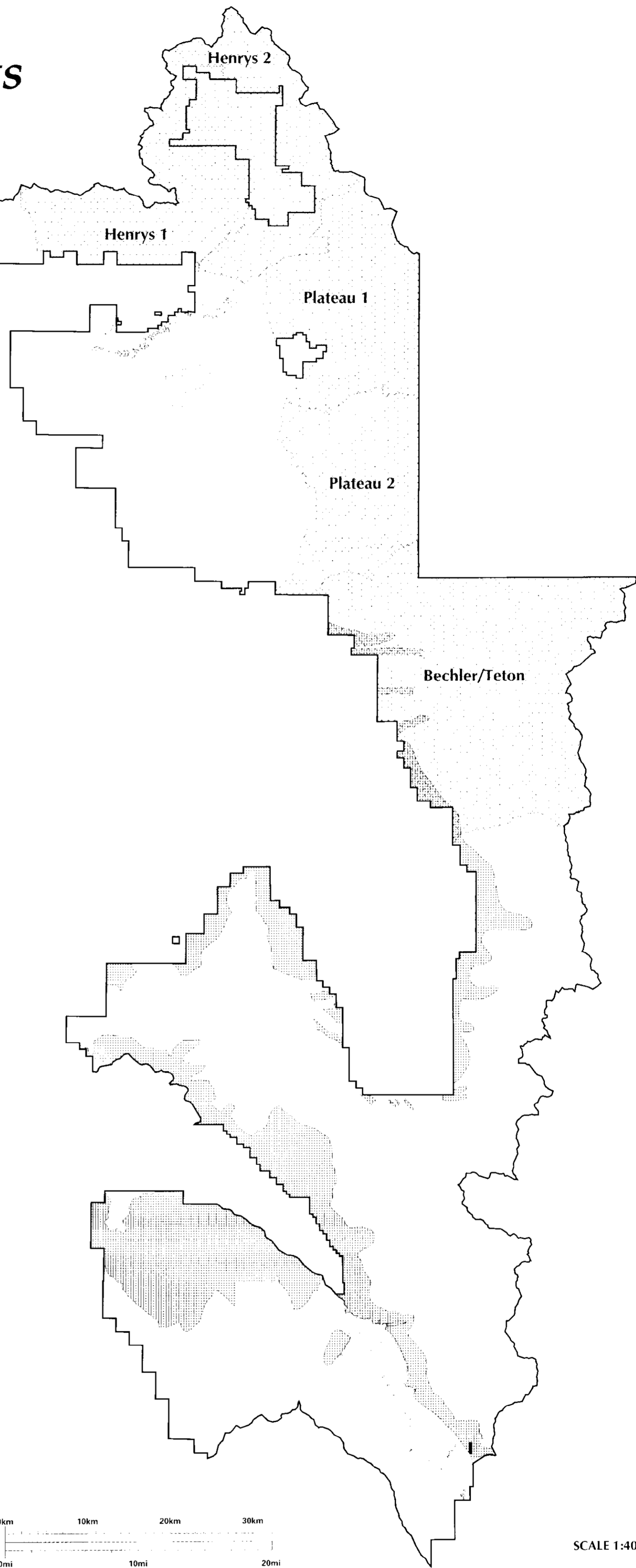
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Grizzly Bear Management Units and Deer & Elk Winter Range

Continued Below





Western Section of Forest



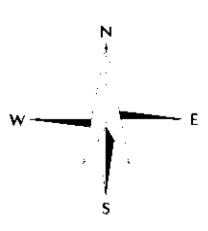
SCALE 1:400,000

LEGEND

-  Grizzly Bear Management Unit
-  Deer and Elk Winter Range

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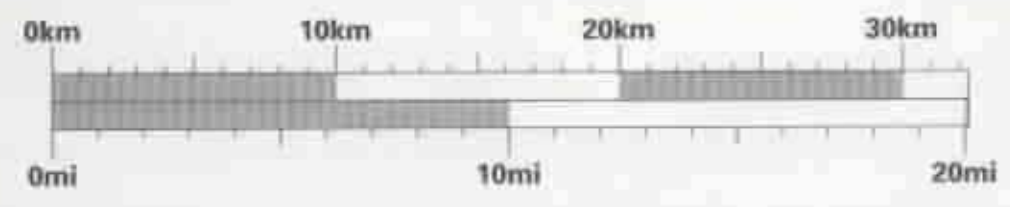
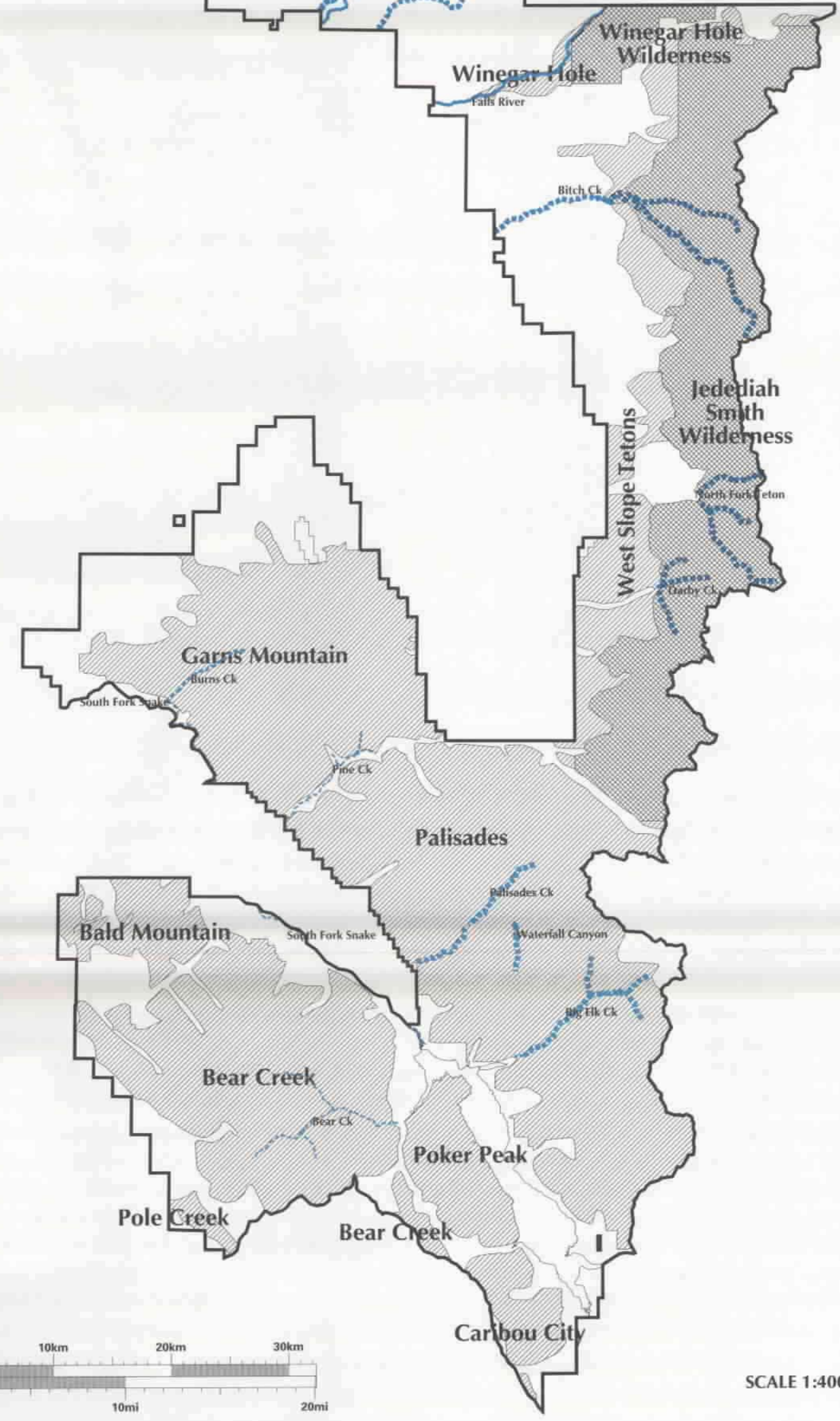
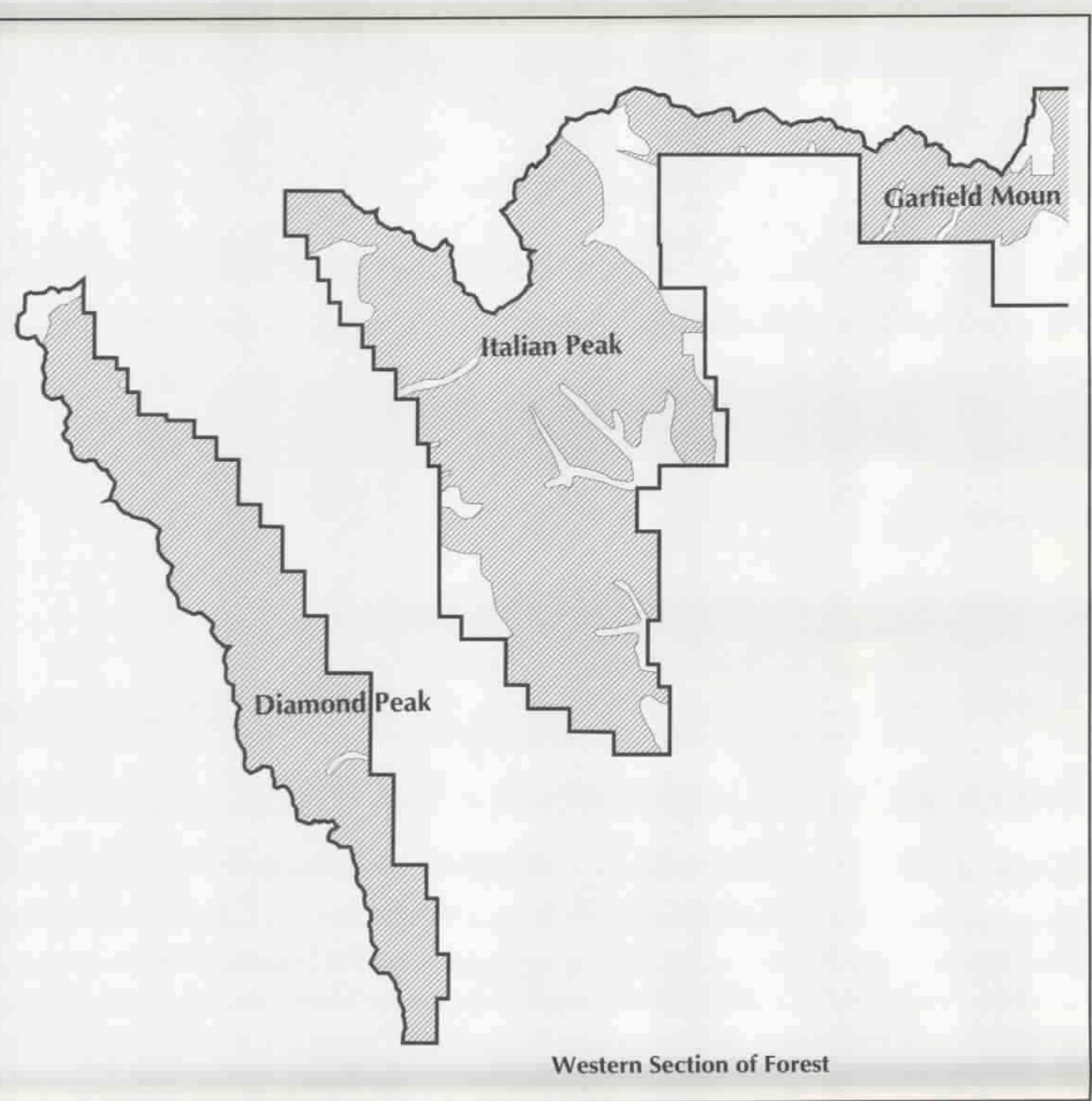
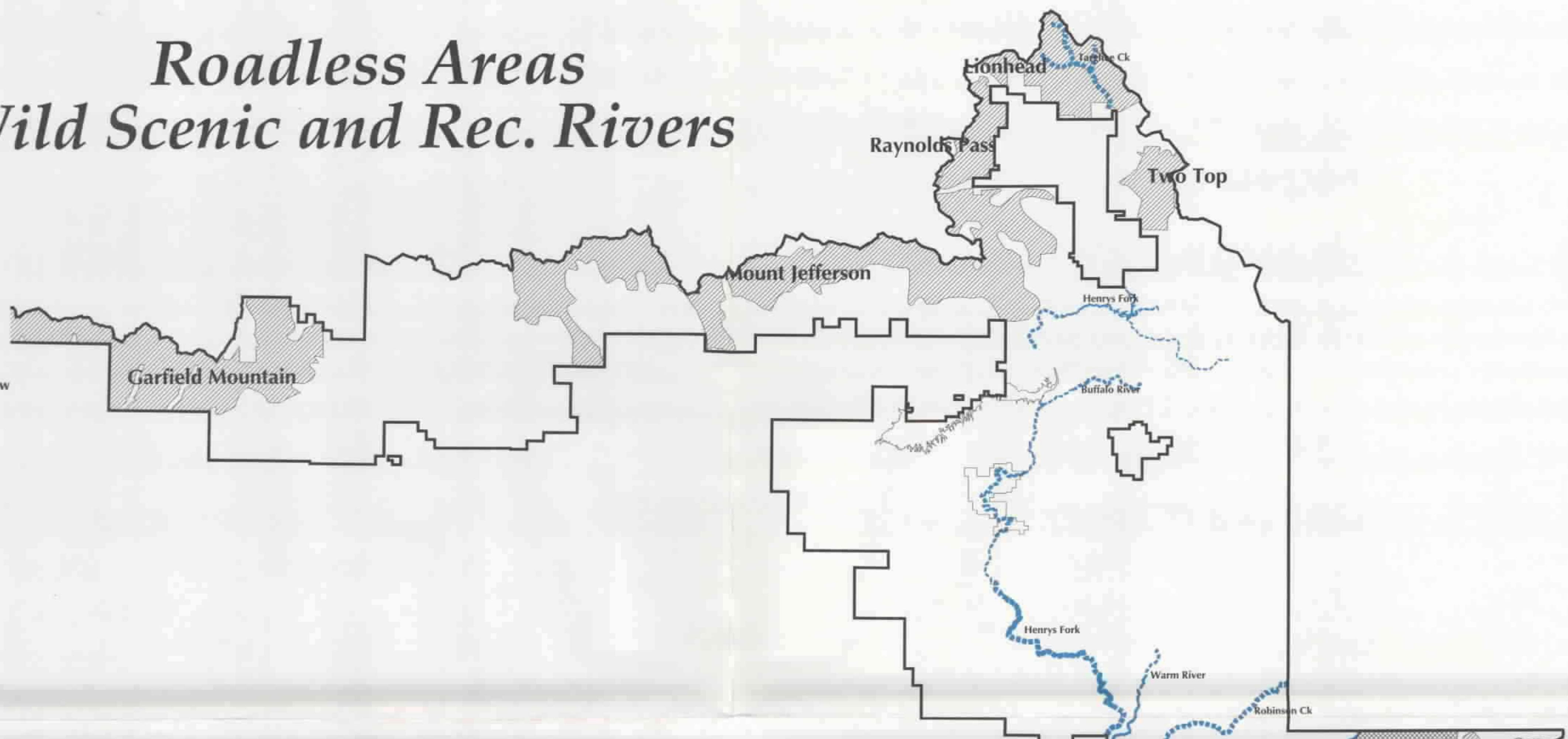


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Roadless Areas Wild Scenic and Rec. Rivers

Continued Below



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LEGEND

- Roadless Area
- Wilderness Area
- Recreational Rivers
- Scenic Rivers
- Wild Rivers

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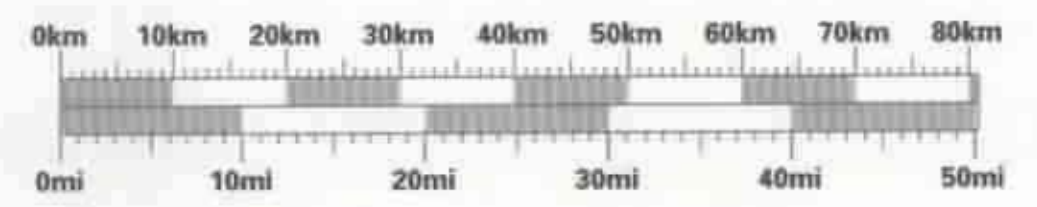
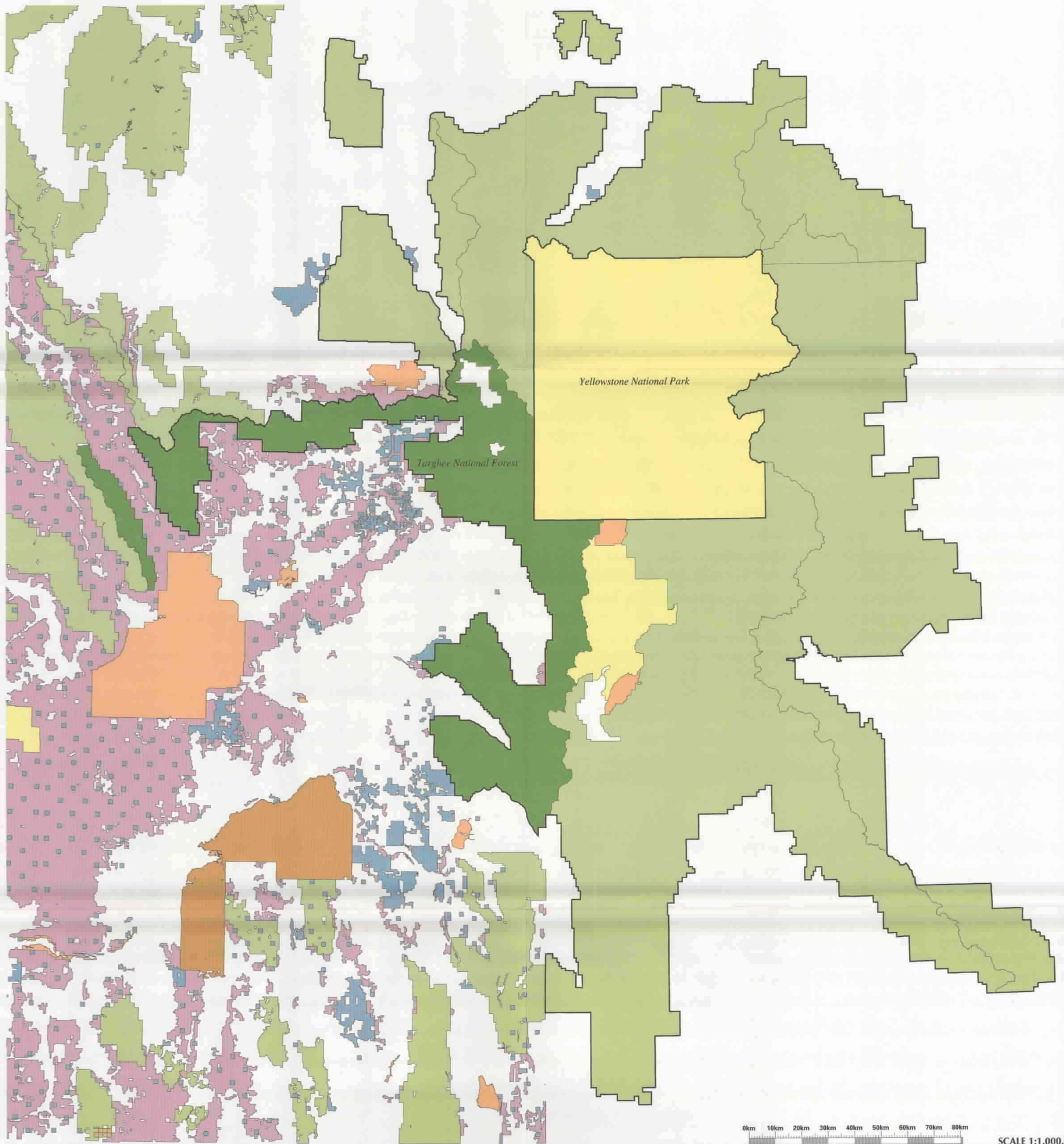


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Targhee National Forest and Adjacent Lands



SCALE 1:1,000,000

LEGEND

- Targhee National Forest
- National Forest Lands
- National Park Lands
- Bureau of Land Management Lands
- Tribal Lands
- Other Federally Administered Lands
- State Lands
- Private Land
- Greater Yellowstone Area Boundary

** Land ownership has been generalized



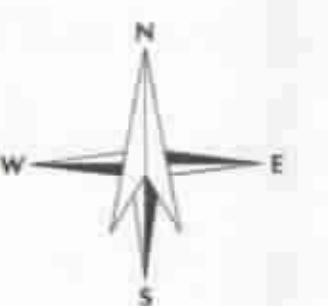
Greater Yellowstone Area



IDAHO

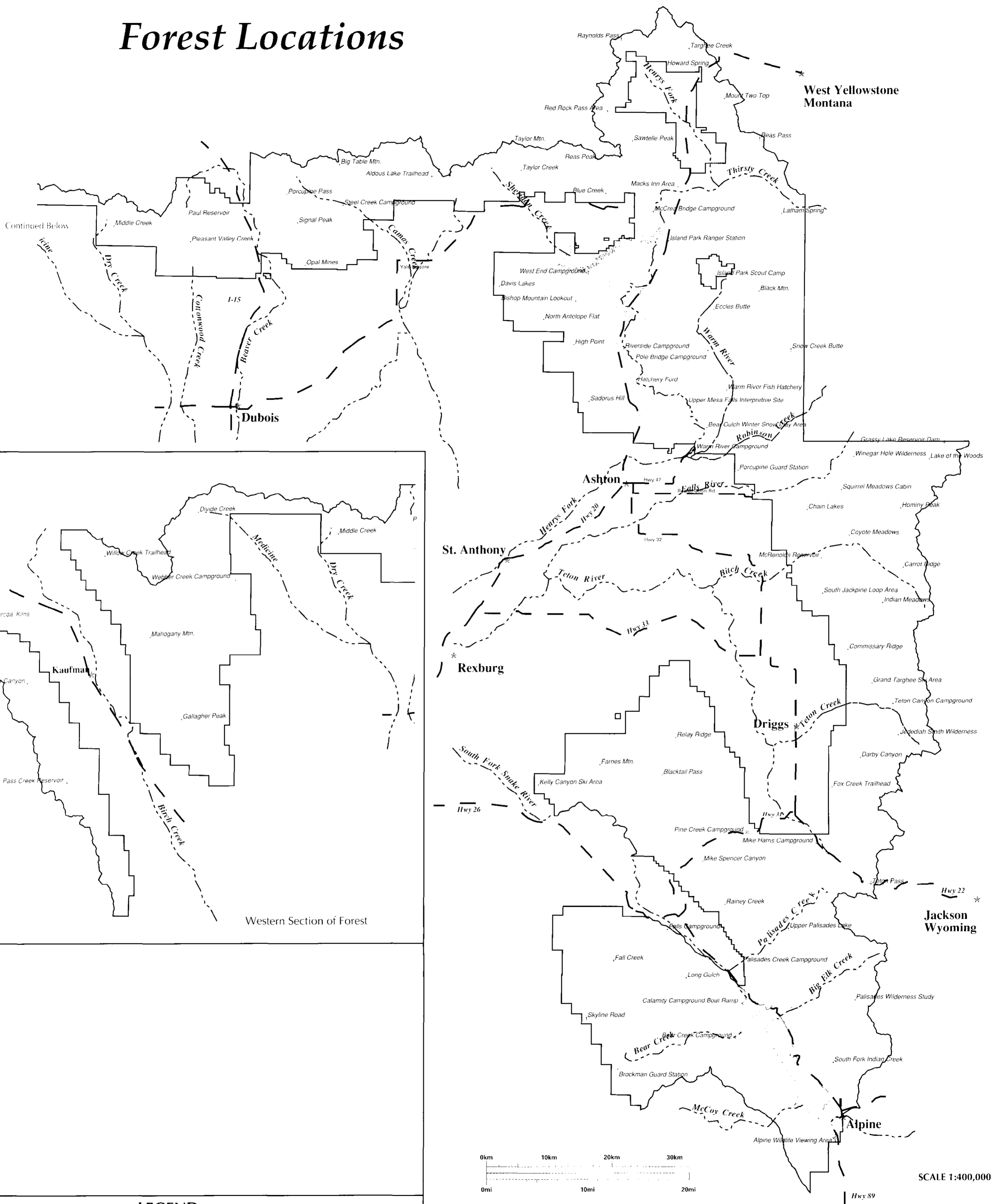
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Forest Locations

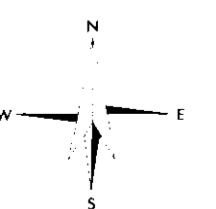


LEGEND

- Major Highways
- Major Cities
- Forest Points of Interest
- Major Streams

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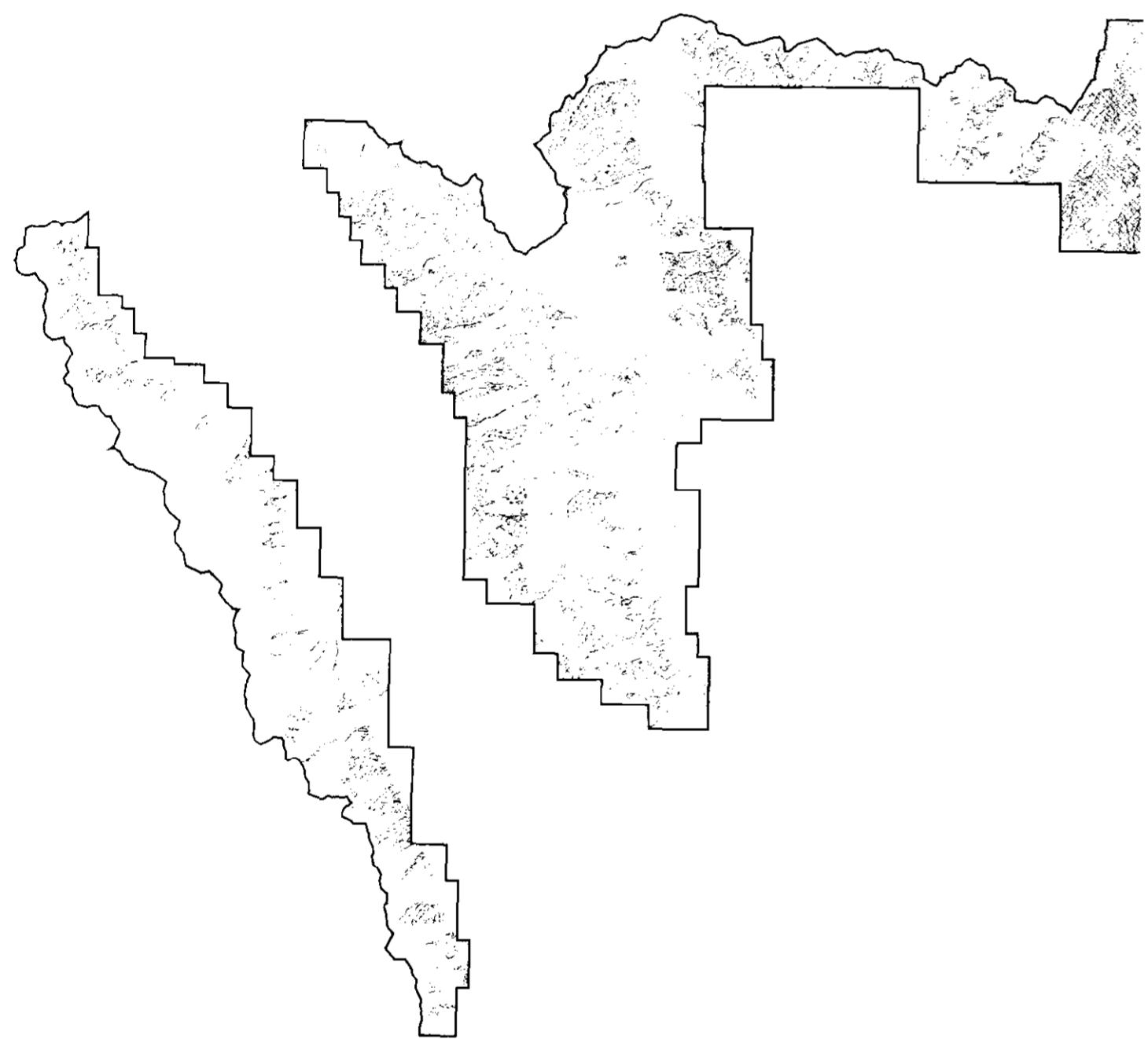


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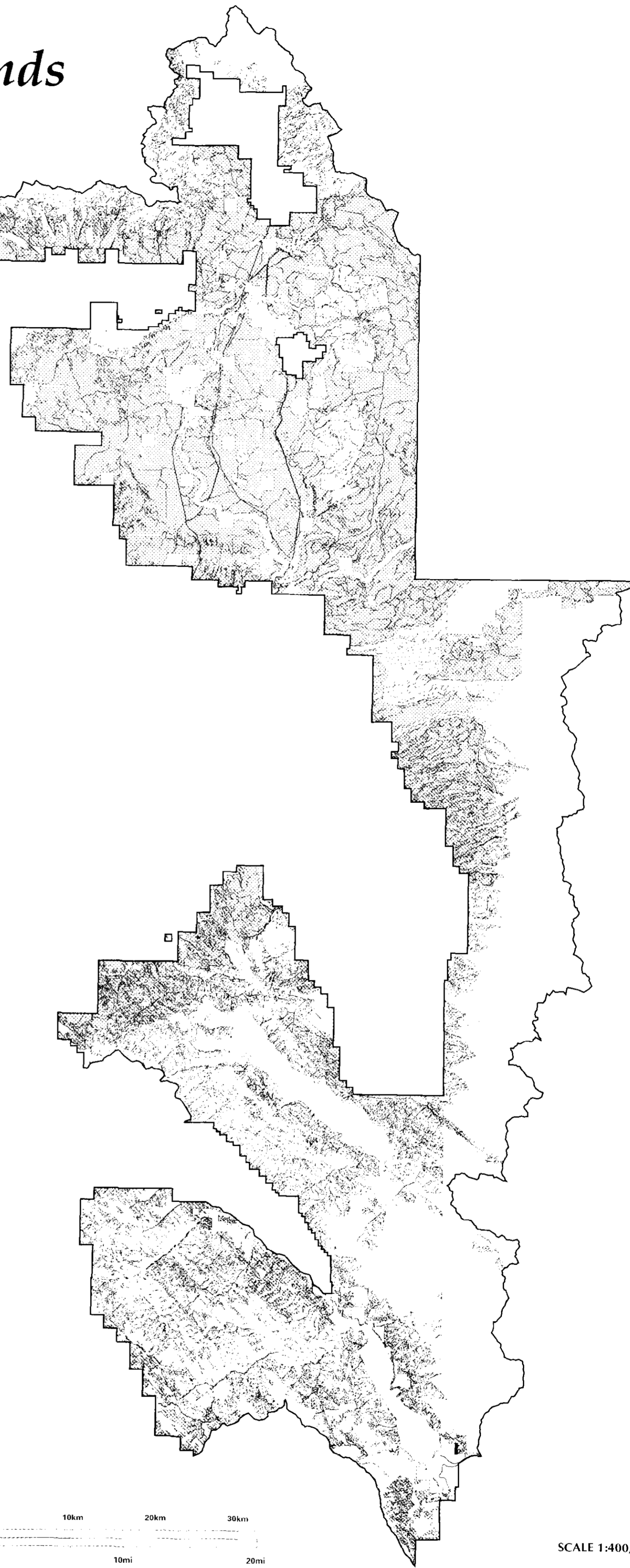
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Tentatively Suitable Timber Lands and Alt. 3-M Category 5 Rx

Continued Below






Western Section of Forest



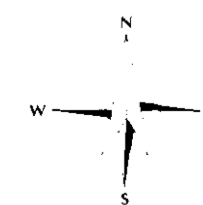
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LEGEND

-  Tentatively Suitable Timber Lands
-  Category 5 Prescriptions for Alternative 3-M
-  Lands Suitable and Available for Timber Harvest

Forest Plan Revision Targhee National Forest Idaho and Wyoming

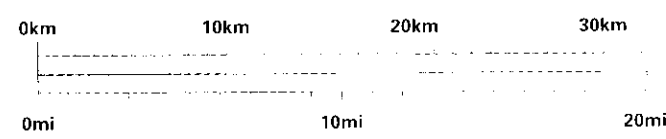
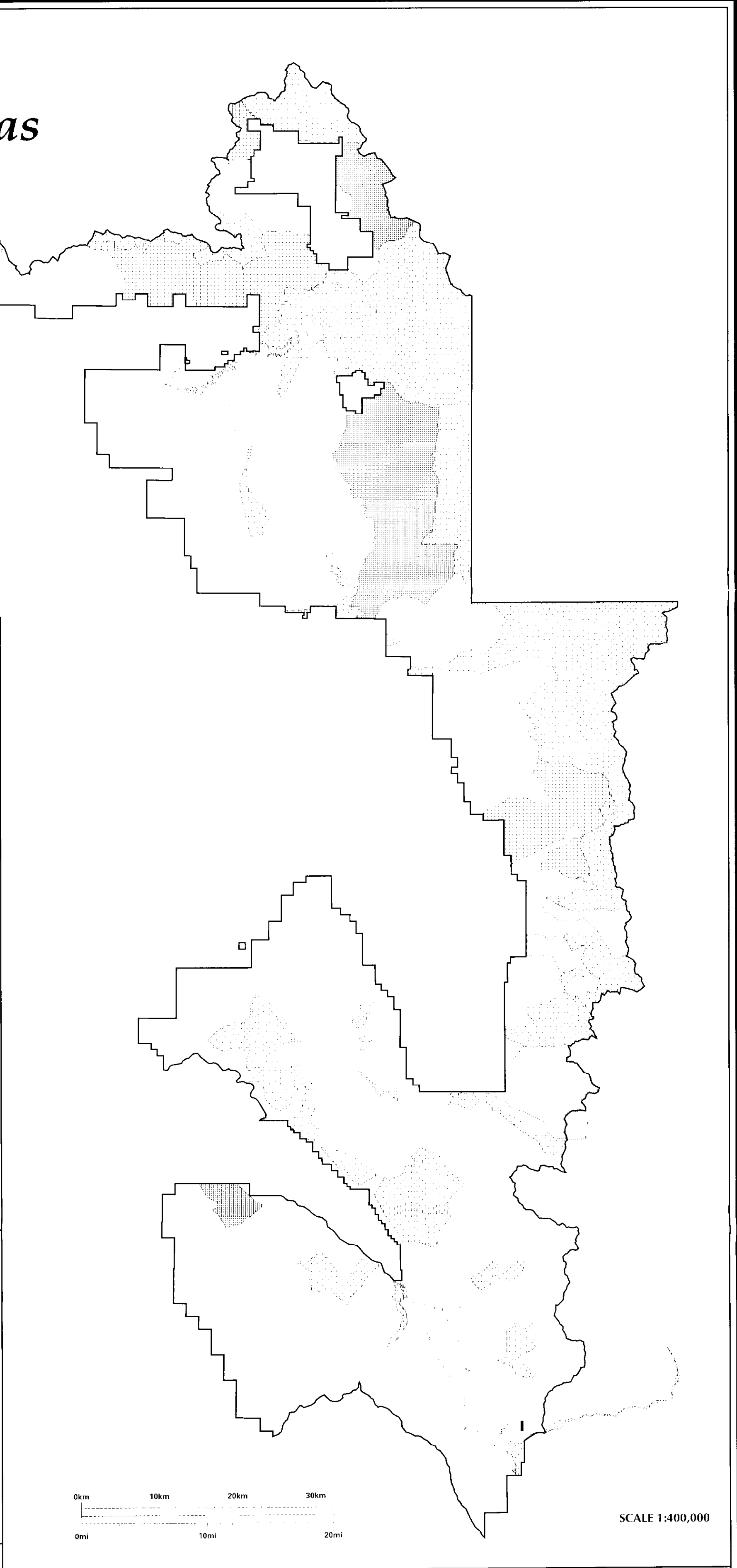
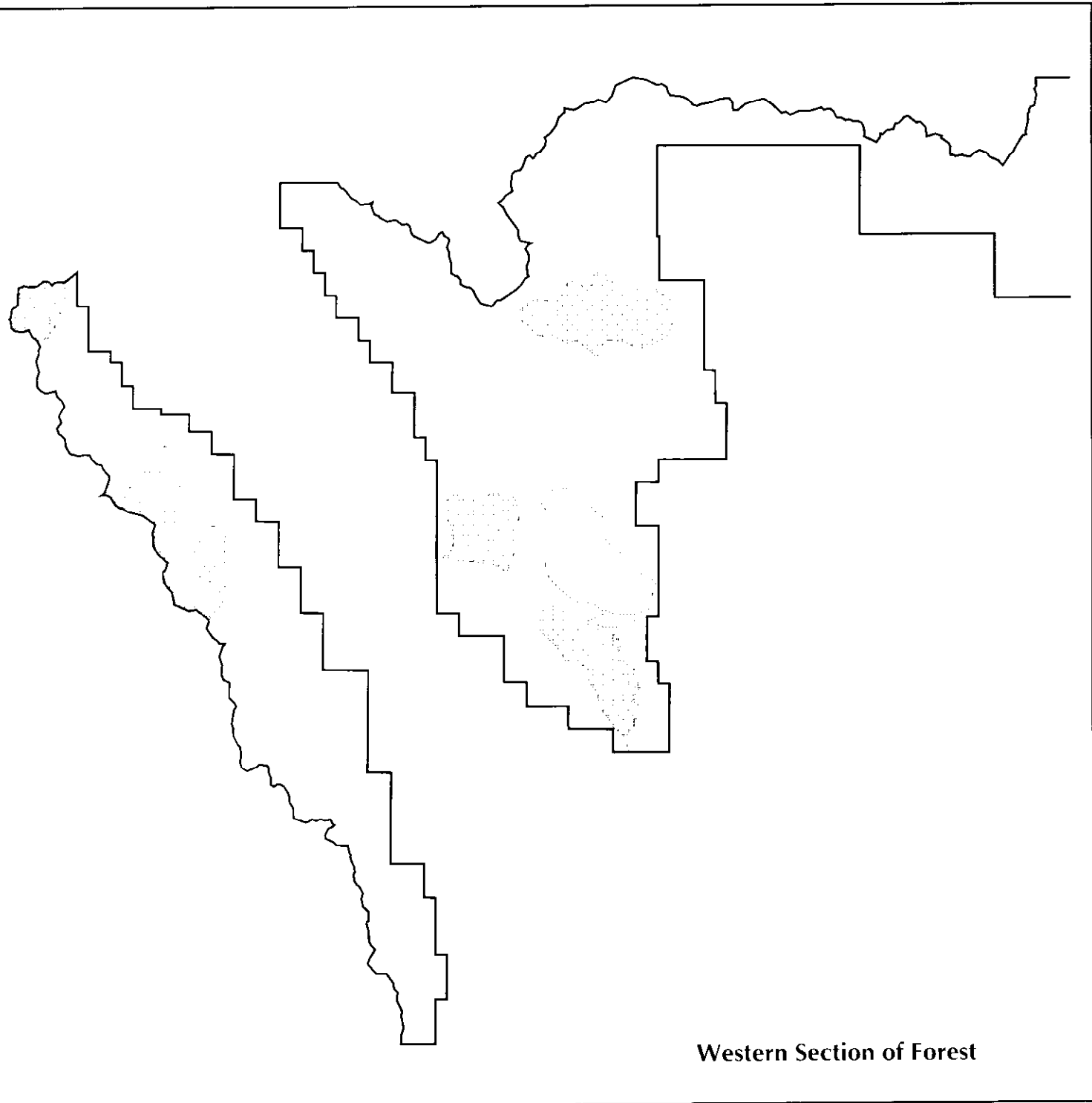
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Final
EIS
April 1997

Domestic Livestock Use Areas

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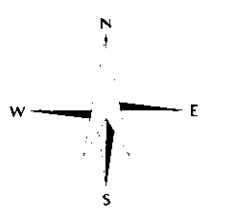
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LEGEND

- Areas Presently Open to Domestic Cattle and Sheep Grazing
- Areas Presently Closed to Domestic Cattle and Sheep Grazing
- Domestic Sheep Grazing to be Phased Out in Alternatives 3-M, 4, 5, and 6 Due to Grizzly Bear Activity
- Domestic Sheep Grazing to be Phased Out in Alternatives 3-M, 4, 5, and 6 Due to Big Horn Sheep Activity
- Areas to be Closed to Domestic Cattle and Sheep Grazing in All Alternatives upon Forest Plan Implementation

Forest Plan Revision Targhee National Forest Idaho and Wyoming

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**Final
EIS**
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United States
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Forest Service

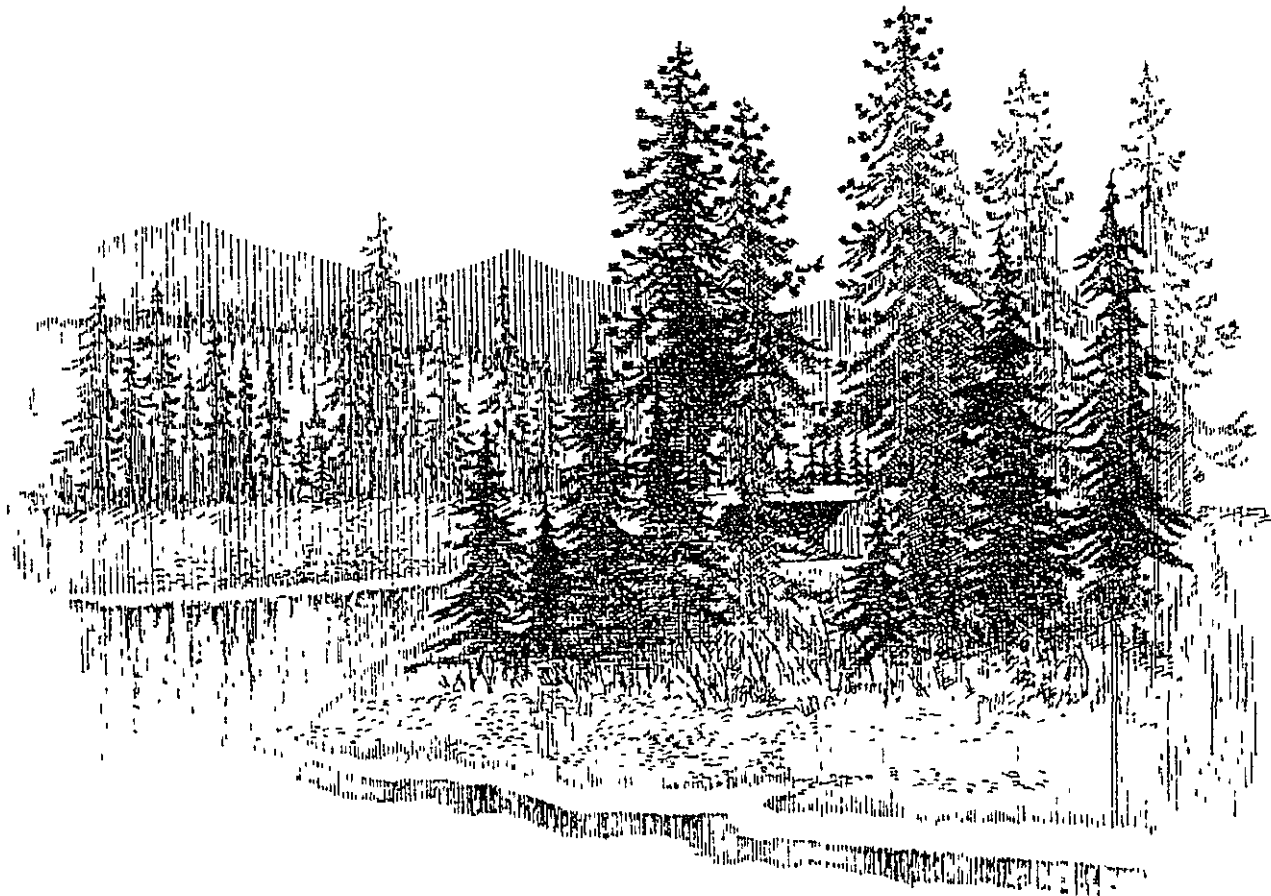
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Forest



1997 Revised Forest Plan

Targhee National Forest



LIST OF ACRONYMS USED IN THE REVISED FOREST PLAN

AMP	Allotment Management Plan
AMS	Analysis of The Management Situation
AOP	Annual Operating Plan (Annual Plan of Operations)
ASQ	Allowable Sale Quantity
ATV	All Terrain Vehicle
AUM	Animal Unit Month
BLM	Bureau of Land Management
C&H	Cattle and Horse (Allotment)
DFC	Desired Future Condition
EM	Ecosystem Management
GIS	Geographic Information System
GYCC	Greater Yellowstone Coordinating Committee
IDT	Interdisciplinary Team
IGBC	Interagency Grizzly Bear Committee
IGBG	Interagency Grizzly Bear Guidelines
INFISH	Inland Native Fish Strategy
MBF	Thousand Board Feet
MIS	Management Indicator Species
MIST	Minimum Impact Suppression Tactics
MMBF	Million Board Feet
NEPA	National Environmental Policy Act
NFMA	National Forest Management Act
NRCS	Natural Resources Conservation Service
OHV	Off-Highway Vehicle
PACFISH	Anadromous Fish Habitat and Watershed Conservation Strategy
PAOT	Persons At One Time
PFC	Properly Functioning Condition
ROD	Record of Decision
ROS	Recreation Opportunity Spectrum
RPD	Rangeland Project Decision
RVD	Recreation Visitor Day
S&G	Sheep and Goat (Allotment)
T&E	Threatened and Endangered
VQO	Visual Quality Objective
WFUD	Wildlife and Fish User Day

REVISED FOREST PLAN
for the
TARGHEE NATIONAL FOREST
Intermountain Region R-4
April 1997

Lead Agency

USDA - Forest Service
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This Revised Forest Plan was prepared according to Secretary of Agriculture regulations (36 CFR 219), which are based on the Forest and Rangeland Renewable Resources Planning Act (RPA) as amended by the National Forest Management Act of 1976 (NFMA). This Revised Forest Plan was developed in accordance with regulations (40 CFR 1500) for implementing the National Environmental Policy Act (NEPA). A detailed Environmental Impact Statement (EIS) has been prepared as required by NEPA and 36 CFR 219.

If any particular provision of this Revised Plan, or the application of the action to any person or circumstances, is found to be invalid, the remainder of the proposed action and the application of that provision to other persons or circumstances shall not be affected.

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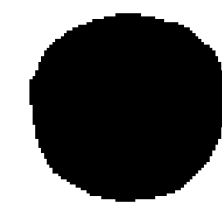
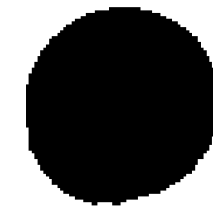
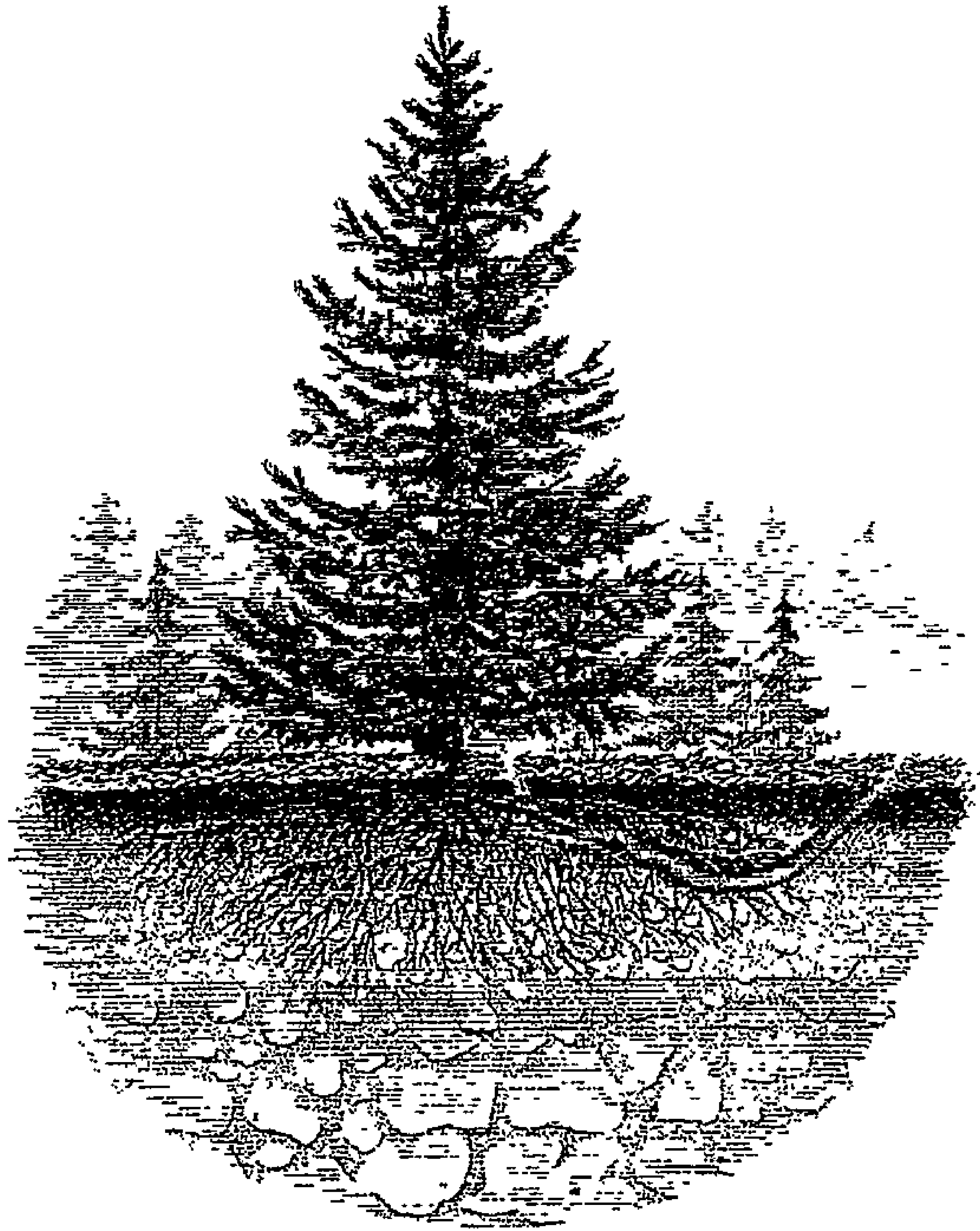


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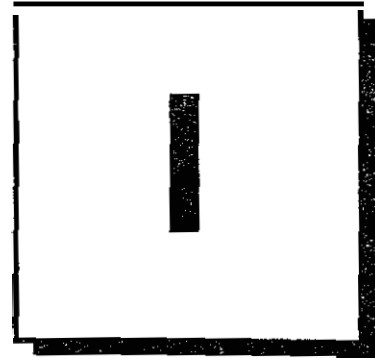
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Chapter



**Revised Forest Plan
Introduction**



CHAPTER I

FOREST PLAN REVISION INTRODUCTION

PURPOSE OF THE LAND AND RESOURCE MANAGEMENT PLAN (FOREST PLAN REVISION)

This Revised Forest Plan (Revision, or Plan) guides all natural resource management activities and establishes management standards for the Targhee National Forest (hereinafter referred to as "the Forest") The Revision embodies the provisions of the Forest and Rangeland Renewable Resources Planning Act (RPA) as amended by the National Forest Management Act (NFMA), Endangered Species Act (ESA), and other guiding documents The forestwide standards and guidelines, subsection direction and management prescriptions state the Revision's management direction, however, the project outputs, services, and rates of implementation are dependent on the annual budgeting process

The Forest Plan will be revised every 10-15 years, or sooner should conditions or demands significantly change

Development of the Revision occurs within the overall framework of both National and Regional Planning The Revision and accompanying Environmental Impact Statement (EIS) are "tiered to the Intermountain Regional Guide Regional planning is a two-way street that helps convey direction from National to the Forest level, and helps transmit information from the Forest to the National level The Regional Guide establishes standards and guidelines, and resolves Regional issues

During the Revision process, alternatives were developed, analyzed, compared, and a preferred alternative selected This Revision is based on the "selected alternative" displayed in the accompanying Environmental Impact Statement (EIS) The planning process and analysis procedures used in developing this Revised Plan, as well as the other management alternatives that were considered, are described or referenced in the EIS In the development of the alternatives, estimates were made based on broad averages, as to the various activities and resulting outputs of implementing that alternative These estimates were used to compare alternatives and to arrive at the preferred alternative Actual outputs may vary slightly from those displayed in the preferred alternative, however, the intent of the preferred alternative will be met

Revised Forest Plan direction serves as an "umbrella" for the environmental analysis for proposed projects at the Forest and Ranger District levels Future environmental analyses for those projects will refer to this Plan, the accompanying EIS, and related documents wherever possible (the travel plan will be implemented by a separate decision based on the EIS associated with this Plan) Analysis and decision documents will be developed for project level activities not specifically described in this Plan and will concentrate on issues unique to the project

Landscape or watershed analysis is one means of implementing Revised Forest Plan direction It is not a process independent of the Plan, but fits under the Plan "umbrella" This process evaluates ecological, social, and economic conditions—present and historical—at a geographic scale between the entire Targhee National Forest and a much smaller individual project area It generally assesses conditions at a watershed (such as Camas Creek) or subsection (such as Centennial Mountains) scale This assessment precedes analysis and decision-making on individual project proposals in the landscape analysis area Subsequent site-specific project analyses use the broader scale analysis to set the context for the proposed activities and their anticipated results

Most projects will not be preceded by a landscape analysis because it is an intense analysis process. However, landscape analysis may be helpful for

- identifying and evaluating ecosystems in properly functioning condition and systems at risk,
- providing baseline data and information for project planning,
- understanding the role of historical processes and patterns within which current management actions can take place,
- identifying priorities for project proposals,
- predicting cumulative environmental effects beyond the project area, and,
- integrating individual project outcomes into the larger ecological landscape

The Revision does not give specific "how-to's" for project implementation. Many implementation plans will be developed during the life of the plan that will provide this operational direction. These plans will be adapted as new scientific principles and methods become available to improve resource management activities. The Revision contains detailed guidance for implementing travel management plan maps for all Districts on the Forest. A fire management plan for the Jedediah Smith Wilderness will be completed shortly which outlines operational direction for that portion of the Forest.

The Revision replaces previous resource management plans. Upon final approval of the Revision, all Forest activities, including budget proposals, will conform to it. All permits, contracts, and other uses of Forest lands must also conform with the Revision. Some existing permits and leases are already committed. In this case, existing contracts will remain in effect until they can be adjusted to accommodate Revision direction.

REVISION STRUCTURE

The Revision provides the long-term direction for managing the Forest. When implemented it will achieve the desired condition for the Forest.

The Revised Forest Plan is organized into five chapters and one appendix.

Chapter I Forest Plan Revision Introduction

Discusses the general purpose of the Plan, the relationship of the Plan to other documents, and the Plan structure. Includes a brief description of the Forest.

Chapter II Summary of the Analysis of the Management Situation (AMS)

Summarizes the key information contained in the AMS and describes the need to revise the original Targhee National Forest Land Management Plan. Presents the Desired Future Condition for the Forest.

Chapter III Management Direction

Presents the forestwide management direction, descriptions and direction for ecological subsections, and lists the management prescriptions. Collectively these represent direction for management of the Forest.

Chapter IV Implementation of the Plan

Displays the timber activity schedule contemplated to meet the Desired Future Conditions (DFC) set forth in the EIS.

Chapter V Monitoring and Evaluation

Shows how the Forest will monitor compliance with, and performance of, critical standards and guidelines in the Revision. In this sense it is a part of a larger range of project level monitoring activities which take place on the Forest

Appendix A

National Direction Relevant to Land and Resource Management

Appendix B

U S Fish and Wildlife Service Biological Opinion

Literature Cited, References

Glossary

Defines technical terms used throughout the document

LOCATION OF THE FOREST

The Forest contains approximately 1,789,000 acres of National Forest System land located in south-east Idaho and western Wyoming. Parts of the Forest lie in the Idaho counties of Bonneville, Butte, Clark, Fremont, Jefferson, Lemhi, Madison, Teton, and the Wyoming counties of Lincoln and Teton. The Forest is bordered on the east by Yellowstone and Grand Teton National Parks and the Bridger-Teton National Forest, on the south by the Caribou National Forest, on the west by the Challis and Salmon National Forests, and on the north by the Beaverhead and Gallatin National Forests. Figures I-1 and I-2 display the location of the Forest on a National and local scale.

The Forest has five administrative Districts

District	Net Acres
Dubois D-1	449,416
Island Park D-2	285,712
Ashton D-3	347,130
Palisades D-4	442,447
Teton Basin D-5	264,341

The Forest Supervisor's office is located in St. Anthony, Idaho

Vicinity Map of Targhee National Forest on a National Scale

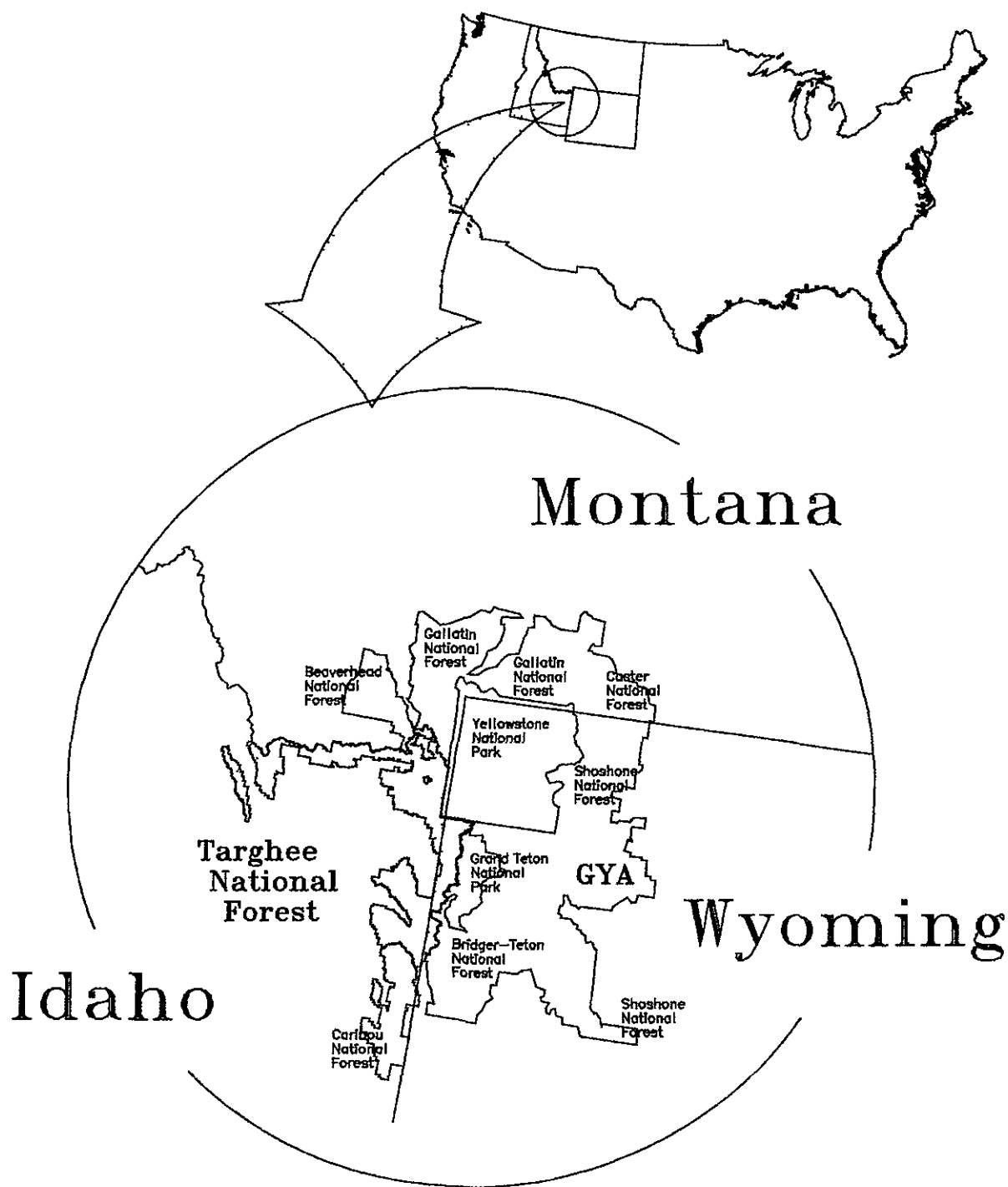
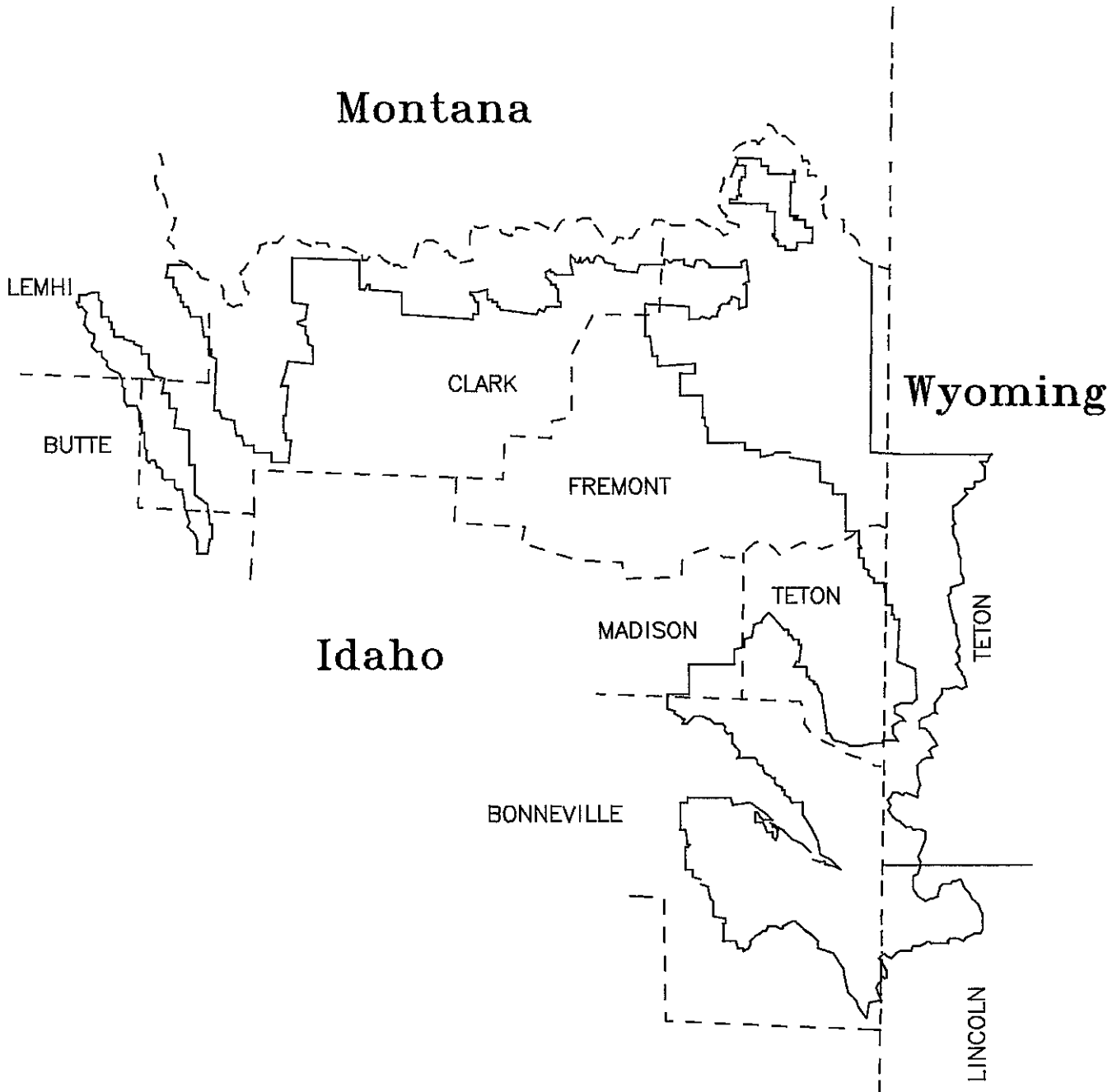


Figure I-1

Vicinity Map of the Targhee National Forest and the Surrounding Area

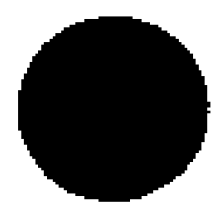
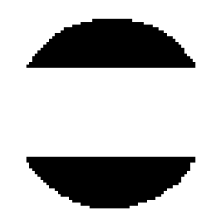


- Forest Boundary
- - - State Lines
- - - - County Lines

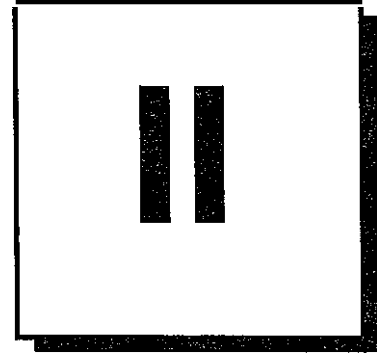


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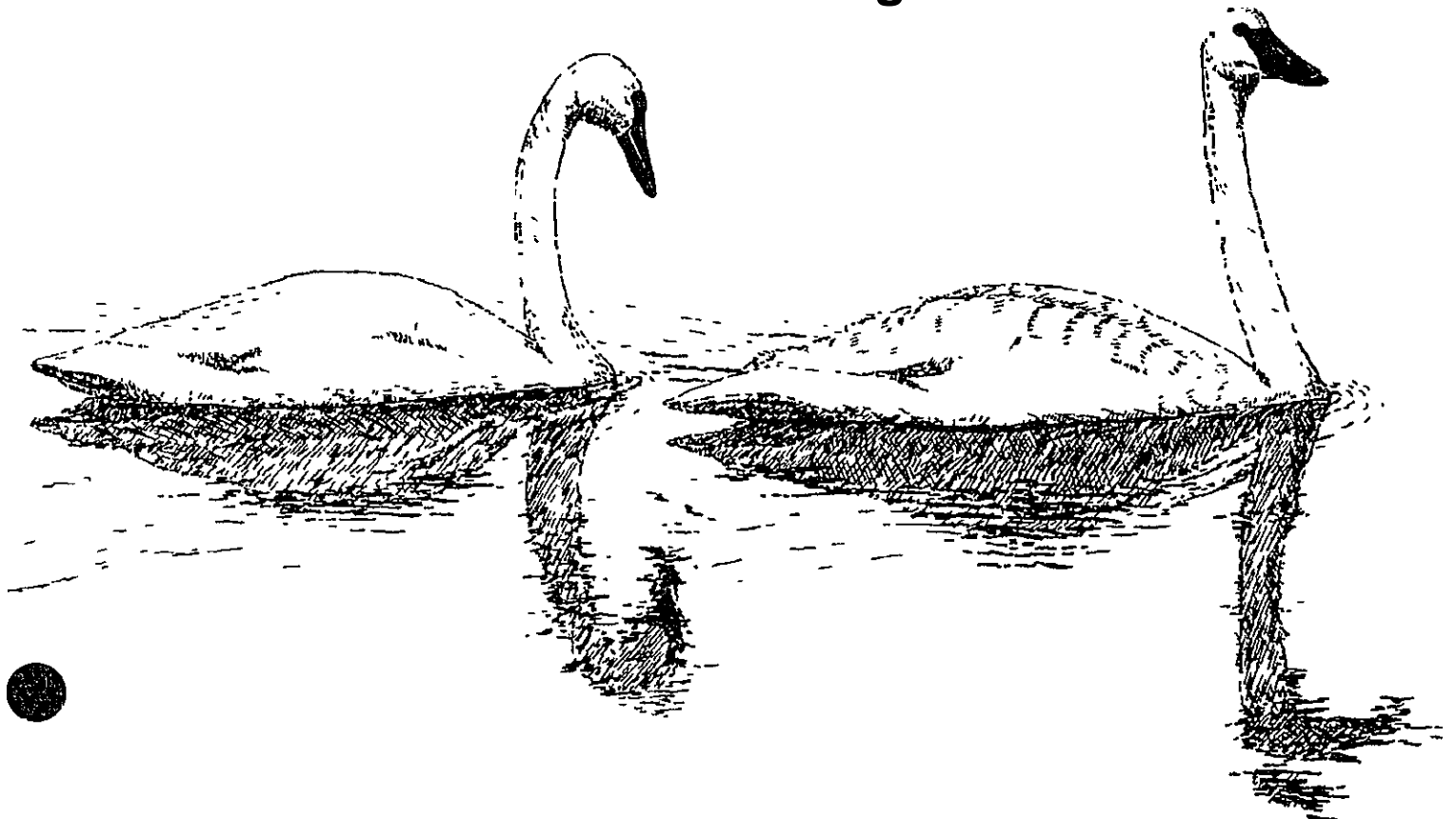
Figure I-2



Chapter



Summary of the Analysis of the Management Situation



CHAPTER II

SUMMARY OF THE ANALYSIS OF THE MANAGEMENT SITUATION

Introduction

This chapter summarizes the key information contained in the Analysis of the Management Situation (AMS) and describes the need to revise the Targhee National Forest Land Management Plan

Purpose of Preparing an AMS

As part of the Revision process an AMS was completed in 1992 (USDA Forest Service, Targhee National Forest, 1992) A comprehensive review of the existing Plan identified changed conditions and new information, including new public issues and changed public attitudes and awareness, which affected the appropriateness of continuing with the management direction in the Plan The AMS is on file at the Targhee Supervisor's Office This analysis 1) described the present Forest condition, 2) defined the progress that has been made in implementing the Plan with respect to accomplishment of goals and objectives set forth in the Plan, and 3) showed how effective standards and guides were in achieving the desired future conditions described in the Plan Process papers provide additional information These are listed in the literature cited section of this document

Primary Emphasis of the Plan

A primary goal of the existing Plan was to harvest and reforest the thousands of acres of lodgepole pine that had been killed or damaged by the mountain pine beetle To achieve this goal, species/product mix objectives were established Concerning species mix, about ten percent of the acres harvested were to be Douglas-fir and about 90 percent lodgepole pine Another objective was to provide a product mix that was 40 percent sawtimber and 60 percent other products, such as posts, poles and firewood A third objective limited the percent or number of acres within each Management Area that would be harvested

Results of Monitoring

Monitoring indicated the volume of timber actually harvested, for both lodgepole pine and Douglas-fir, was near planned levels This volume was taken from 58 percent of the acres originally considered for harvest

It was expected that the Allowable Sale Quantity (ASQ) would be reached while operating within standards and guidelines The Forest began to experience difficulty in achieving this level of outputs within these constraints Agency direction states that ASQ will be adjusted if standards and guidelines cannot be met

The species mix objective was achieved, with the total harvest consisting of 11 percent Douglas-fir and 89 percent lodgepole pine The product mix objective was not met The product mix was 76 percent sawtimber and 24 percent other products This exceeded the 20 percent variance set forth in the Plan

Habitat effectiveness for big game and grizzly bear was reduced through increases in road density and reduction of forest cover Some degraded riparian habitats showed improvement as a result of implementing the standards and guidelines in the original Plan

The number of plant and animal species on the Forest listed as threatened or endangered has increased by one with the recent discovery on the Forest of the Ute ladies'-tresses, a threatened species of orchid. Bald eagles (threatened) and peregrine falcons (endangered) have reached recovery levels on the Forest and there is a need to address long-term management needs for these species. The number of plant and animal species on the Forest which are listed as sensitive by the Intermountain Region of the Forest Service has increased as more information on occurrence and habitat needs has become available.

Public Interaction and DFC

Social needs and desires have changed. This is evidenced by the comments received in scoping for individual projects, public meetings, and the number of administrative appeals and lawsuits that challenged the application of Forest management. The proposals most frequently challenged after 1991 were timber harvests. Issues centered on impacts to wildlife and, to a lesser extent, recreation and scenic values.

The original Forest Plan was designed by focusing primarily on capabilities of the land to produce commodities such as timber or livestock forage. The advent of ecosystem management (EM) requires that the Forest be managed for sustainability of all ecosystem components, some of which were not adequately addressed in the original Plan.

Public comments and ideas received through scoping identified new public expectations as to what uses and benefits the Forest should provide. The new Desired Future Condition (DFC) which emerged could not be achieved under the original Plan direction. It is described below.

Desired Future Condition for Ecosystem Processes and Patterns

A mosaic of age classes and types of vegetation are sustained through time and exist across the landscape. Natural disturbances such as insects, disease, and fires continue their natural roles in ecosystem. The Forest functions as an integral part of the Greater Yellowstone Ecosystem as well as adjacent systems sustaining habitat and conditions necessary for free movement of wildlife.

Desired Future Condition for Biological and Physical Resources

Riparian zones (aquatic influence zones) are healthy and productive. Aquatic systems are allowed to function naturally while protecting flows for downstream consumptive uses. Riparian area integrity contributes to productive fisheries and excellent water quality. Native plant and animal species are favored over undesirable nonnative species and sustained populations of all native and desirable species thrive. Habitat conditions contribute toward the recovery of threatened, endangered and sensitive species.

Desired Future Condition for Forest Use and Occupation

Growing and diverse recreational, cultural, visual, historical, and prehistoric management, interpretive and spiritual needs are accommodated based on the capability of the ecosystem to sustain these uses. Recreation use is managed to minimize conflicts between incompatible uses and provide high levels of satisfaction. Year-round human access is managed to provide both motorized and nonmotorized recreation opportunities. A system of trails and support facilities exist which are compatible with resource capabilities. Roadless characteristics are preserved in the proposed wilderness areas and in existing wildernesses.

Desired Future Condition for Production of Commodity Resources

Commodity production, such as timber, firewood, mining, livestock forage, or outfitting and guide services are conducted at sustainable levels and maintain the capability of the land to produce an even flow and variety of goods and services for present and future generations. Timber harvest, prescribed fires and livestock grazing are tools used to achieve desired ecological vegetation conditions. Forest products are provided to sustain social and economic values and needs of the local communities within limits which maintain ecosystem health.

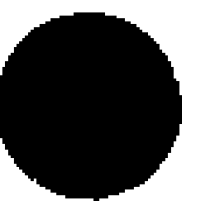
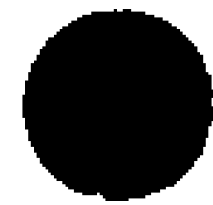
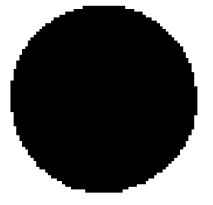
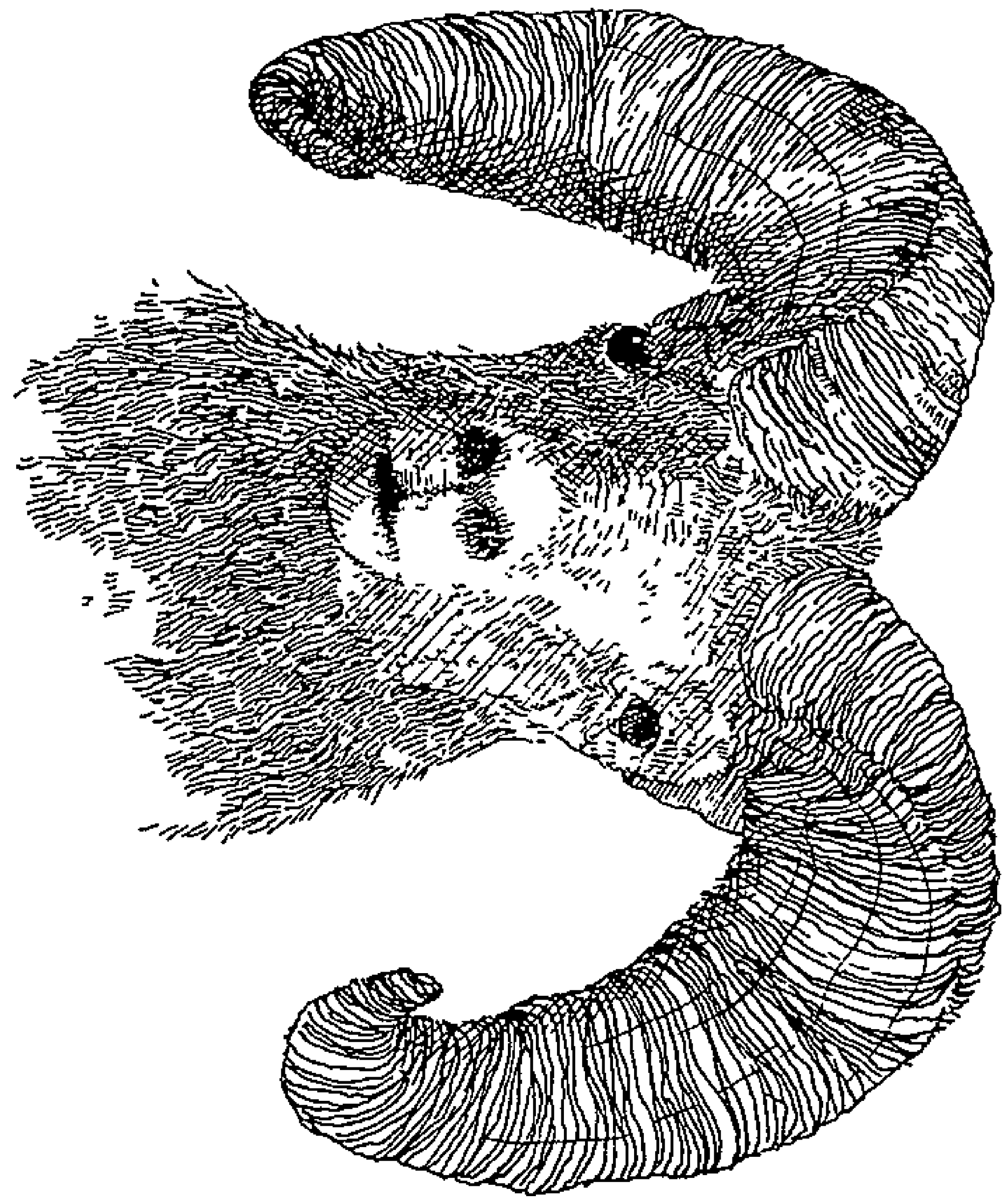
New Information

Another reason for embarking on the Revision was the need to review and incorporate new knowledge and techniques to improve sustainability of ecosystems. Recent studies and publications indicate, for example, that road density plays a more crucial role in habitat management for elk and grizzly bears than was assumed in the original Plan. Much work has been done to develop standards for nesting and foraging habitat for goshawks and other raptors. EM efforts analyzing fish habitat in the Upper Columbia River Basin have suggested new ways of managing fisheries and aquatic ecosystems. These findings and other information have been reviewed for their applicability to habitat management on the Forest and incorporated where appropriate.

Need for Change

The original Targhee Forest Plan, approved in 1985, emphasized an extensive salvage and reforestation program of dead lodgepole killed by a massive mountain pine beetle epidemic over the previous 30 years. This rate of salvage caused, in effect, a departure from a sustained yield of timber harvest and could not be continued beyond the first decade (1985-1995) in an environmentally sound manner. Monitoring of activities during this time showed it was increasingly difficult to meet the standards and guidelines in the 1985 Plan. New information on resource needs and various management practices became evident during this time, and by 1990 it was apparent that a full revision was needed. More specific needs for change are as follows:

- The salvage program has ended. Use of the many roads built during salvage operations by increasing numbers of people is causing unwanted effects to wildlife, riparian areas, and soil productivity.
- The need to review and incorporate new knowledge and techniques continues, especially in wildlife habitat management. For example, recent studies indicate motorized road and trail densities play a crucial role in availability of suitable habitat for elk and grizzly bears. Standards for management activities near nesting and foraging habitat for goshawks and other raptors are needed to protect these crucial areas. Results of studies analyzing fish habitat in the Upper Columbia River Basin are pointing out new ways to manage fisheries. Some of these findings have widespread implications that the revision process was intended to address.
- Although much of the lodgepole pine component on the Forest has been salvaged, there is still a need to use timber harvest as a tool to reach ecosystem objectives, supply a variety of timber products for local use, deter other epidemics like the mountain pine beetle outbreak, and manage the potential for a devastating wildfire, like the Yellowstone Wildfires of 1988.





Chapter



Forestwide Standards and Guidelines, Subsection Direction, and Management Prescriptions



**CHAPTER III
FORESTWIDE STANDARDS AND GUIDELINES,
SUBSECTION DIRECTION, AND PRESCRIPTIONS FOR
IMPLEMENTING THE SELECTED ALTERNATIVE.**

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PART 2 - SUBSECTION DESCRIPTIONS AND DIRECTION	111-34
PART 3 - MANAGEMENT PRESCRIPTIONS	111-65

CHAPTER III - INTRODUCTION

This chapter provides management direction for the Forest for the next 10 to 15 years. This direction takes several forms and is applied at three geographic levels.

Desired Future Conditions (DFCs) are broad target conditions envisioned for the Forest or various resources at some point in the future. They may or may not be totally achieved during the life of the Revised Plan, but they serve to indicate the direction in which management should proceed.

Goal - a concise statement that describes a DFC which normally is expressed in broad, general terms that are timeless, in that there is no specific date by which each goal is to be achieved.

Objective - a concise, typically time-specific statement of a condition, outcome, or purpose. Objectives are often measurable planned results that respond to goals.

Standard - a condition of land, normally a maximum or minimum condition, that is measurable. A standard can also be expressed as a constraint on management activities or practices. Standards are established on a forestwide, subsection, and management prescription area basis to promote achievement of the DFC and objectives. Deviation from compliance with a standard requires a Forest Plan amendment (except for emergency situations as explained below). (USDA Forest Service, 1993)

Guideline - a preferred or advisable course of action that is generally expected to be carried out. Deviation from compliance with a guideline does not require a Forest Plan amendment, but the rationale for such a deviation shall be documented in the project decision document. Guidelines are established on a forestwide, subsection, and management prescription area basis to promote achievement of the desired future condition and objectives in an operationally flexible manner that responds to such variations as changing site conditions or changed management circumstances. (USDA Forest Service, 1993)

If the wording of an item appears to conflict with its label, the label shall prevail ("S" for standard, "G" for guideline).

Direction in the form of goals, objectives, standards and guidelines is prescribed at three different geographic levels in the Revised Plan. This direction is described in the following three parts of this chapter.

Part 1 -- Forestwide Standards and Guidelines. Direction is provided for individual and collective resources. This applies forestwide unless otherwise stated in subsequent parts of the chapter. Forestwide direction is organized into five components which are consistent with descriptions in the Final EIS for this Revised Plan. These components are Ecological Processes and Patterns, Biological Elements, Physical Elements, Forest Use and Occupation, and Production of Commodity Resources.

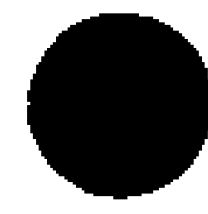
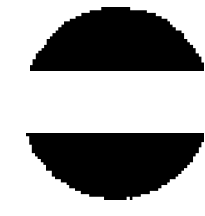
Part 2 -- Subsection Direction. This part of the chapter describes the Forest in terms of seven large geographic units, or ecological subsections. This provides a locational perspective to overall management direction. Conditions in each subsection are briefly described and broad DFCs are presented. These are followed by goals, objectives, standards and guidelines as applicable.

Part 3 -- Management Prescriptions. An array of different management regimes are presented here which have been applied to various parts of the Forest to address specific management needs or public desires. The 45 prescriptions are organized in categories and presented in a sequence allowing progressively more active management. Prescriptions beginning with a "1" provide direction

for areas managed as wilderness, wilderness study areas or recommended wilderness, while series "8" prescriptions give direction for areas managed for concentrated development such as ski areas or utility corridors. All prescriptions are organized according to the five components used in the Final EIS and forestwide direction.

In the event of conflicting direction for a given area of the Forest, the direction stated under the applicable prescription shall prevail, with few exceptions. Where prescription direction is superseded by Forestwide or subsection direction, this is explicitly stated in those parts of the chapter.





CHAPTER III - PART 1 FORESTWIDE STANDARDS AND GUIDELINES

FORESTWIDE STANDARDS AND GUIDELINES

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INTRODUCTION

The forestwide standards and guidelines are organized by ecological groupings, as shown in the table of contents. The standards and guidelines in this section of the document are common to the entire Forest. Forestwide goals and (in some cases) objectives are provided for each resource area and/or activity. Following the goals and objectives, the specific standards and guidelines are presented. A standard is identified with an (S), and a guideline is identified with a (G). A diligent effort has been made to make these goals and objectives, and standards and guidelines specific to the Forest. This set of standards and guidelines is the result of many suggested changes made by our publics and employees.

The existing body of national direction for managing a National Forest remains in effect. The standards and guidelines presented herein provide direction more specific to the needs of the Targhee. A summary of national program and regional policy and goals can be found in Appendix A. The direction from the references cited in Appendix A is incorporated herein as additional forestwide direction.

If an emergency event occurs on the Forest, deviation from these standards and guidelines may occur in order to protect human life, property values and structures, and forest resources. Activities in response to emergency events include such things as law enforcement, search and rescue, and fire.

ECOLOGICAL PROCESSES AND PATTERNS

Properly Functioning Condition (PFC)

✓ Goals - PFC

- 1 Ecosystems and their components are maintained in properly functioning condition: dynamic and resilient to disturbances to structure, composition, and processes at appropriate landscape scales. Ecosystems are not at risk for disturbances that have the potential to degrade them beyond the point of resiliency and sustainability.
- 2 Ecological systems at risk are identified and prioritized for management action.
- 3 In assessing properly functioning condition, the biological and physical, social, and economic components of ecosystems are considered.
- 4 Management strategies are used to maintain or restore ecological integrity, productivity and sustainability over time.
- 5 Biodiversity is maintained or enhanced by managing as much as possible for a diverse array of habitats tied to natural occurrence and distribution of plant communities.
- 6 Adaptive management strategies are used to gain understanding during project implementation and make adjustments to maintain and restore properly functioning condition.

/Objective - PFC

- 1 Within three years, complete a PFC assessment within a selected subsection.

Standards and Guidelines - PFC

- 1 During landscape or watershed analyses, identify ecosystems in properly functioning condition and those at risk (G).

2 Where appropriate, during project planning and implementation, identify and prioritize systems at risk for corrective treatment or action (G)

Insects and Disease

Goal

Insects and disease are allowed to play their natural role in ecosystem dynamics to the extent compatible with other resource objectives

Fire

Goals

- 1 Identify the historic role of fire and restore fire as an ecological process, where appropriate to achieve multiple-use and ecosystem management objectives
2. Prescribed fire and managed natural fire is used to achieve desirable soil and habitat characteristics, improve forest health, and create or maintain diversity in vegetative structure, composition, and patterns as described in PFC analysis
- 3 Suppress fire in a safe, cost effective manner where necessary to protect human life and safety, developments, structures, and sensitive resource values
- 4 Fuel accumulations are reduced and managed within their historic range

Objectives

- 1 By 2007, develop at least one fire management plan for a priority area within each of the seven subsections
- 2 By 2005, initiate a program to burn a minimum 2,000 acres annually for habitat improvement, fuels management, and forest health, consistent with approved fire management plans

Standards and Guidelines

When feasible and appropriate, use prescribed burning to dispose of slash in order to return the inorganic and organic chemicals in the foliage and small woody material to the soil, to reduce fire hazard and to provide seed beds for natural regeneration (G)

PHYSICAL ELEMENTS

Soils

Goal

Long-term soil productivity is sustained by retaining fine organic matter and woody residue on activity areas

Standards and Guidelines - Soil Quality (applicable only to current activity areas)/Forested Ecosystems

- 1 Fine Organic Matter Generally strive to maintain fine organic matter over at least 50 percent of

the area. The preference is for fine organic matter to be undisturbed, but if disturbed, it should be of sufficient quantity and quality to avoid detrimental nutrient cycle deficits. If the soil and potential natural community are not capable of producing fine organic matter over 50 percent of the area, adjust minimum amounts to reflect potential soil and vegetation capability (G)

2 Woody Residue Requirements for Materials three inches in Diameter or larger. Sustain site productivity by providing the following minimum amounts of woody residue dispersed on the site (G)

WOODY RESIDUE REQUIREMENT FOR WOODY MATERIALS >= 3 INCHES IN DIAMETER		
Woody Residue Minimum Requirement (tons/acre) 1/	Forest Habitat Type	
3-5	Limber pine/curl-leaf mountain mahogany (Pifi/Cele) Douglas-fir/common juniper (Psmc/Juco)	Douglas-fir/mountain snowberry (Psmc/Syor) Lodgepole pine/heartleaf arnica (Pinc/Arco)
5-10	Douglas-fir/ninebark (Psmc/Phma) Douglas-fir/mountain maple (Psmc/Acgl) Douglas-fir/blue huckleberry (Psmc/Vagl) Douglas-fir/grouse whorleberry (Psmc/Vasc) Douglas-fir/common snowberry (Psmc/Syal) Douglas-fir/white spirea (Psmc/Spbe) Douglas-fir/pine grass (Psmc/Caru) Alpine fir/white spirea (Abla/Spbe)	Alpine fir/pine grass (Abla/Caru) Alpine fir/heartleaf arnica (Abla/Arco) Whitebark pine/ross sedge (Pial/Caro) Lodgepole pine/blue huckleberry (Pico/Vagl) Lodgepole pine/grouse whorleberry (Pico/Vasc) Lodgepole pine/white spirea (Pico/Spbe) Lodgepole pine/pine grass (Pico/Caru) Lodgepole pine/elk sedge (Pico/Cage)
10-15	Douglas-fir/mountain sweetroot (Psmc/Osch) Engelman spruce/softleaved sedge (Pien/Cadi) Alpine fir/ninebark (Abla/Phma) Alpine fir/blue huckleberry (Abla/Vagl) Alpine fir/grouse whortleberry (Abla/Vasc)	Alpine fir/mountain arnica (Abla/Arta) Alpine fir/common snowberry (Abla/Syal) Alpine fir/western meadow-rue (Abla/Thoc) Alpine fir/oregon grape (Abla/Bere)
15-20	Engelman spruce/sweetscented bedstraw (Pien/Gatr)	Alpine fir/baneberry (Alba/Acru) Alpine fir/mountain sweetroot (Abla/Osch)

3 During site preparation treatments, strive to avoid disturbing concentrated areas of soil wood (G)

Standards and Guidelines - Slope Stability for Mineral Activities

1 In areas of high mass instability, that have been ground verified, occupancy shall not be allowed (S)

2 In areas identified as having moderate instability, and that are ground verified, occupancy may be allowed provided it can be shown the project design can prevent unacceptable resource damage (G)

Caves

Standards and Guidelines

1 Restrict logging, road construction, and other uses of heavy equipment above or in the vicinity of a cave with a thin roof, or the course of such a cave, if there is a potential for damage (G)

2 Retain vegetation in the vicinity of a cave or cave course if it is required to protect the cave's microenvironment (habitat, climate, vegetation, etc) (G)

3 Fell trees away from the cave and its course if timber harvesting is permitted in the vicinity of a cave (G)

4 Cave entrances will not be altered or used as disposal sites for slash or other refuse and no action will be taken to prevent or hinder ingress or egress of cave-dependent wildlife Gating of cave entrances will be allowed as long as physical alteration of the entrance is not needed to construct the gate Wilderness values will also be considered prior to installing such structures (S)

5 Management activities will not be permitted within any area draining into a cave if they are likely to affect the cave ecosystem through sedimentation, soil sterilization, the addition of nutrients or other chemicals (including pesticides, herbicides, and fertilizers) or by changing the cave's natural hydrology (S)

6 Do not allow alteration of natural surface drainage into or away from caves (S)

Lands

Goals

1 A well planned system of reliable and technically feasible energy corridors are provided to serve existing and future regional and local energy needs, compatible with other resource needs and objectives These corridors may be either designated (prescription 8 1) or nondesignated (other prescriptions)

2 The National Forest System lands set aside for utility corridors are minimized to reduce fragmentation and minimize acres allocated for that use

Objective

Remove utility facilities located in avoidance or exclusion areas as it becomes practical to do so

Standards and Guidelines

Allow for essential access for repair and maintenance of facilities within energy corridors (S)

Avoid parallel corridors Consolidate facilities within existing energy corridors where feasible (G)

Bury new lines and upgrades/replacements when feasible (G)

Proponents of new facilities within existing corridors, and new corridor routes, must demonstrate clearly that the proposal is in the public interest, and that no other reasonable alternative exists to public land routing (G)

Minerals

Goal

Implement leasing decisions including identification of lands available for leasing made in the Forest Oil and Gas Leasing EIS and its associated Record of Decision

Standards and Guidelines - Locatable and Mineral Materials

1 Common Minerals Give priority to use of currently developed common mineral (natural gravel and hard rock) material sources over undeveloped sources Exceptions should be made when existing

sources are unable to economically supply the quality and quantity of material needed or when conflicts with other resource uses are found to be unacceptable (G)

2 The Forest is open to exploration and development and production of locatable, leasable, and mineral material resources unless otherwise specified in the management prescriptions (S)

3 Oil and gas pipelines and other related utilities should share utility corridors except as needed to meet other resource objectives (G)

BIOLOGICAL ELEMENTS

Fisheries, Water, and Riparian Resources

Goals

1 Maintain or improve water quality to meet water quality standards for the States of Idaho and Wyoming

2 Water quality will improve on stream segments on the Forest identified by the States of Idaho and Wyoming as having water quality concerns and they are removed from the Water Quality Limited list

3 Maintain or restore water quality, to a degree that provides for stable and productive riparian and aquatic ecosystems

4 Maintain or restore stream channel integrity, channel processes, and the sediment regime (including the elements of timing, volume, and character of sediment input and transport) under which the riparian and aquatic ecosystems naturally developed

5 Maintain or restore instream flows to support healthy riparian and aquatic habitats, the stability and effective function of stream channels, and the ability to route discharges

6 Maintain or restore the natural timing and variability of the water table elevation in meadows and wetlands

7 Maintain or restore the diversity and productivity of native and desirable nonnative plant communities in riparian zones.

8 Maintain or restore riparian vegetation to

A Provide an amount and distribution of large woody debris characteristic of natural aquatic and riparian ecosystems,

B Provide adequate summer and winter thermal regulation within the riparian and aquatic zones,

C Help achieve rates of surface erosion, bank erosion, and channel migration characteristic of those under which the communities developed naturally

9 Maintain or restore aquatic habitats necessary to support overall biodiversity, including unique genetic fish stocks such as native cutthroat trout that evolved within the specific geo-climatic regions

10 Maintain or restore habitat to support populations of well-distributed native and desired nonnative plant, vertebrate, and invertebrate populations that contribute to the viability of riparian-dependent communities

11 Wherever possible, secure water rights for maintenance of riparian and aquatic habitat, under State appropriative law, State reserved rights (in Wyoming), and Federal reserved rights

12 Focus maintenance and restoration efforts, where needed, within inventoried hydrologically disturbed watersheds

13 Participate in cooperative river basin planning efforts. Coordinate management activities to be consistent with the results of these efforts including the Henry's Fork Basin Plan and the South Fork Snake Basin Plan

Objectives

1 By 2007, complete watershed improvement needs backlog in the Lemhi/Medicine Lodge, Big Hole Mountains, and Caribou Range Mountains Subsections. Verify watershed improvement needs identified in the Teton Basin Study. Inventory watershed improvement needs on the Centennial Mountains, Madison-Pitchstone Plateaus, and Teton Range Subsections

2 Within two years after the ROD is signed, coordinate with the States of Idaho and Wyoming to 1) reassess the health of native cutthroat trout populations within the Lemhi/Medicine Lodge, Centennial Mountains, Island Park, Madison-Pitchstone Plateaus, and Teton Range Subsections, 2) use this information to further define species recovery needs and opportunities and to evaluate the effectiveness of the Native Trout Watersheds, and 3) determine which subwatersheds (drainages) within Native Trout Watersheds are vital to native cutthroat trout recovery. The designated Native Trout Watersheds on the Forest are Elk Creek (003), Palisades Creek (004), Rainey Creek (005), Pine Creek (006), Heise (007), Henry's Fork Headwaters (008), Robinson Creek (013), Trail Creek (017), Mahogany Creek (022), Moody Creek (024), Bitch Creek (032), Burns-Pat Canyon (035), McCoy-Jensen Creeks (036), Elk-Bear Creeks (037), Fall Creek (038), Prichard Creek (039), and Brockman Creek (040)

3 Within four years after the ROD is signed, coordinate with the States of Idaho and Wyoming to 1) reassess the health of native cutthroat trout populations within the Big Hole Mountains and Caribou Range Mountains Subsections, 2) use this information to further define species recovery needs and opportunities, and 3) determine which subwatersheds (drainages) within designated Native Trout Watersheds are nonessential to native cutthroat trout recovery

4 Coordinate with sub-basin assessments for implementation of State water quality standards (Total Maximum Daily Loads, TMDLs)

Standard and Guideline - Watershed, General

Not more than 30 percent of any of the principal watersheds and their subwatersheds should be in a hydrologically disturbed condition at any one time (G)

Standards and Guidelines - Fisheries and Other Aquatic Resources

1 New special use permits or new Forest Service projects involving instream facilities (exclusive of facilities retrofitted to existing dams) must maintain minimum instream flows as specified by the Forest or State and, on fish-bearing streams provide for fish passage and include screening devices to prevent accidental loss of fish (S)

2 When reauthorizing existing special use permits or existing Forest Service projects involving instream facilities (exclusive of facilities retrofitted to existing dams), where feasible, provide for minimum instream flows as specified by the Forest or State and, on fish-bearing streams, where feasible, provide for fish passage and include screening devices to prevent accidental loss of fish (G)

For guidelines 3, 4, and 5, refer to the following discussion and Table

The following table describes expected values for specific habitat features which are reflective of good fisheries habitat conditions and are also indicators of ecosystem health. It is intended to guide management of native cutthroat trout habitats. Although individual habitat features will be measured at the stream reach scale, the criteria for meeting the expected values apply at the watershed scale, generally for third- to sixth-order streams. These expected values are based on the best available information including INFISH. They are intended as a starting point and can be refined later, based on field analysis or literature review, to better reflect conditions that are attainable in a particular watershed or stream reach.

EXPECTED VALUES FOR HEALTHY NATIVE FISH HABITAT CONDITIONS AT THE WATERSHED SCALE	
Habitat Feature	Expected Value
Pool Frequency (all systems)	At least 1 pool per length of stream equal to 5-7 times the channel width
Water Temperature	Within spawning habitats 13 C or less with a maximum daily average no greater than 9 C ^{1/} Within adult holding habitat 16 C with a maximum daily average no greater than 12 C
Large Woody Debris (forested systems)	> 20 pieces per mile ^{2/}
Bank Stability (nonforested systems)	> 80 percent
Lower Bank Angle (nonforested systems)	> 75 percent of banks with < 90 degree angle
Width/Depth Ratio (all systems)	Must be suitable for the Rosgentype of the given stream reach ^{3/}
<p>^{1/} This criterion applies to the period of time from spawning to emergence. In lieu of site-specific information, use March 1 to September 15</p> <p>^{2/} Criteria must meet R1/R4 stream inventory procedures</p> <p>^{3/} Rosgentype refers to a stream classification system which categorizes streams based on entrenchment, gradient, width to depth ratio, sinuosity, and channel materials</p>	

3 Within subwatersheds occupied by native cutthroat trout or designated as vital to meeting recovery goals, avoid management activities that are found, through interdisciplinary site-specific analysis, to either reduce habitat features below the expected values described above or retard the rate of recovery of degraded habitat features (G)

4 Emphasize watershed analysis or site-specific analysis to more accurately define fisheries habitat features when planning or conducting management activities within Native Trout Watersheds (G)

5 Values for fish habitat features may be adjusted based on field analysis or literature review. A clear rationale supporting the adjustment must be documented (G)

Vegetation

Goals

- 1 Maintain and restore healthy, diverse forested and nonforested ecosystems through time, including appropriate components of dead and down woody material
- 2 Use vegetation management to achieve a broad array of multiple-use and ecosystem management objectives, including maintenance, improvement, and restoration of
 - forest health,
 - scenic viewsheds and corridors,
 - wildlife habitat effectiveness and quality,
 - hazardous fuels reduction,
 - biological diversity of plant and animal communities,
 - riparian and watershed health and function,
 - vegetation structure, composition, and distribution in larger landscapes

Objectives

- 1 By 2007, identify properly functioning condition (PFC) and systems at risk for forested landscapes
- 2 Within five years, complete a properly functioning condition assessment for the lodgepole pine community type and develop long term vegetation and density management strategies to reduce the risk of a future catastrophic bark beetle epidemic

Standards and Guidelines

- 1 Where appropriate, use methods of vegetation treatment that emulate natural ecological processes to maintain or restore properly functioning ecosystems (G)
- 2 Forest vegetation manipulation on lands not included in the ASQ will be accomplished to meet the individual management prescription direction. Production of wood products will not be the primary consideration. Harvest will be accomplished with sufficient mitigation to protect and maintain soil, wildlife, visual, and aquatic resources (S)
- 3 Vegetation manipulation may include mechanical treatments, commercial or noncommercial timber harvest of wood products, prescribed fire, or other appropriate methods (G)
- 4 Vegetation manipulation through timber harvest on lands not included in the ASQ will not exceed 20 million board feet (MMBF) per decade (S)
- 5 Treat aspen plant communities to reduce encroaching conifers and maintain a balance of age classes for these communities (G)
- 6 Old Growth and Late Seral Forest Stages
 - A In each principal watershed, the combination of old growth and late seral forest stage acres will be 20 percent or more of the forested acres. Where it exists, at least half of this (ten percent of the forested acres) should meet old growth characteristics (G)
 - 1 For aspen and conifer forest types, acres classified as old growth and late seral should be in blocks over 300 acres in size (a block can consist of a combination of old growth and late successional forest types) (G)

Within these blocks

- a Maintain 80 percent or greater primary cavity nesting species habitat capability (see Wildlife Standards and Guidelines - Snag/Cavity Nesting Habitat) (G)
 - b Maintain the wildlife dead and down woody material guidelines (see Wildlife Standards and Guidelines - 1 Dead and Down Material) (G)
 - c Silvicultural techniques may be used to maintain or improve old growth and late successional characteristics (G)
- 2 If a catastrophic event (such as fire) reduces the acres of old growth and late seral forest below 20 percent of the forested acres in a principal watershed, identify replacement forested acres to achieve the 20 percent. When necessary, use silvicultural techniques to promote old growth and late seral characteristics in the replacement acres (G)
- 3 Use the definition of old growth characteristics by forest type found in "Characteristics of Old-Growth Forests in the Intermountain Region" (USDA Forest Service 1993) (S)
- 4 Use the definition of late seral stages by forest type in the table below (G)

LATE SERAL (SUCCESSIONAL) STAGES					
		Dominant	Live	Overstory	Trees
Forest	Type	Age	Trees/Acre	DBH(IN)	
Lodgepole	Pine	100+	40+	9+	
Douglas-fir		140+	25+	14+	
Mixed	Conifer	100+	40+	12+	
Spruce/Fir		110+	20+	12+	
Aspen		60+	20+	10+	
Cottonwood		50+	--	--	

- 7 Conduct vegetation manipulations in a cost effective manner. Manipulations should emphasize desired ecological and multiple-use outcomes over being above cost (G)
- 8 Maintain, and where possible, increase unique or difficult-to-replace elements or habitats such as whitebark pine, and areas of high species diversity, such as aspen, riparian zones, etc (G)
- 9 Do not conduct management activities which alter canopy vegetation within 400 feet of a Natural Resources Conservation Service (NRCS) snow measuring site without first contacting NRCS. Legal locations of these sites are in the Forest Geographic Information System (GIS) (S)
- 10 Sagebrush/grassland habitats. Within big sagebrush (*Artemisia tridentata* & varieties)/grassland habitats strive for canopy coverage distributions on a subwatershed basis (generally 2,000 to 6,000 acres in size) of (G)
- Less than five percent of a subwatershed in a less than five percent canopy coverage class
 - Seventy-five percent of a subwatershed in a well distributed mosaic of canopy coverage ranging from 5-30 percent
 - Twenty percent of a subwatershed in a greater than 30 percent canopy coverage class

Goals - Plant Species Diversity

- 1 Preserve unique formations within a landscape (such as cliffs, bogs, seeps, talus slopes, warm or alkaline springs, pot holes, and rock outcroppings) that provide habitat to plant species not common to the overall landscape and contribute to the species diversity within the landscape
- 2 Provide necessary protection and management to conserve listed threatened, endangered and sensitive plant species.

Standards and Guidelines - Plant Species Diversity

- 1 Native plant species from genetically local sources will be used to the extent practicable for erosion control, fire rehabilitation, riparian restoration, forage enhancement, road right-of-way seeding, and other revegetation projects (G)
2. Areas planned for nonnative seedings or plantings of nonnative woody species need to be evaluated to determine the impacts to the native flora within the analysis area and habitats adjacent to it (G)
- 3 Introduced species should be utilized in project seedings where native species would not meet the objectives of erosion control, such as in high **use** or impact areas, and where the effects on local, native flora is minimal, sites that are currently dominated by introduced species and **use** of nonnative species has not degraded the adjacent native flora; and sites where the management objective is to utilize nonnative species in one area to prevent degradation of other natural areas. (G)
- 4 Information on the presence of listed threatened, endangered or sensitive plant species will be included in all assessments for vegetation and/or ground disturbing management activities. Appropriate protection and mitigation measures will be applied to the management activities (S)

Objectives - Ute Ladies' Tresses (*Spiranthes diluvialis*)

- 1 Map suitable habitat (generally within wetland/riparian/floodplain areas below 7,000 feet elevation) on the Forest within three years of implementation of the ROD
- 2 Complete intensive surveys of suitable habitat to document presence of plants within five years of implementation of the ROD

Standards and Guidelines - Ute Ladies' Tresses (*Spiranthes diluvialis*)

- 1 For known populations within livestock grazing allotments, provide appropriate protection, particularly during the flowering and seed-set periods (generally August and September) (S)
- 2 Allow no ground disturbing activities or changes in hydrology within occupied habitat without review by botanist and interdisciplinary team (S)

Goals - Special Forest Products

- 1 Establish guidelines for commercial harvesting of special forest product species
- 2 Provide for the historical, cultural, and recreational **uses**, as well as rights and privileges afforded Native Americans under treaties and agreements, before commercial **uses** of special forest products are allowed

Wildlife ✓

Goals

- 1 Wildlife biodiversity is maintained or enhanced by managing for a diverse array of habitats and distribution of plant communities
- 2 Provide habitat to support the wildlife and hunting goals of the States of Idaho and Wyoming

Standards and Guidelines - General Habitat

1 Dead and Down Material

(Note These requirements are interrelated with the woody residue requirements and are not cumulative to those requirements)

A On at least 60 percent of the forested acres of each analysis area an average of 21 logs per acre should be left consisting of logs in decomposition classes 1, 2 and 3 where they exist (USFS, 1979) (G) (Note unmanaged stands or stands where management did not include the removal or piling of down material, meet forestwide standards and guidelines for down woody material)

When this amount of down material is not present on at least 60 percent of the forested acres in an analysis area, an average of **42** logs per acre should be left in all activity areas (harvest units) consisting of logs in all decomposition classes where they exist Fewer logs may be left if fuel loading would exceed 25 tons per acre (G)

1 Logs should be at least seven inches in diameter at the small end, be at least 20 feet long, and have a volume of at least ten cubic feet (e.g., a log averaging 9.5 inches in diameter and 20 feet long) (G)

a Smaller size logs may only be used in meeting this volume criteria if the area is incapable of producing larger trees, or the stand is too young to produce these trees In these cases, logs representing the largest tree diameter class present in the stand should be retained and at least 200 cubic feet (approximately 2.3 tons) per acre of down logs shall be retained

b For every area two-acre area in an activity area, a minimum of two logs should be left, where they exist, to maintain distribution of down woody material

2 Winter Feeding of Big Game Allow no new permanent feed grounds for wintering big game animals (S)

3 Animal Damage management will be conducted in compliance with the 1996 "APHIS-ADC Predator Damage Management in Southern Idaho" Decision Notice and FONSI, selected alternative "Current Program with Livestock Protection Collar" (S)

a Annual ADC work plans will be prepared using the 1990 Targhee National Forest "Forest-Wide Predator Control Environmental Assessment" as a framework for conducting predator control activities on the Forest Deviations from the direction in the 1990 EA will be considered when necessary to deal with particular problem animals (G)

b Problem wolves will be managed according to the Nonessential Experimental Population for Gray Wolves Final Rule (USDI, 1994b) (S)

c Problem grizzly bears will be addressed according to the Interagency Grizzly Bear Committee nuisance bear guidelines (IGBC, 1994) (S)

d Use of toxicants will not be allowed on the Forest (S)

Objective - Snag/Cavity Nesting Habitat

Determine the biological potential for cavity nesting habitat on a watershed basis to enable management of some areas at higher levels of biological potential and some at lower levels of biological potential and meet the overall management prescription objectives

Standards and Guidelines - Snag/Cavity Nesting Habitat

1 Retain snags within all management prescription areas allowing timber harvest (refer to the following Tables 1 & 2 for snag requirements of cavity nesting species, refer to the wildlife standards and guidelines in each management prescription for the specific biological potential to be achieved) (G)

Table 1 Snag requirements for 100 percent biological potential for woodpecker populations

Species	Range in Snag DBH (inches)	Range in Snag Height (feet)	No of Snags per 100 Forested Acres for 100 Percent Biological Potential			
			Aspen	Cottonwood	Doug-fir Spruce/Fir	Lodgepole
Lewis's Woodpecker	12 to 27	5 to 170	101	101	101	NA
Yellow-bellied Sapsucker	9 to 47	15+	150	150	150	150
Williamson's Sapsucker	12 to 37	15+	NA	NA	150	150
Downy Woodpecker	6 to 14	6 to 50	300	300	300	300
Hairy Woodpecker	9 to 29	15+	180	180	180	180
Three-toed Woodpecker	7 to 19	15+	59	NA	59	59
Black-backed Woodpecker	8 to 17	6+	NA	NA	59	59
Northern Flicker	10 to 51	6+	38	38	38	38
Total Hard Snags per 100 acres			828	769	1037	936
NA indicates the species does not use this forest type						

Table 2 Snag requirements for maintaining various percentages of biological potential for woodpecker populations (refer to Table 1 for snag dbh, snag height, and individual species requirements)

Percent of Biological Potential	Number of Hard Snags per 100 Forested Acres			
	Aspen	Cottonwood	Doug-fir Spruce/Fir	Lodgepole
100	828	769	1037	936
80	662	615	830	749
60	497	461	622	562
40	331	308	415	374
20	166	154	207	187

2 Retain live trees for future snag recruitment using the following guidelines to achieve various percentages of biological potential (G)

Percent of Biological Potential	Number of Live Trees per Forested Acre				
	>= 10 in dbh	>= 7 0-9 9 in dbh	>= 5 0-6 9 in dbh	< 5 0 in dbh	Total Tree/Acre
100	8	5	5	7	25
80	6	4	4	6	20
60	5	3	3	4	15
40	3	2	2	3	10
20	2	1	1	1	5

3 In analysis areas where snag numbers are low (at or approaching management minimums), no dead standing trees should be harvested (G)

4 Public workforce and contractor safety will be considered and provided for in selecting the arrangement of retained snags and trees (S)

Goals - Grizzly Bear Habitat

- 1 Habitat conditions will be sufficient to sustain a recovered population of grizzly bears
- 2 Allow for unhindered movement of bears (continuity with Yellowstone National Park and adjacent bear management units)

Objectives - Grizzly Bear Habitat

- 1 Meet recovery criteria in the current Grizzly Bear Recovery Plan
- 2 Implement guidelines developed by the Interagency Grizzly Bear Committee
- 3 Provide safe, secure sites for nuisance bears as defined by Interagency Grizzly Bear Guidelines

4 Achieve the road density standards in the Bear Management Units (BMUs) within three years of the implementation of the ROD in coordination with USFWS and State Wildlife agencies

5 Develop fire management plans for each of the Bear Management Units (BMUs) to address wildfires and prescribed fires, as follows

- Bechler-Teton BMU -- within two years of the Record of Decision (ROD) for the Revised Plan,
- Plateau BMU -- within four years of the ROD,
- Henrys Lake BMU -- by 2003

Standards and Guidelines - Grizzly Bear Habitat

1 The grizzly bear education program will focus on residents in residential and summer home areas, developed recreation site users, wilderness users, hunters, outfitters and guides, and permittees (G)

2 Those areas shown as Management Situation 3 (MS3) habitat on Map #5 of the 1985 Forest Plan will continue to be managed as MS3 habitat (S)

Goals - Bald Eagle Habitat

Habitat conditions will be sufficient to sustain a recovered bald eagle population

Objectives - Bald Eagle Habitat

- 1 Continue current nest location and productivity monitoring
- 2 Identify bald eagle wintering and migration habitat and identify appropriate management needs
 - For the Henry's Fork watershed, within three years of the ROD for the Revision
 - For the South Fork of the Snake, by the year 2003

Standards and Guidelines - Bald Eagle Habitat

1 In Occupied Nesting Zones (Zone I) and Primary Use Areas (Zone II) apply the following

A Minimize all human activities from February 1 to August 1 (G)

B No new roads in Zone I (S) Avoid building new roads in Zone II (G)

C Manage human use on existing roads at levels which do not adversely affect use and productivity of the nest site (G)

D No new developed recreation sites or facilities in Zone I (S) Avoid building new recreation sites or facilities in Zone II (G)

E Manage existing recreation use at levels which do not adversely affect use and productivity of the nest site (S)

F Use the "No Surface Occupancy" stipulation for all minerals activities (S)

G If eagles choose to establish new nest sites and use areas in an area already receiving human use, the human activities may be restricted or modified Expanded human activity, however, should be discouraged (G)

H Use silvicultural techniques which maintain or promote mature and old growth timber stand characteristics in both the short and long term, but reduce the risks of insects and disease epidemics (S)

I Vegetation management can only occur between September 1 and January 31 (S)

J Use "control" as the appropriate suppression response for wildfires to minimize loss of habitat (G)

K Prohibit new structures that have the potential to cause direct mortality to bald eagles (e.g. power lines) (S)

L Permit historic levels of livestock use as long as no adverse impacts (such as abandonment of nest territory or reproduction failures) occur related to this activity. Manage livestock to allow successful reproduction of cottonwood where applicable (G)

M Prohibit wildlife management or predator control activity with the potential to cause mortality to bald eagles (such as exposed traps) (S)

2 Within Home Ranges (Zone III) follow existing site-specific management plans (when they exist) for each bald eagle territory, or Zone III management direction in the Bald Eagle Management Plan for the Greater Yellowstone Area when site-specific management plans do not exist (S)

3 Within Zones I, II, and III, prohibit all **use** of herbicides and pesticides which cause egg shell thinning as determined by EPA labeling (S)

4 Recreation activities and developments will be designed to minimize conflicts with bald eagle wintering and migration habitat (G)

5 New roads and trails will be located to avoid bald eagle wintering and migration habitat. Where these areas cannot be avoided the roads and trails will be designed and located to minimize impacts to eagles (G)

Objective - Gray Wolf Habitat

All wolves found in the wild on the Forest will be considered nonessential experimental animals as defined in the FEIS for The Reintroduction of Gray Wolves to Yellowstone National Park and Central Idaho (USDI Fish and Wildlife Service 1994 a and b)

Standards and Guidelines - Gray Wolf Habitat

1 Restrict intrusive human disturbances (motorized access, vegetation management, livestock grazing, etc.) within one mile around active den sites and rendezvous sites between April 1 and June 30, when there are five or fewer breeding pairs of wolves in the Yellowstone Nonessential Experimental Population Area (applies to the portion of the Forest east of Interstate 15) or the Central Idaho Nonessential Experimental Population Area (applies to the portion of the Forest west of Interstate 15). After six or more breeding pairs become established in each experimented population Area, land-use restrictions will not be needed (USDI Fish and Wildlife Service 1994 a and b) (S)

2 The ability of individuals holding grazing permits on public land to harass adult wolves in an opportunistic, noninjurious manner will become part of their permit conditions so it is clearly understood exactly what can occur. There is a seven day reporting requirement (USDI Fish and Wildlife Service 1994 a and b) (S)

3 The following conditions and criteria will apply in determining the problem status of wolves (USDI Fish and Wildlife Service 1994 a and b) (S)

A Wounded livestock or some remains of a livestock carcass must be present with clear evidence that wolves were responsible for the damage and there must be a reason to believe that additional losses would occur if the problem wolf or wolves were not controlled. Such evidence is essential since wolves may simply feed on carrion they have found while not being responsible for the kill.

B Artificial or intentional feeding of wolves must not have occurred. Livestock carcasses not properly disposed of in an area where depredations have occurred will be considered attractants. Removal or resolution of such attractants must accompany any control action. Livestock carrion or carcasses not being used as bait in an authorized control action (by agencies) must be removed, burned, treated with an acceptable chemical repellent, or otherwise rendered such that the carcass(es) will not attract wolves using methods approved by the District Ranger.

C Animal husbandry practices previously identified in existing approved Allotment Management Plans and annual operating plans for allotments must have been followed.

4 If additional livestock depredations are likely, proper animal husbandry practices are employed (proper disposal of livestock carcasses, etc.), artificial feeding does not take place, and AMPs are followed, the Forest may implement procedures to harass, capture, move, or kill wolves that attacked livestock (defined as cattle, sheep, horses, or mules only) on National Forest land (G). Prior to the establishment of six breeding pairs, depredating females and their pups will be captured and released at or near the site of capture, one time prior to October 1. If depredations continue, or if six packs are present, females and their pups will be removed (USDI Fish and Wildlife Service 1994 a and b) (S)

Goal - Peregrine Falcon Habitat

Plan project activities to avoid adverse impacts to falcons and their habitats.

Standards and Guidelines - Peregrine Falcon Habitat

1 For proposed projects within two miles of known falcon nests consider such items as 1) human activities (aircraft, ground and water transportation, high noise levels, and permanent facilities) which could cause disturbance to nesting pairs and young during the nesting period March 15 to July 31, 2) activities or habitat alterations which could adversely affect prey availability (G)

2 Within 15 miles of all known nest sites, prohibit all use of herbicides and pesticides which cause egg shell thinning as determined by risk assessment (USDA-Forest Service, September 1992) (S)

3 Restrict climbing and other human disturbances from March 15 through July 31 to avoid adverse impacts at known falcon nest sites (S)

Objective - Wolverine Habitat

Within two years of the ROD complete a GIS inventory to identify potential wolverine natal den sites. Within 4 years of the ROD, survey all potential wolverine natal den sites to document wolverine presence.

Goal - Goshawk Habitat

Provide suitable habitat conditions for known active and historic goshawk nesting territories.

Standard and Guideline - Goshawk Habitat

Management standards and guidelines for all forest types within active and historic goshawk nesting territories follow

Attribute	Nest Area	Post-Fledging Family Area	Foraging Area
Number of areas (S)	1	1	1
Size of each area (acres) (S)	>= 200 acres	>= 400	>= 5,400
Size-Class Distribution for forested acres (%) (G)			
nonstocked/seedling	0	<= 20	<= 20
sapling	0	<= 20	<= 20
pole	0	<= 20	<= 20
mature/old growth ^{1/}	100	>= 40	>= 40
Rotation age (years) (G)	--	60 to 240	60 to 240
Maximum created opening (acres) (G)	0	<= 40	<= 40
Snags and Reserve Trees ^{2/} (G)	>= 60% unless specified higher in prescription	>= 60% unless specified higher in prescription	>= 60% unless specified higher in prescription
Downed logs (average/acre) (G)	Forestwide S&Gs	Forestwide S&Gs	Forestwide S&Gs
Management Season (S)	Oct-Feb	Oct-Feb	Year-long
Thinning (G)	Non-uniform ^{3/}	Non-uniform	by silvicultural prescription
Open Road Density ^{4/} (G)	No new system roads	No new system roads	<= Management Rx Density
^{1/} Mature and old growth canopy closure for nest sites and post-fledging family areas should range between 75-100 percent (G) ^{2/} Refer to previous section on snag/cavity nesting habitat for explanation of biological potential ^{3/} Maximize diversity of structure ^{4/} Open roads in goshawk territories will be given priority for closure to meet management prescription road density standards. First priority will be to close roads in nest areas, second priority in post-fledging family areas, third priority in foraging areas. Where possible, open road density should be zero in the nest areas and the post-fledging family areas			

Standard and Guideline - Flammulated Owl Habitat

Do not allow timber or firewood harvest activities within a 30-acre area around all known flammulated owl active and historic nest sites (S)

Standards and Guidelines - Boreal Owl Habitat

1 Do not allow timber or firewood harvest activities within a 30-acre area around all known boreal owl active and historic nest sites (S)

- 2 Maintain over 40 percent of the forested acres in late seral age classes within a 3,600-acre area around all known boreal owl nest sites (G)

Standards and Guidelines - Great Gray Owl Habitat

- 1 Do not allow timber or firewood harvest activities within a 20-acre area around all known great gray owl active and historic nest sites. Vegetation manipulation does not include tree planting (S)
- 2 Maintain over 40 percent of the forested acres in late seral age classes within a 1,600-acre area around all known great gray owl nest sites (S)
- 3 Restrict the use of strychnine poison to control pocket gophers within a 1/2-mile buffer around all known active great gray owl nest sites (G)

Goals - Trumpeter Swan Habitat

- 1 Maintain habitat to support ten breeding pairs or more on the Forest
- 2 Protect emergent vegetation along shorelines. Maintain riparian vegetation in desired vegetative condition

Standards and Guidelines - Trumpeter Swan Habitat

- 1 Maintain suitable trumpeter swan nesting habitat conditions including (but not limited to) the following lakes and ponds: Boundary Pond, Swan Lake, Lily Pond, Hatchery Butte, Railroad Pond, Mesa Marsh, Bear Lake, Upper Goose Lake, Long Meadows, Thompson Hole, Twin Lakes, Chain Lakes, Widgit Lake, Rock Lake, Indian Lake, Putney Meadows, Unnamed Pond (Sec 19, T9N, R46E) (S)
- 2 Change livestock grazing through management or fencing when grazing is adversely affecting trumpeter swan use or productivity (G)
- 3 No vegetation management will occur within 300 feet of the lake or pond shoreline unless necessary to improve riparian habitat conditions favorable for trumpeter swans. Management may occur after the swans have left the lake or pond (S)
- 4 Maintain constant water levels, allow no drawdowns from May 1 to September 30 when not in conflict with preexisting water rights (G)
- 5 Do not take any recreation management actions that would encourage dispersed recreation activity at these lakes and ponds. Close these areas to recreation activity if this activity is adversely affecting trumpeter swan use or productivity (G)
- 6 Implement habitat improvement projects at these lakes and ponds, such as dredging to maintain proper water depths and aquatic vegetation control (G)

Goal - Spotted Frog Habitat

Maintain riparian vegetation in desired vegetation condition

Goals - Common Loon Habitat

- 1 Evaluate the potential to provide and maintain suitable breeding habitat for common loons at these sites: Indian Lake, Thompson Hole, Bergman Reservoir, Junco lake, Fish Lake, Loon Lake, Moose Lake, unnamed pond (Sec 9, T47N, R118W)

2 Develop common loon management plans for the above sites if the evaluation indicates there is potential to provide and maintain suitable breeding habitat

Standard and Guideline - Harlequin Duck Habitat

Avoid establishing new trails, new roads, or new recreation facilities within 300 feet (on each side) of any stream reach with documented harlequin duck breeding activity (G)

Objective - Spotted Bat and Western Big-eared Bat Habitat

Develop management plans for any caves, mine shafts, and other suitable habitats where these bat species are known to be present

FOREST USE AND OCCUPATION

~~Access~~

Goals

- 1 The Forest road and trail system is cost effective and integrates human needs with those of other resource values, particularly grizzly bear, elk, and native cutthroat trout
- 2 Elk vulnerability is decreased and grizzly bear security is increased
- 3 Native cutthroat trout habitat is restored through effective road closures, obliterations, reclamations, redesign, and improved maintenance practices

Objective

Motorized access standards in each management prescription will be achieved as soon as practicable

- 1 Within three years of the ROD for BMUs
- 2 By the year 2007 for all other areas

Standards and Guidelines

1 Road Closure

A Road closures will be located and designed to effectively control motorized use (S)

B Restrict or reclaim roads not needed for future management as determined in site-specific analysis, at the end of project use Consider historic recreation use before closure (G)

2 Administrative Use on Restricted Roads and Trails and in Restricted Areas

A The Open Road and Open Motorized Trail Route Density (OROMTRD) Standards prescribed for each prescription area do not restrict responses to emergency events to protect human life, property values and structures, and forest resources Responses to emergency events include law enforcement, search and rescue, and fire suppression (S)

B Prudent cross-country motorized access is allowed to implement projects consistent with prescription objectives, in all prescription areas except for grizzly bear core areas and designated

wilderness Administrative uses including but not limited to planned project work such as firewood harvest, timber sales, tree planting, prescribed burns, wildland survey or fish and wildlife habitat improvements on restricted roads, trails or areas will only be allowed under the following conditions

- 1 Any motorized vehicle access on a restricted road or trail or in a restricted area will be for official administrative business only and must be approved by the District Ranger
- 2 When motorized vehicle access on a restricted road or trail or area is necessary, a sign will be posted while project work is being accomplished
- 3 Motorized vehicle access on a restricted road or trail or area will be allowed by permit under the following conditions when approved by the Forest Supervisor or District Ranger
 - a Project work is one mile or 30 minutes walk or greater
 - b Equipment is being used that is unreasonable to carry to the project work site
 - c Contract inspectors working with contractors who have motorized equipment and vehicles which are necessary for the contract work

This direction (in item 2 B above) supersedes direction in access tables for individual prescriptions (S)

C Needs for motorized cross-country administrative access will be presented and considered in analysis documents for proposals including, but not limited to prescribed burning, fish and wildlife habitat improvement, timber sales, and personal use firewood harvest The proposal will limit access to that reasonably needed to conduct the project Prudent cross-country access to implement these projects may be allowed consistent with project-level NEPA decisions and prescription objectives in all prescription areas except for grizzly bear core areas and designated wilderness This direction supersedes direction in access tables for individual prescriptions (S)

D During the big game hunting seasons, persons with disabilities may be permitted to use motorized vehicles, if needed for mobility, on restricted roads and trails which are designated for such use, with an authorized motor vehicle hunting permit issued by the district ranger These persons must have a Disabled Hunting Permit issued from the State Fish and Game Departments (G)

3 Figures appearing in the access tables for individual prescriptions represent direction for those prescription areas If no figure appears refer to the following direction (S)

	Henry's Lake BMU Subunit 1	Henry's Lake BMU Subunit 2	Plateau BMU	Bechler-Teton BMU
TMARD	1.0 MI/SQ MI	1	1	1
OROMTRD	0.6 MI/SQ MI	0.6	0.6	0.6
Henry's Lake 1 - The Targhee National Forest portion of the Henry's Lake 1 subunit, excluding Management Situation 3 (MS3) habitat Henry's Lake 2 - The Targhee NF portion of the Henry's Lake 2 subunit Plateau BMU - The Targhee NF portion of this Bear Management Unit (BMU), excluding MS3 habitat Bechler/Teton BMU - The Targhee NF portion of this BMU				

The access density measurements TMARD and OROMTRD are defined in the Glossary Access densities are based on open and restricted roads and trails

4 Travel Plan

The Forest travel plan was developed from individual prescription access tables and the elk and deer winter range map. The following application dates were developed to respond to local resource and travel conditions. This direction supplements and is to be used in conjunction with the applicable direction in individual prescription access tables.

A Snow-Free Season - The snow-free season direction takes effect yearly in the spring as local conditions become suitable to support wheeled vehicle traffic on roads and trails without damage. Where legally permitted, snowmachines may use designated roads and trails shown on the travel plan as open to motorized use. Cross-country snowmachine travel is allowed only where the snow-free season direction allows cross-country motorized travel after June 1 except in Prescription 5 1 4 (c) (S).

B Snow Season - The snow season direction takes effect yearly on Thanksgiving Day. Where legally permitted, snowmachine travel is allowed consistent with the travel plan map. Cross-country snowmachine travel is permitted from Thanksgiving Day through June 1 except on the Palisades Ranger District which permits said usage from December 15 through June 1 and except in (inventoried) winter range as shown on Forest Plan Map #24. Cross-country snowmachine travel is allowed in Prescription area 5 1 4 (c) (Big Bend Ridge) from January 1 until April 30 (S).

Recreation

Goals - Winter Recreation

- 1 Provide a quality winter recreation experience while minimizing conflicts between motorized and nonmotorized use and wintering big game
- 2 Establish a linear capacity for two-way snowmachine trails for purposes of safety and quality of the recreation experience
- 3 Provide networks of marked, designated, and groomed snowmachine, cross-country ski, and other winter travel routes and trailhead facilities
- 4 Provide winter recreation user information to educate users of wildlife needs and promote backcountry safety
- 5 Promote opportunities for backcountry winter recreation

Objective - Winter Recreation

Within three years, establish by prescription, travel plan designation or other method a few nonmotorized winter recreation activity areas with easy access for users such as telemark skiers, snowshoers, and snowboarders. Conform to results anticipated from the Greater Yellowstone Winter Visitor Use Management (GYWNUM) Assessment currently underway.

Standards and Guidelines - Winter Recreation

- 1 Develop or provide trailhead facilities to match the desired trail capacity. These facilities may be public or private depending on location (G)
- 2 Management of winter trails should be done where feasible by cooperative agreements with agencies and groups (G)

a 3 Snowmachine, snowshoes, and dogsleds are prohibited within designated groomed cross-country ski trails. Snowmachines and dogsleds are prohibited within designated cross-country ski areas. (S)

4 Those areas mapped as winter range on the Revised Forest Plan elk and deer winter range map are closed to cross-country snowmachine travel. This direction supersedes direction in access tables for individual prescriptions. (S)

Goal - Visual Quality

Manage the visual landscape in accordance with the planned visual quality objective, as mapped in the Geographic Information System.

Standards and Guidelines - Visual Quality

1 Following timber harvest in lodgepole pine, dispose of slash not needed to meet other resource objectives by a combination of piling, firewood gathering, and burning in areas up to 200-250 feet on either side of primary travelways, trails, and use areas which have high public concern for scenic quality as soon after harvest as possible. (G)

2 Following timber harvest in lodgepole pine, dispose of slash not needed to meet other resource objectives by piling, firewood gathering, or burning for 150-200 feet on either side of roads, trails, and areas which have moderate public concern for scenic quality. (G)

Goal - OHV

Provide a network of OHV trails while minimizing the effects of OHV use on soils, wildlife and other users.

Standards and Guidelines - OHV

1 Discourage OHV use on slopes greater than 40 percent, except on designated routes and except for snowmachine use. Roads and trails, however, may cross slopes that exceed 40 percent. (G)

2 Areas with slopes of 25-40 percent may require travel restrictions if soil erosion factors warrant them. (G)

3 Restrict OHV use on identified areas of unstable soils (except for snowmobiles). (G)

4 No motorized vehicles over 50 inches wide are allowed on trails unless the trails are specifically designed for such vehicles. (S)

Goal - Developed Facilities

Maintain or slightly increase the Forest's developed site capacity in accordance with the CIP (Capital Improvement Projects) Implementation Schedule.

Standards and Guidelines - Developed Facilities

1 Expand existing developed facilities to meet public needs. (G)

2 Phase out low use developments that have high operation and maintenance (O&M) costs consistently exceeding \$1.50 per persons-at-one-time (PAOT) per day. (G)

3 Rehabilitate or provide heavy maintenance to facilities in Maintenance Class Two (MC 2) and Maintenance Class Three (MC 3) which cannot be brought up to Maintenance Class One (MC 1) through general maintenance (G)

4 Developed facilities receiving heaviest use should receive first priority for maintenance (G)

5 Facilities that cannot be maintained to acceptable health and safety requirements will be closed until they can be brought up to standard (S)

Objective - Dispersed Recreation Use

By 2007, address soil, water, and vegetation impacts to maintain the desirable recreation setting on approximately 100 campsite areas of the 300 identified dispersed recreation sites on the Forest, which are in greatest need of monitoring. These sites would have limited developed facilities.

Standards and Guidelines - Dispersed Recreation Use

1 Unless otherwise posted, motorized access is allowed for parking and dispersed camping within 300 feet of roads and trails which are open for motorized use. This direction supersedes direction in individual prescriptions, except no motorized use is permitted within designated wilderness. (S)

2 Wilderness, recommended wilderness, and roadless areas dispersed campsites should be managed according to the Frissell Condition Classification System. Actions (close, protect, or restore) should be taken to restore campsites that do not meet Class three or better. (G)

3 Dispersed campsite conditions on the remainder of the Forest should have no more than 15 percent of an activity area in a detrimentally disturbed soil condition, as described in the Dispersed Camping Protocol (Process Paper X). (G)

4 Low-development-level facilities should be provided at undeveloped concentrated-use areas to prevent resource damage and protect public health and safety. (G)

Goal - Trails

1 Trails for motorized/mechanized use would be sufficient to sustain use over long periods of time and minimize requirements for maintenance or reconstruction. These conditions would be achieved within subsections in the following sequence: Big Hole Mountains, Caribou Range Mountains, Lemhi-Medicine Lodge, Centennial Mountains, Madison-Pitchstone Plateaus, Island Park, and Teton Range.

2 Trails for nonmotorized/mechanized use would be sufficient to sustain use over long periods of time with minimal requirements for maintenance or reconstruction. These conditions would be achieved within subsections in the following sequence: Teton Range, Big Hole Mountains, Centennial Mountains, and Caribou Range Mountains.

Objective - Trails

Complete an interdisciplinary review of five-ten percent of the system trails each year to determine rehabilitation needs.

Objective - Outfitters and Guides

Establish use capacities using the process outlined in the AMS for outfitter and guide recreation opportunities prior to issuing new permits.

Standard and Guideline - Outfitters and Guides

Outfitter and guide facilities in dispersed nonwilderness areas should be built in less-frequented areas and be temporary. To prevent unacceptable resource damage or sanitation problems, facilities may be allowed at more heavily used locations. Only essential facilities should be provided at commercial outfitter camps in accordance with Greater Yellowstone Area Outfitter Policy camp standards (G)

Wilderness

The following goals, standards and guidelines apply to all congressionally designated wilderness on the Forest Presently that includes the Jedediah Smith and Winegar Hole Wildernesses

Goal

Achieve desirable wilderness conditions for the Jedediah Smith and Winegar Hole Wildernesses as specified in the management prescriptions. The Wilderness Implementation Schedules and a Monitoring Action Plan will guide implementation using the Limits of Acceptable Change (LAC) process

Standards and Guidelines

- 1 Outfitter/Guide - Allow no new outfitter camps (for hunters, anglers, etc) until studies have been completed to determine site suitability and carrying capacity (S)
- 2 Recreation - ROS Manage for a primitive to semi-primitive nonmotorized classification (G)
- 3 Recreation - VQO Manage for preservation (S)

Tribal Coordination

Standard

Forest consultation procedures and intergovernment agreements with the tribes to guide future cooperative efforts will comply with the protocols set forth in the National Resource Book on American Indian and Alaska Native Relations Working Draft 1995 or its successor (S)

PRODUCTION OF COMMODITY RESOURCES

Range

Goals

- 1 Upland and riparian plant communities meet Desired Vegetation Conditions (DVCs) for site-specific areas
- 2 Domestic livestock grazing is managed to promote the desired conditions of various resources including maintenance of adequate plant and litter ground cover, nutrient recycling, forage for wildlife species, seed production, and the restoration and maintenance of riparian communities

Objectives

- 1 By 2007, improve the ecological status of 1,200 acres of riparian habitat currently reported as not meeting Desired Vegetation Condition (DVC) to meeting or moving toward DVC
- 2 By 2007, improve 26,400 acres of uplands (nonriparian and nontimber plant communities) currently reported as not meeting Desired Vegetation Condition (DVC) to meeting or moving toward DVC
- 3 By 2007, implement grazing systems or Allotment Management Plans (AMPs) designed to meet Range Goals 1 and 2 above on all grazing allotments
- 4 Establish utilization levels for key browse and grass species in either the Allotment Management Plan or the Annual Operating Plan for allotments within elk and deer winter ranges

Standards and Guidelines

1 Upland Forage Utilization

Apply upland forage utilization levels to all allotments and/or management areas as shown in Table 1, unless determined otherwise through the interdisciplinary team process. These figures provide for maximum utilization levels regardless of which species of animal uses the forage or browse. These utilization guidelines apply to native and desirable nonnative vegetation as recorded at the end of the grazing period (G)

Table 1 Upland Rangeland Ecosystems - Percent Forage Utilization of Current Years Growth 1/				
	Season-long Grazing		Rotation Grazing	
	Unsatisfactory Range Condition	Satisfactory Range Condition	Unsatisfactory Range Condition	Satisfactory Range Condition
Grasses and Herbaceous Species	35%	45%	45%	55%
Shrubs	25%	35%	35%	35%

1/ The figures shown represent the best estimate of acceptable use levels which will provide for maintenance or improvement of these ecosystems. They shall be used as maximum use levels unless there is site-specific information to show that these levels are incorrect. Percent use is based on a dry weight percentage.

2 Riparian Forage Utilization

A Riparian Woody Plant Utilization No more than 30 percent use on riparian woody plant species (current year's growth) is allowed. Thirty percent is the maximum allowed use as recorded at the end of the grazing period (S)

B Riparian Vegetation Stubble Height Standard (these apply to all grazing systems) (S)

1 At the HGL, there will be at least four inches of stubble height remaining on key species at the end of the grazing period, unless determined otherwise through the interdisciplinary team process. This standard applies to key species of native and desirable nonnative hydric vegetation.

2 Away from the HGL, at least three inches of stubble will be left on the remainder of the key riparian species at the end of the grazing period, unless determined otherwise through the interdisciplinary team process

3 Allotment Management Planning (AMP)

A Salt should be placed greater than **1/4** mile from water, or as far from water as practicable Salting should be designed to avoid conflicts with aspen regeneration, conifer plantations, and system trails (G)

B Allow no livestock grazing before seed set of the second growing season after prescribed or natural fires and rangeland planting or seeding (G)

C Allow livestock conversions based only on resource capability (such as topography, water distribution, vegetation, wildlife, and recreation), and management objectives and not solely based on the desires of the permittee (G)

1 Conversions may be made in accordance with an AMP, and current range analysis, only after all necessary range improvements structures are in place (G)

2 All range improvements necessary for the conversion will be financed and constructed by the permittee Construction will be in accordance with Forest Service standards (S)

3 Do not convert from a cattle allotment to a sheep allotment within bighorn sheep habitat or in grizzly bear management prescriptions (S)

4 All proposed livestock conversions will be evaluated through the interdisciplinary process Only those conversions meeting Forest Plan objectives and desired vegetation conditions will be approved (S)

D Forest Service administrative site livestock pastures will comply with the forestwide standards and guidelines for forage utilization and riparian management (S)

E All structural improvements directly required to implement the AMP will be installed and financed whereby the Forest Service provides approximately 50 percent of the cost and the permittee provides the remaining 50 percent (G)

F Permittees are allowed motorized access to maintain facilities AMPs and Annual Operating Plans will include direction that motorized access must be less than two vehicles per week (This permitted access is not included in the OROMTRD) (S)

G In Idaho, follow the "Memorandum of Understanding Between the National Forests in Southern Idaho and the Idaho State Historic Preservation Officer Regarding Rangeland Management Activities" (February 1996) In Wyoming, follow the process outlined in the National Programmatic Agreement, Option 2 (Criteria and standards for independent management) until a memorandum of agreement is developed between southern Idaho Forests and the Wyoming State Historic Preservation Office (S)

H Monitor heritage resource sites on grazing allotments in Wyoming, and in Idaho consistent with the Heritage Resource Monitoring Plan for Southern Idaho Forests (S)

I Within subwatersheds occupied by native cutthroat trout or designated as vital to meeting recovery goals, identify areas where livestock grazing is causing fisheries habitat conditions to fall below or retard the rate of recovery toward the values described in the table, "Expected Values for Healthy Fish Habitat Conditions" in standards and guidelines for Fisheries and Other Aquatic Resources Include specific remedial actions in the AMP or Annual Operating Plan Progress toward meeting these expected values should be monitored and grazing systems adjusted, as necessary (G)

J All grazing allotments will be managed at FRES (Forest Range Environmental Study) management strategies A, B, C, or D with exceptions as noted in individual prescriptions (1 1 6, 1 1 7, 1 1 8, 2 2, 2 4, 2 5, 4 2) (G)

Timber Management

Goal - General

Silvicultural techniques will be used as a tool to manage or manipulate vegetation for the purpose of achieving Forest Plan resource objectives Emphasis will be placed on restoration of ecological function, structure and composition

Standards and Guidelines

1 ASQ (Allowable Sale Quantity)

A Estimates of ASQ and long-term sustained yield timber supply capacity are themselves based on estimates of volume available on timbered acres scheduled for harvest Total harvested acres for the decade may vary and will depend on site-specific project implementation to meet plan goals and objectives (G)

B ASQ will not exceed 80 million board feet (MMBF) for the plan decade (S)

C ASQ will not exceed 80 million board feet for outyear decades until this Plan is revised or amended (S)

D On suited lands within five-series prescriptions, roadless areas and areas with slopes between 40 and 60 percent are in a noninterchangeable component (NIC) (S)

2 Rotation Age Guideline Following are the earliest rotation ages of each species group beginning at culmination of mean annual increment (G)

Species	Earliest Rotation Age (years)
Douglas-fir	100
Mixed Conifer 1/	80
Spruce-fir	100
Aspen	60

1/ Includes both MX (DF/LP) and MX3 (DF/LP with ES/AF)

3 Minimum Stocking Guideline Following is the minimum stocking which should occur before an area can be certified as stocked (G)

Species	Minimum Stocking	Percent of Area Meeting Minimum Stocking
Lodgepole Pine	170	70
Douglas-fir	140	70
Mixed Conifer 2/	200	70
Spruce-fir	200	70
Aspen	300	70

1/ Aspen counts toward stocking
 2/ Includes both MX (DF/LP) and MX3 (DF/LP with ES/AF)

Goal - Slash Treatment

1 Fuel loading on activity areas meets site productivity objectives for wildlife and fire

Guideline- Slash Treatment

SLASH TREATMENT FOR FUELS < 3 INCHES IN DIAMETER (G)		
redicted and existing fuel loading under 3 inches diameter 1/	Minimum Treatment 2/	Maximum Fuel Patch size
Under 5 Tons/Acre	No treatment necessary for fire hazard reduction	160 ac under 40% slope 100 ac over 40% slope
to 10 Tons/Acre	Lop or crush to Regional Lopping Specifications	80 ac < 40% 40 ac > 40%
11 - 25 Tons/Acre	Alternatives	
	1 Reduce single entry loading to 10 tons/ac or less by multiple entry thinnings Follow lopping stds above according to loading	Single entry loading < 5 Ton/Ac , use above stds for < 5 tons Loading 5-10 use above std for 5-10 T/Ac
	2 Reduce slash < 3 in to < 5 tons per ac by burning or chipping	160 Ac < 40% 100 Ac > 40%
	3 Reduce loading of lopped or crushed fuel < 3 in to 5- 10 ton per acre by burning or chipping	80 Ac < 40% 40 Ac > 40%
	4 Rehabilitate by piling, burning, and reforestation	160 Ac < 40% 100 Ac > 40%
	5 No treatment	N/A
1/ When down woody fuels constitute 30% or more of the total loading under 3 inches, the values in this column may be increased by 3 tons per acre 2/ Make sure mechanical treatments meet forestwide soils standards		

Objective - Size of Harvest Units and Adjacent Leave **Blocks/Strips**

Design timber management projects to simulate natural patch sizes, patch shapes, connectivity, and species composition and age class diversity

Standard and Guideline

Created Opening. A harvested area of commercial forest land will not be considered a created opening for silvicultural purposes when stocking surveys indicate that minimum stocking is achieved and at least seven feet high. When other resource management considerations (such as wildlife habitat, watershed needs, or visual requirements) prevail, a created opening will no longer be considered an opening when the vegetation in it meets a particular management objective stated in the applicable management prescription (S)

Standards and Guidelines - Logging Systems

1 Slopes 40 percent or less will normally be harvested using ground-based logging equipment (tractors, rubber-tired skidders, low ground pressure equipment, etc.) Slopes greater than 40 percent, but less than 60 percent, will normally be harvested using advanced logging systems like shortspan cable systems, longspan cable systems, or aerial systems (G)

2 Rutting in skid trails should not exceed six to eight inches in depth (wet condition) over more than ten percent of a designated skid trail system. No yarding operations should take place when ground conditions are wet enough that there is a risk of such rutting (G)

Goals - Fuelwood

- 1 A sustainable level of fuelwood is made available
- 2 Conduct inventory for better determining the sustainable level of fuelwood

Standards and Guidelines - Fuelwood

- 1 Allow permitted fuelwood gathering in designated areas only (S)
- 2 Select designated fuelwood areas that have an excess of dead and down woody material which is in excess of that required for ecological function, structure and composition (G)

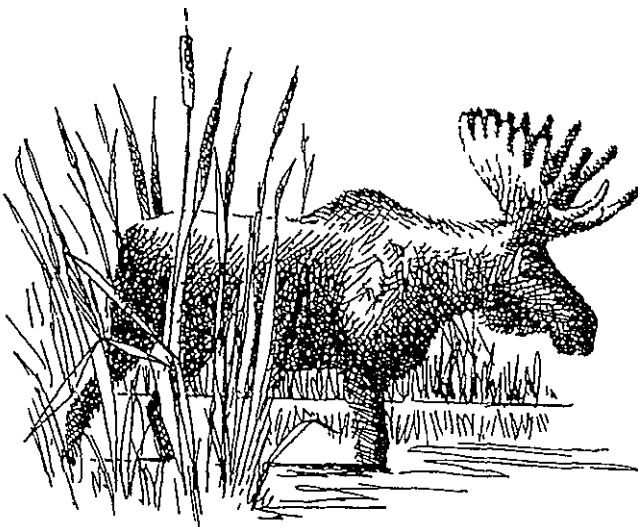
Goals - Precommercial Thinning

- 1 Thinning results in restoration of ecological structure, function and composition
- 2 Mimic tree densities and patch sizes occurring under natural conditions over a landscape
- 3 Provide for a variety of future resource products



Chapter III - Part 2

Subsection Descriptions and Direction



CHAPTER III - PART 2

SUBSECTION DESCRIPTIONS AND DIRECTION

About This Part

Working guidelines for ecosystem management state that effects of proposed actions should be considered at several geographic scales including one scale larger and one smaller than that at which the action is proposed (USDA Forest Service, June 1994). Based on a larger national mapping effort it was determined that the Forest wholly or partially overlays seven large ecological units, or subsections, which were delineated using physiographic parameters. Using this approach resource conditions can be viewed at a scale between the larger forest and the smaller prescription area levels. These subsections are numbered and named as follows:

- M332Ek - Lemhi/Medicine Lodge (subsection comprising two noncontiguous parts)
- M332Ea - Centennial Mountains
- M331Aa - Island Park
- M331Ab - Madison-Pitchstone Plateaus
- M331Db - Teton Range
- M331Dk - Big Hole Mountains
- M331Di - Caribou Range Mountains

In this part of the Revised Plan lands in each of these subsections are described. Desired Future Conditions (DFCs), goals, objectives and standards and guidelines for management in each subsection may also be presented.

Figure III-1 displays the locations of these seven subsections. Figure 1112 shows the boundaries of the principal watersheds on the Forest and their relation to the subsections. Figures III-3 through III-9 display the individual subsections. A listing shows the management prescriptions applied within each, and the total acres of each prescription area. More information on these prescriptions including the management direction they provide is given in the third part of this chapter.

Further Information

The ECOMAP unit of the Forest Service has developed a National Hierarchical Framework of Ecological Units to improve consistency in developing and sharing resource data and information at multiple geographic scales and across administrative and jurisdictional boundaries.

An Ecological Unit is defined as "A mapped landscape unit designed to meet management objectives, comprised of one or more ecological types" (FSM 2060 05). These ecological units are designed to exhibit similar patterns in potential natural communities, soils, hydrologic function, landform and topography, lithologies, climate, air quality, and natural processes for cycling plant biomass and nutrients.

As of this writing, ECOMAP has described four levels in the National Hierarchy of Ecological Units: Domains, Divisions, Provinces, and Sections. A map of the United States (1:7,500,000 scale) displays these four levels. The land area of the Forest falls within three of those sections. The National Hierarchical Framework of Ecological Units is shown in Figure III-1 in its particular application to the Forest, as adjusted by Revision and Ecological Unit Inventory personnel.

Domain - Described by broad climatic zones or groups. The Forest is within the Dry Domain (which covers most of the Intermountain Region). This is an area of water deficit where the potential annual water losses through evaporation exceed annual water gains through precipitation.

Division - Described by regional climatic types, vegetation affinities, and soil order The Forest is within the Temperate Steppe Regime Mountains Division (M330)

Province - Described by potential natural vegetation, highlands or mountains with complex vertical climate-vegetation-soilzonation The Forest is within two Provinces

M331 - Southern Rocky Mtn Steppe - Open Woodland - Coniferous Forest - Alpine Meadow

M332 - Middle Rocky Mtn Steppe - Coniferous Forest - Alpine Meadow

Sections - Described by geomorphic province, geologic age, stratigraphy, lithology, regional climatic data, phases of soil orders, suborders or great groups, potential natural vegetation (PNV), potential natural communities (PNC) The Forest lies within three Sections

M331A - Yellowstone Highlands Section

M331D - Overthrust Mountains Section

M332E - Beaverhead Mountains Section

Delineation of ecological subsections was done by Targhee National Forest personnel under direction provided by ECOMAP Subsections are described by geomorphic process, surficial geology, lithology, phases of soil orders, suborders or great groups, subregional climatic data, PNC - formation or series The Forest lies within seven subsections



Subsection Overlay on the Targhee National Forest and the Surrounding Area

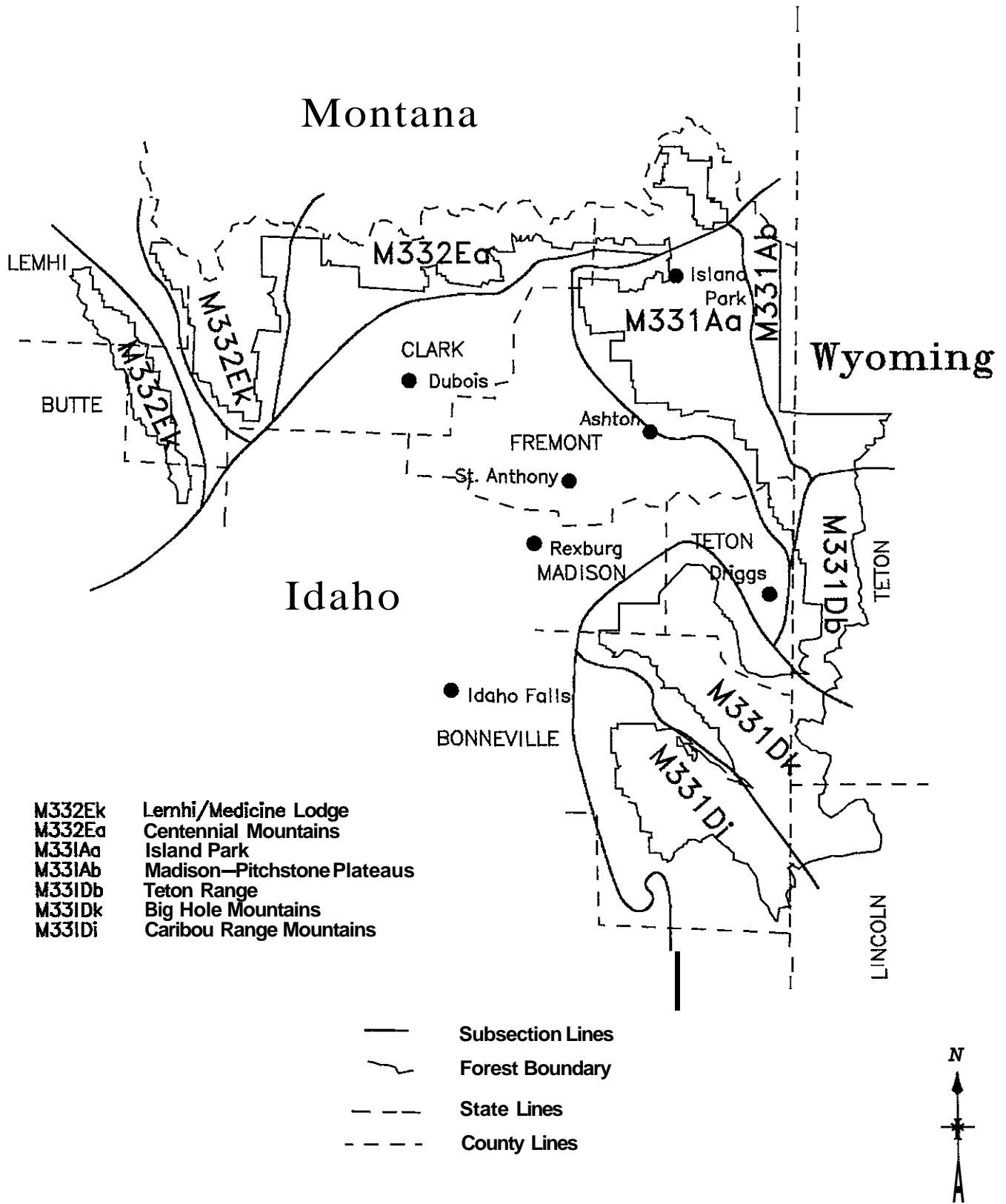
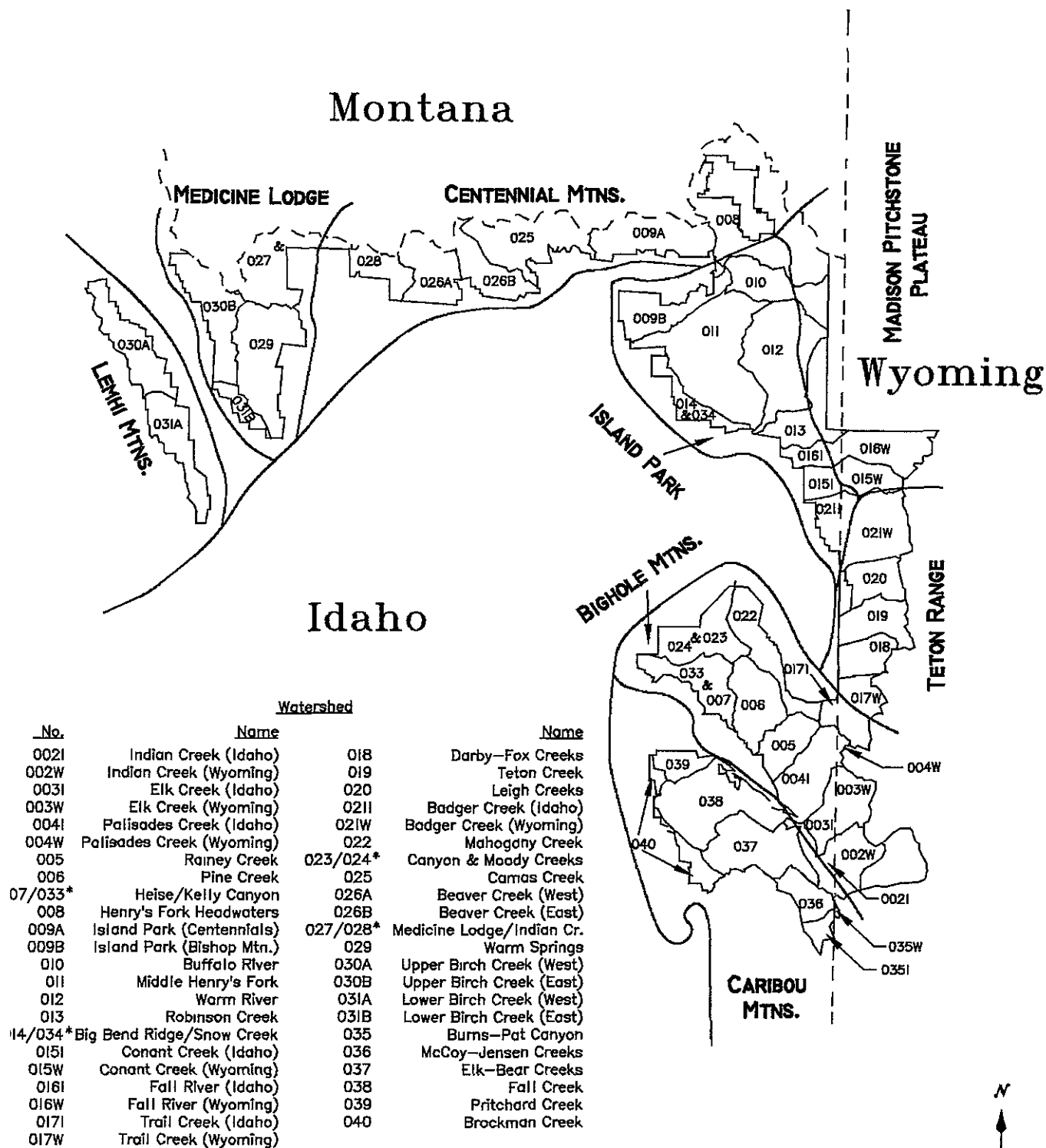


Figure III-1

Targhee National Forest Principal Watersheds



Note.

* Both used for watershed analysis in EIS, combined for elk habitat analysis as shown on Forest Plan Map 22.



Not To Scale

Figure III-2

LEMHI/MEDICINE LODGE SUBSECTION (M332Ek)

SETTING

This subsection includes the Lemhi Mountains and the Medicine Lodge/Beaverhead Mountains. A variety of vegetation exists with forested communities dominated by Douglas-fir and limber pine. Sagebrush/bunchgrass and mountain mahogany communities are common at lower elevations and on strong southerly exposures. Limber pine communities and alpine meadows exist at the high elevations. This subsection is rich in mining history with old mining sites and remnants of town sites. In the Birch Creek Valley four preserved brick adobe charcoal kilns remain of sixteen originally built to furnish charcoal to the Nicholia Mine. This area contains some of the most significant Native American sites on the Forest, as well as a segment of the Continental Divide National Scenic Trail, two recommended wildernesses (Diamond Peak and Italian Peaks) and most big game species found on the Forest.

About 37 percent of this subsection is forested, this is more forest land than occurred historically. Information from the early 1900s indicates that in some areas Douglas-fir has recently established itself on lands formerly dominated by grasses and sagebrush. Some riparian communities also appear to have more conifers than they did historically.

Approximately 90 percent of the forested land is in a mature age class, indicating a lack of age class diversity in the subsection. With 90 percent of the forests in Douglas-fir there is also a lack of tree species diversity. Many of the Douglas-fir stands are densely stocked. The uniformity of tree species and age classes, as well as the dense stocking, make this area's forests more susceptible to ecosystem disturbances such as insects, diseases and large fires. An example of the latter was the Gallagher Peak Fire which burned 37,230 acres in 1979. This was the largest fire in the last twenty years on the Forest.

Aspen forest acreage in this subsection has declined since the early twentieth century due to fire suppression. This is of concern since aspen provides important habitat for many wildlife species. It is also an important factor in the scenic beauty of the Forest.

Existing biological potential for woodpeckers is 26 to 34 percent. This indicates that larger size snags are not abundant or well distributed in this subsection at this time, even though a very high percentage of the forests are in mature and older successional stages.

Figure III-3 displays this subsection along with the major prescription areas.

DESIRED FUTURE CONDITION

This area provides quality motorized and nonmotorized dispersed recreation, livestock forage, and elk and deer winter range. Big game hunting is an important recreational activity.

Italian Peaks is managed as a recommended wilderness. Diamond Peak Roadless Area is also managed as a recommended wilderness. Except for the Eightmile-Pass Creek corridor, the rest of this roadless area would remain roadless.

GOALS AND OBJECTIVES

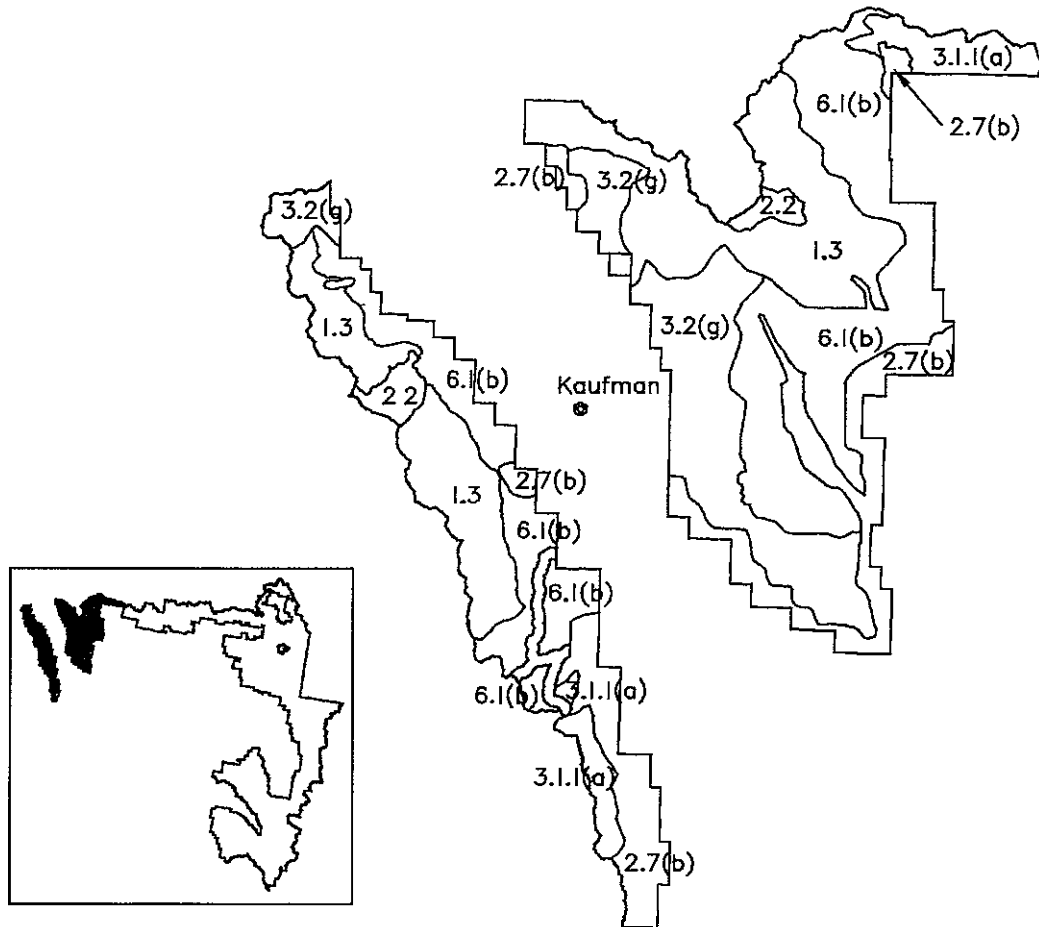
Goal - Properly Functioning Condition

Manage where possible for a diverse array of habitats tied to the natural occurrence and distribution of plant communities. Regenerate and maintain plant associations in properly functioning condition.

Objectives - Fisheries, Water and Riparian Resources

1. Improve stream channel stability ratings to good or excellent by 2007 on Divide Creek.

Lemhi/Medicine Lodge Subsection (M332Ek)



RX	Lemhi Mtns. acres	Med. Lodge acres	TOTAL acres
1.3	29,521	49,406	78,927
2.1.1	302	0	302
2.2	3,722	3,011	6,733
2.7(b)	12,669	22,986	35,649
2.8.3	5,431	15,206	20,637
3.1.1(a)	8,255	7,149	15,404
3.2(g)	7,027	38,264	45,291
4.1	6	13	19
4.3	0	0	6
6.1(b)	24,313	52,150	76,463
8.1	7	196	203
PRV	329	1,553	1,882
STA	0	640	5,869
Total	91,596	190,584	282,180



Figure 111-3

2 By 2007, reassess conditions on Webber Creek to determine needs for channel stability improvement

Goal - Recreation

Provide increased designated motorized road and trail access in a managed low impact method

Goal - Heritage Resources

Provide opportunities for scientific studies of significant archaeological sites

Objective - Range

Within three years of signing the ROD, assess opportunities to modify grazing allotment boundaries and permits to more effectively use natural barriers, change grazing patterns, adjust seasons of use, administratively close some additional areas, etc , to further separate winter domestic sheep grazing in the Medicine Lodge portion of the subsection from bighorn sheep

STANDARDS AND GUIDELINES

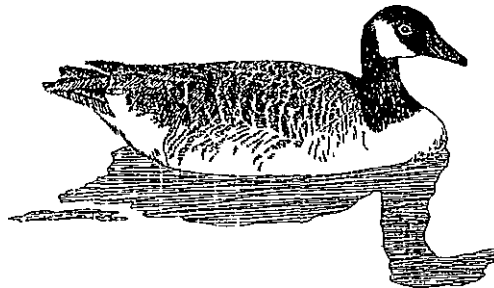
Recreation

Restrict motorized use to designated routes only, except for snowmobiles (G)

Range ✓

1 To better manage bighorn sheep habitat, the Kelly Canyon and Snakey Canyon winter sheep allotments in the Medicine Lodge portion of the subsection, on the Dubois Ranger District, will be phased out on an opportunity basis (Process Papers L and N) In addition, the winter sheep grazing permit will be phased out on the Nicholia-Chandler S&G allotment An opportunity is defined as a suitable or favorable time to abolish or close an allotment because of nonuse violations, term permit waivers where the permit is waived back to the government, resource protection, or permit actions resulting in cancellation of the permit If opportunities do not arise, then efforts will be made to relocate or accommodate sheep to other areas When all winter sheep allotments in that portion of the subsection have been vacated, they will be closed The intent of not closing these individual allotments as they become vacated is to provide an opportunity to minimize conflicts between domestic and bighorn sheep (S)

2 On the Medicine Lodge portion of the Dubois Ranger District, the sheep grazing permit on the Willow Creek S&G allotment will be closed immediately to grazing for watershed protection (S)





CENTENNIAL MOUNTAINS SUBSECTION (M332Ea)

SETTING

This subsection covers the Centennial Mountains between the east fork of Irving Creek on the west and Reas Pass to the east. The Centennials, which form part of the Continental Divide, are a scenic mountain range with high mountain meadows scattered among spruce/fir and Douglas-fir forests. At lower elevations sagebrush/grasslands grade into Douglas-fir and lodgepole pine forests. The recommended Lionhead wilderness, in the northeast portion of the subsection, abuts existing and recommended wilderness in Montana. The major travel corridors are Highways 20 and 87, and a portion of Interstate 15. The Yale-Kilgore road is a secondary travel route connecting Island Park to Kilgore and Dubois. In the northeast portion of the subsection is Henry's Lake, a world-renowned fishery. Segments of the Continental Divide National Scenic Trail, the Nez Perce National Historic Trail and the Two Top National Recreation (snowmobile) Trail lie within this subsection.

This subsection is dominated by sagebrush/grasslands and Douglas-fir communities, some of which have seen substantial timber management activities. Forested communities cover 71 percent of the subsection. Approximately 51 percent of the forested acres are Douglas-fir. Lodgepole pine (21 percent) is found in pockets on low productivity soils. Mixed lodgepole pine/Douglas-fir (13 percent) and other mixed conifers (ten percent) are also well represented. Species such as Douglas-fir and subalpine fir are becoming established as stands move toward later seral stages through succession. Aspen comprises four percent of the forested acres, which is less than was historically present. Fire suppression has allowed conifers to take over areas that were previously rangeland, tall forb communities, and aspen. Conifers have also encroached into riparian areas.

Mature forests make up 79 percent of the forested acres, indicating a lack of diversity in age classes. Existing biological potential for larger woodpeckers is 33 to 52 percent. Larger size snags are not abundant or well distributed in this subsection. Severe fires, insects and diseases are concerns in this subsection, mainly because of the large component of mature forests. The wildland/urban interface has significantly increased due to the development of the private lands within the forest protection boundary. This increases the risk of a fire spreading between the forest and private lands.

The subsection contains portions of two subunits within the Henry's Lake Bear Management Unit.

Figure III-4 displays this subsection along with the major prescription areas.

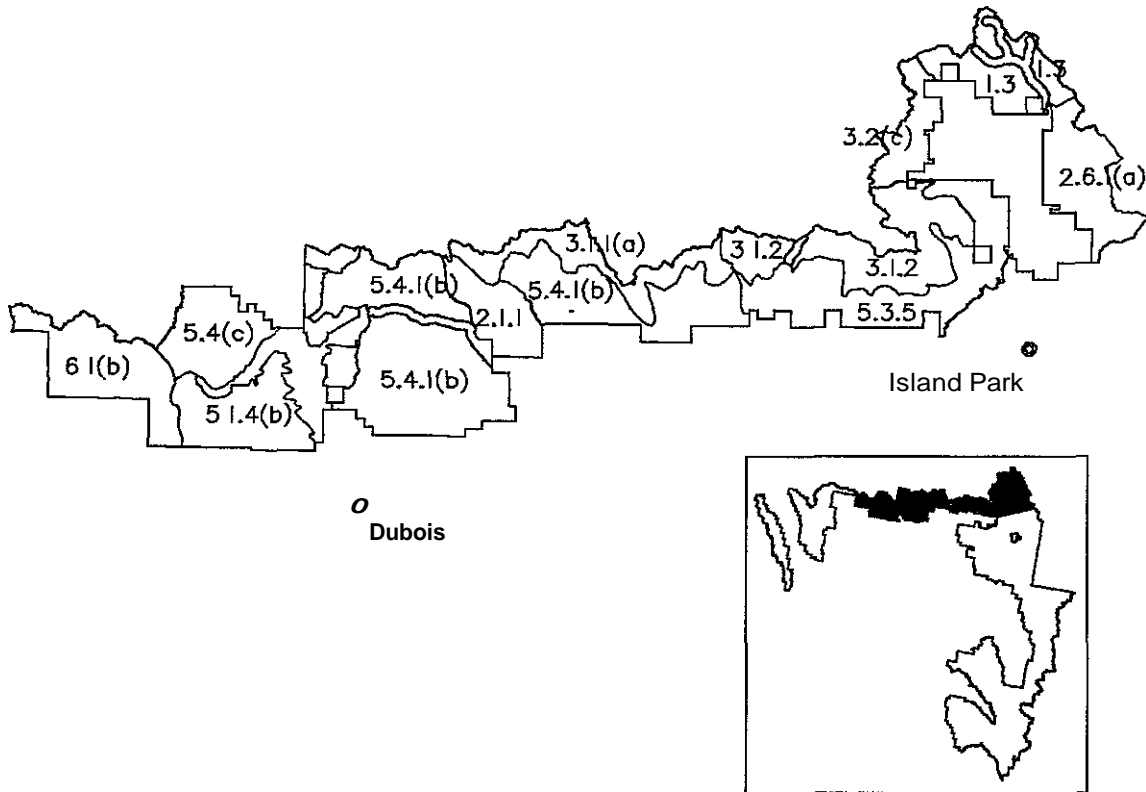
DESIRED FUTURE CONDITION

This subsection is one of the most diverse and complex subsections on the Forest. It offers the greatest opportunity to move the landscape toward properly functioning condition while reducing the risk of catastrophic events.

The Lionhead Roadless Area will provide access for snowmobiles. Its core area is recommended for wilderness designation.

Any activities will need to address concerns associated with grizzly bear and big game habitat management as well as reducing the risks of insects, disease and fire to Forest resource values and adjacent lands.

Centennial Mountains Subsection (M332Ea)



RX	TOTAL	RX	TOTAL acres
1.3	11,314	4.3	198
2.1.1	12,417	5.1.3(a)	14,533
2.2	2,711	5.1.4(b)	85,177
2.3	2,536	5.2.1	925
2.4	1,076	5.2.2	10,875
2.5	2,560	5.3.5	29,613
2.6.1(a)	17,047	5.4(b)	1
2.7(b)	1,930	5.4(c)	15,044
2.8.3	31,428	6.1(b)	26,324
3.1.1(a)	13,934	8.1	1,066
3.1.2	26,757	NFS	2
3.2(c)	9,309	PRV	7,413
3.2(g)	1,187	STA	5,869
4.1	273	Water	1,051
4.2	107	Total	332,692



Figure III-4

GOALS AND OBJECTIVES

Goal - Properly Functioning Condition

Move the spatial distribution patterns and ages of vegetation toward sustainable conditions

Objective - Properly Functioning Condition

By 2007, develop a fire plan which allows for prescribed natural and management ignited fire, where compatible with other resource objectives

Objective - Fisheries, Water and Riparian Resources

Improve stream channel stability ratings to good or excellent by 2007 on Allan Canyon Creek, McGarry Canyon Creek, Moose Creek, Dairy Creek, Long Creek, E Rattlesnake Creek, E Three-mile Creek and W Dry Creek

STANDARDS AND GUIDELINES

Lands (Special Uses)

The Leon Petersen cabin and associated facilities will be managed as an isolated cabin. Follow provisions in Special Use Permit (11/25/96) that allow continued use as an isolated cabin until December 31, 2017. The permit will not be renewed or extended beyond December 31, 2017, at which time the cabin and associated facilities will be removed from National Forest System lands and the site restored to Forest Service specification. All costs for facility removal and site restoration will be the responsibility of the permit holder (S)

Range

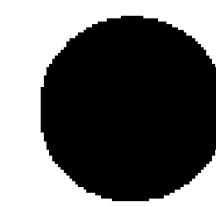
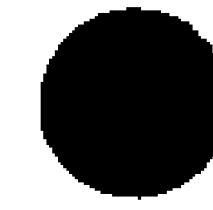
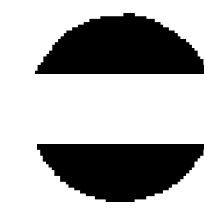
1 To better manage grizzly bear habitat, all sheep allotments on the Island Park Ranger District will be phased out on an opportunity basis (Process Papers L and N). These allotments are the Blue Creek, Carrot-Taylor, Coffee Pot, Hotel Creek, Icehouse-Willow, Myers Creek, Sawtell Creek, Snyder Creek, and West Lake S&G allotments. Domestic sheep grazing within the grizzly bear recovery area will be managed according to Management Situation 2 guidelines and will be phased out on an opportunity basis. When all sheep allotments in the portion of the subsection within the grizzly bear recovery area have been vacated, all of the allotments will be closed in that portion of the subsection. The intent of not closing these individual allotments as they are vacated is to provide an opportunity to minimize conflicts between grizzly bears and domestic sheep in the event of an encounter with grizzlies on sheep allotments (S)

A Opportunities to vacate an allotment include such events as nonuse violations, term permit waivers where the permit is waived back to the government, resource protection, or permit actions resulting in cancellation of the permit. If opportunities do not arise, then efforts will be made to relocate or accommodate sheep to other areas

B Vacated allotments in these areas will be made available as needed to resolve grizzly bear/sheep conflicts in other sheep allotments in Situation 2 habitat

2 On the Dubois Ranger District portion of this subsection, the Huntley Canyon S&G allotment will be closed immediately for watershed protection (S)

3 On the Island Park Ranger District portion of this subsection, the Reas Pass, Dry Creek and Jesse Creek S&G allotments will be closed immediately to better manage grizzly bear habitat (S)



ISLAND PARK SUBSECTION (M331Aa)

SETTING

This subsection includes the west half of Island Park, Ashton, and the north dissected tablelands portion of Teton Basin Ranger Districts (Jackpine Loop). The dominant landscape feature of this subsection is a large volcanic caldera. Highway 20 is the only major highway that travels through this subsection. Among the many scenic attractions are Upper and Lower Mesa Falls, the last major undisturbed falls on the Columbia River system. The Mesa Falls Scenic Byway, established in 1989, provides motorists with an impressive view of the Teton Mountain Range and accesses a summer interpretive site along the two falls.

The Island Park subsection offers excellent trout fishing at Island Park Reservoir and along the Henry's Fork, Buffalo River, Warm River, Fall River and Bitch Creek. The Island Park subsection is also known nationally for its many snowmobile and cross-country ski trails. The significant influx of summer and year-round residents to private lands adjacent to the Forest in recent years is expected to continue. This urban interface is a growing concern for the Forest. The area shows signs of large scale timber harvesting due to salvage efforts following the mountain pine beetle epidemics in the 1960s and 1970s. Harriman State Park lies in the heart of the Harriman Wildlife Refuge, with 16,000 acres of forest, meadows, lakes and streams.

A small portion of the Winegar Hole recommended wilderness lies along the eastern border of this subsection. The Big Springs National Recreation (water) Trail and segments of the Nez Perce National Historic Trail lie within this subsection.

The landscape is dominated by forested cover types, which blanket 93 percent of the area. Forested areas are primarily lodgepole pine types (70 percent) that contain small pockets of aspen, sagebrush/grass, grass meadows and mountain brush. Douglas-fir (ten percent) and mixed lodgepole pine/Douglas-fir (15 percent) cover types provide some diversity in the area. Lodgepole pine occupies the floor of the Island Park Caldera and Douglas-fir cover types are concentrated on the caldera rim. On the caldera rim, aspen and sagebrush areas are being encroached upon by Douglas-fir as the process of succession continues.

Currently 61 percent of the forests are in a mature or older age class which provide suitable nesting sites for a variety of bird species. Since 93 percent of this subsection is forested, creation of young forest age classes probably increases the amount of suitable foraging habitat. Currently 26 percent of the forested acres are in nonstocked and seedling conditions which provide foraging habitat.

Salvage harvesting has shifted 35 percent of the forested acres into the nonstocked, seedling and sapling classes. Active management of aspen, as well as aspen sprouting in lodgepole pine clearcuts, has moved 34 percent of the aspen into these young classes. Other cover types are concentrated in the mature age group.

Mature Douglas-fir on the caldera rim experienced outbreaks of spruce budworm and Douglas-fir beetle in the past decade. These have now subsided, but could easily recur given the mature condition of the Douglas-fir and the presence of multiple-storied stands. Due to fuel reductions and young age classes associated with timber harvest, fire is less of a concern here than in most other subsections.

Figure III-5 displays this subsection along with the major prescription areas.

Island Park Subsection (M331Aa)

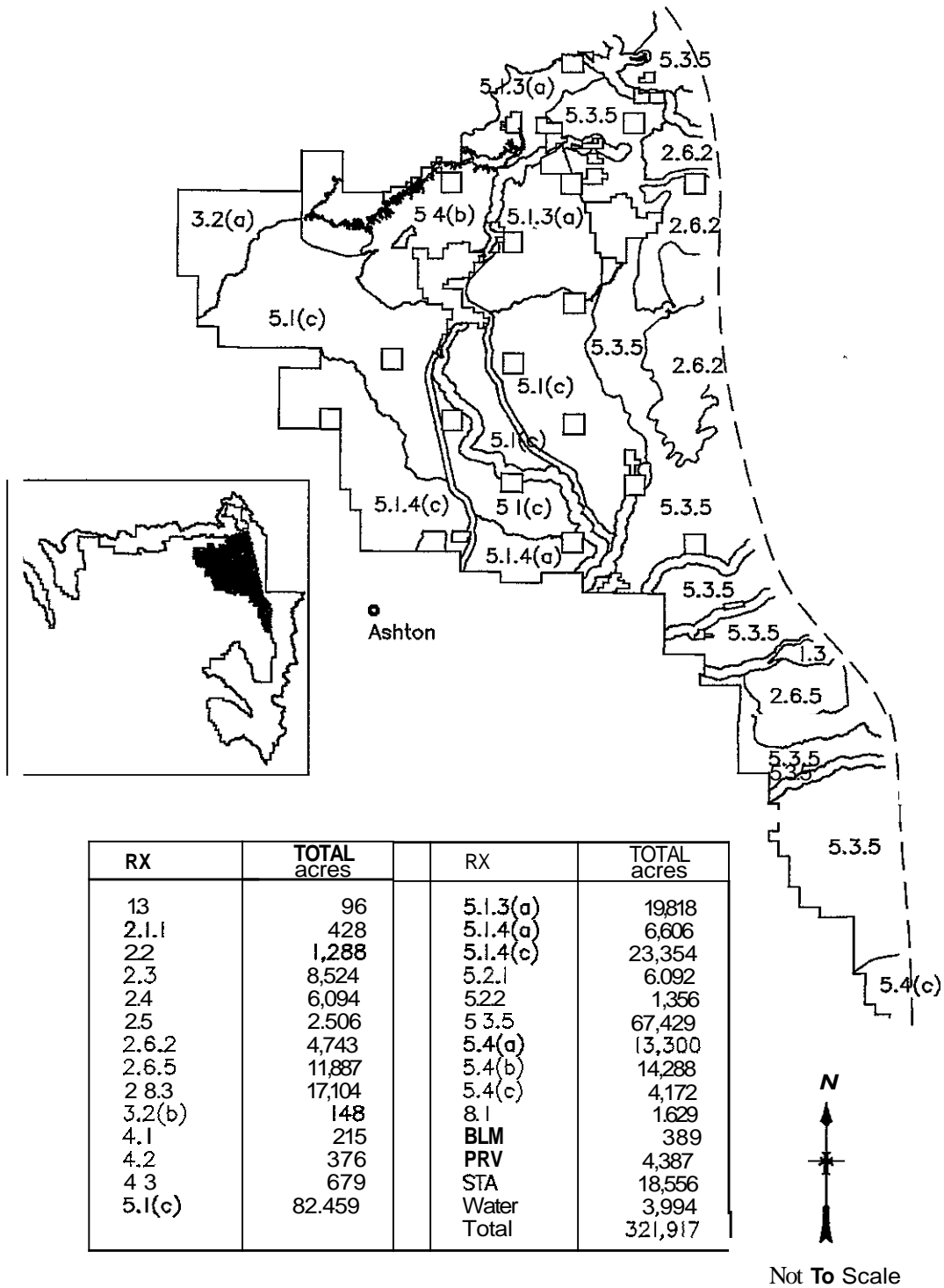


Figure 111-5

DESIRED FUTURE CONDITION

Important Forestwide objectives in this subsection focus on grizzly bear habitat management and elk. Road closures and vegetation treatments aimed at improving cover and maintaining forest health are opportunities to achieve these objectives.

This area will have improved recreation access and quality, particularly on the Highway 47-Mesa Falls Scenic Byway and for snowmobile use linked to West Yellowstone.

GOALS AND OBJECTIVES

Goal - Properly Functioning Condition

Move toward patch sizes that better reflect historical patterns and frequencies of disturbance. Manage forest structure to reflect historic patterns as they are determined.

Goal - Fire

Use management-ignited fire where possible to meet resource objectives.

Goal - Recreation

Maintain visual quality and visitor interpretation facilities along the Highway 47 Mesa Falls Scenic Byway.

STANDARDS AND GUIDELINES

Waterfowl Nesting Areas

The Goose Neck Bay area on Island Park Reservoir is closed to motorized vehicle use April 1 to June 15, and open to motorized vehicle use the remainder of the year. (S)

Range

On the Ashton Ranger District portion of this subsection, the Fish Creek, Partridge Creek, Trail Canyon and Black Mountain S&G allotments will be closed immediately to grazing to better manage grizzly bear habitat. (S)





MADISON-PITCHSTONE PLATEAUS SUBSECTION (M331Ab)

SETTING

The largest portion of the Madison Plateau subsection lies within Yellowstone National Park. The portion on the Forest is managed by the Island Park and Ashton Ranger Districts next to Yellowstone National Park. The Ashton-Flagg Ranch Road and Fish Creek Road are the major access routes through the area. Grassy Lake, a 320-acre artificial lake, as well as other lakes and streams in the area, are popular fishing areas and are accessed by the Ashton-Flagg Ranch road. Several organized youth camps fall within this subsection. The Cave Falls road is the only motorized access to the southwest portion of Yellowstone Park. Segments of the Continental Divide National Scenic Trail and the Two Top National Recreation (snowmobile) Trail lie within this subsection.

Forests comprise 97 percent of the area. Lodgepole pine is the most common forest cover type (76 percent), with mixed stands of lodgepole pine and Douglas-fir making up the remaining forested area (24 percent). Relatively minor amounts of aspen and various mixed conifers provide some diversity. The southern portion of the subsection is unique in that there are many wet meadows and small lakes intermingled with the forests.

The 1988 North Fork Fire scorched 17,700 acres in the northern part of this subsection, stimulating aspen suckering in numerous locations. This fire event and past timber harvesting primarily in the north half of the subsection have shifted 39 percent of the lodgepole pine into the nonstocked, seedling and sapling age classes. Active management of aspen has also provided some age class diversity. Due to fuel reductions and young age classes resulting from these disturbances, fire is less of a concern here than in many other areas. However, conditions in the southern portion of the Madison subsection are presenting some fire risks as aspen and lodgepole pine stands convert to Douglas-fir through succession. Mature subalpine fir and Douglas-fir in this southern area experienced outbreaks of western balsam bark beetle and Douglas-fir beetle in the past decade. These conditions have subsided, but could easily recur since vegetation conditions have not changed.

Currently 63 percent of the forests are in a mature or older age classes and provide suitable nesting sites for various bird species. Currently 23 percent of the forested acres are in nonstocked and seedling conditions which provide foraging habitat.

The two designated wildernesses on the Forest lie wholly or partially within this subsection. The Jedediah Smith Wilderness (123,451 acres) is mostly in the Teton Range subsection with the balance in the Madison Plateau subsection. The Winegar Hole Wilderness (10,715 acres) is totally within the Madison Plateau subsection. Winegar Hole is largely primitive with very little use. This is mostly due to access difficulty, since there are only four miles of trail in the area. Use of this area is mostly for hunting big game. The Jedediah Smith is intensively used in the summer with approximately 60,000 visits (hiking, backpacking and horseback riding). This is a spectacular mountainous area on the west slope of the famous Teton Mountain Range. These wildernesses are two of twelve designated in the Greater Yellowstone Area which total 3.8 million acres. An area in this subsection in Idaho adjoining Wyoming's Winegar Hole Wilderness is recommended for wilderness designation.

Figure III-6 displays this subsection along with the major prescription areas.

DESIRED FUTURE CONDITION

This subsection will contribute toward grizzly bear and elk habitat management objectives, and provide primitive to semi-primitive recreation opportunities. Vegetation management may be used to reduce threats to remaining habitat from fire, insects and disease. Roads will be closed to improve security for grizzly bears and other wildlife.

Madison–Pitchstone Plateaus Subsection (M331Ab)

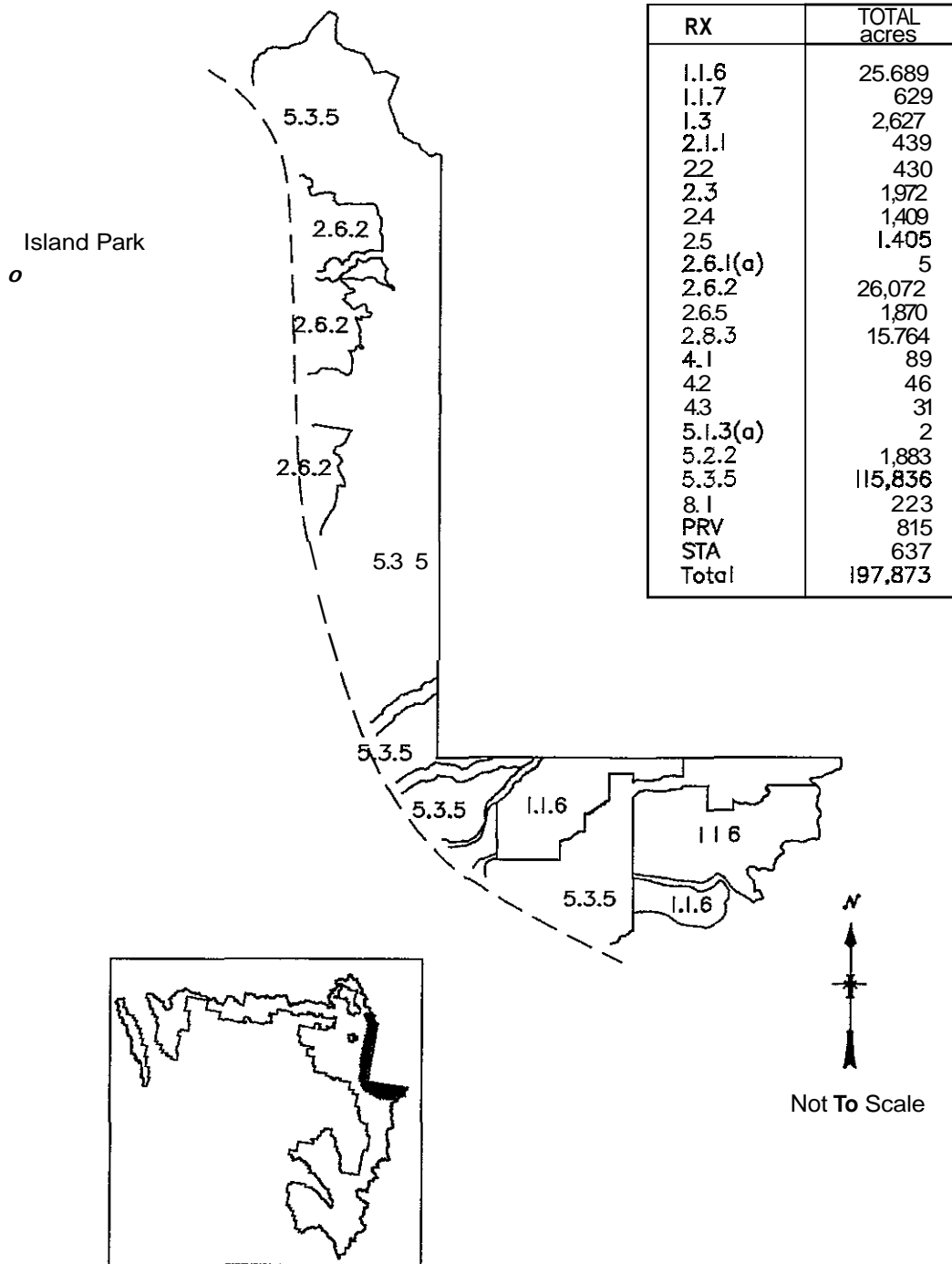


Figure 111-6

GOALS AND OBJECTIVES

Goal - Properly Functioning Condition

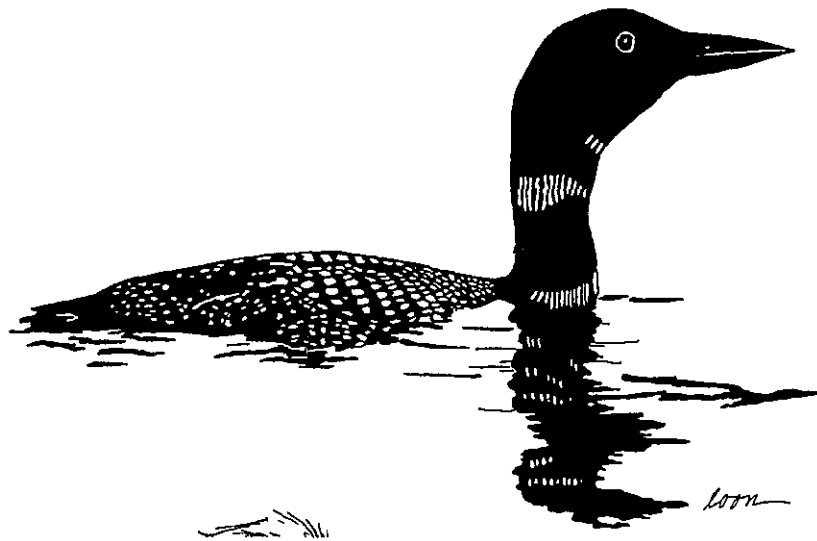
Move the area toward its properly functioning condition with a full mix of age classes, larger patch sizes and connectivity between stands

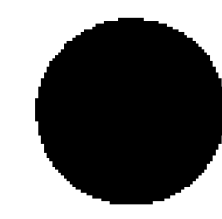
Goal - Fire

Use management-ignited and natural fire to meet resource objectives Comply with the Jedediah Smith Wilderness Fire Management Plan

Goal - Fisheries, Water and Riparian Resources

Effective rehabilitation of the North Fork Fire burn area to stabilize slopes and reduce sediment delivery to streams





TETON RANGE SUBSECTION (M331Db)

SETTING

This area encompasses the Teton Mountains, bounded on the north by South Boone Creek, on the south by Highway 22, on the west by the Teton Basin and on the east by Jackson Hole in Wyoming. The Teton Range is a spectacular line of high peaks rising abruptly along the east side of the Teton Basin. The landscape is a diverse mix of forested and open vegetation. The Jedediah Smith Wilderness traverses the upper portions of the west slopes of the Teton Mountains. The Grand Targhee Ski and Summer Resort is a major tourist destination. Two permitted organized youth camps operate within the subsection. This area is known for its many backcountry trail systems, which are accessible by horse or foot.

The landscape is a diverse mix of forested (57 percent) and open (43 percent) community types. Forest tree species include Douglas-fir, lodgepole pine and mixed conifers. Lodgepole is mixed with Douglas-fir in 31 percent of the forested area, indicating that the pine is converting to Douglas-fir through succession. Open Douglas-fir forests, mountain brush, aspen, and sagebrush pockets are found predominantly on south and west aspects. Aspen is being encroached upon by conifers as succession proceeds, and the amount of aspen has declined compared with historic levels due to fire suppression. Upper elevations are characterized by dense mixed conifer forests, open grass/forb meadows, and talus slopes. Conifers are moving into riparian areas and mountain meadows due to fire suppression.

Since much of the Teton Range subsection is designated wilderness, timber harvest has been limited. Due to this fact and long-term fire suppression only one percent of the forested acres is in the nonstocked, seedling or sapling age classes. The preponderance of mature and older forests (97 percent of total) make this area suitable habitat for species such as marten and owls that prefer late-seral-stage forests. Conversely the lack of fire has contributed to a decline in habitat for bighorn sheep and promoted susceptibility of the forested lands to insect infestations, diseases and large-scale fires. In recent years the western balsam bark beetle has been active in the subalpine fir. The Douglas-fir beetle has killed pockets of Douglas-fir in the past decade, but beetle populations have declined since 1992.

The Jedediah Smith Wilderness (123,451 acres) is mostly in the Teton Range subsection with the balance in the Madison Plateau subsection. The Jedediah Smith is intensively used yearlong with approximately 60,000 visits per year. Some of this use is shared with Grand Teton National Park, lying immediately to the east across the Teton Crest.

The Bechler-Teton Bear Management Unit is also partially within the subsection. In addition to grizzly bears, peregrine falcon, bighorn sheep and many big game species inhabit the area.

Teton Valley has been experiencing a development boom recently and urban interface is a growing concern for the Forest.

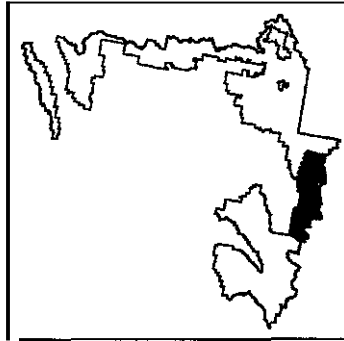
Figure III-7 displays this subsection along with the major prescription areas.

DESIRED FUTURE CONDITION

The Teton Range subsection is dominated by the lands inside the Jedediah Smith Wilderness. Over 73 percent of the subsection is wilderness where the focus is to provide quality wilderness experiences. The description of the potential experience is described in Prescriptions 1.1.6, 1.1.7 and 1.1.8.

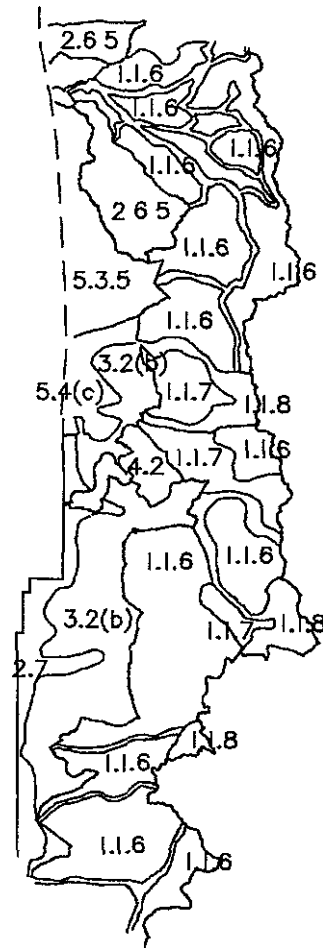
The subsection includes the Grand Targhee Ski and Summer Resort, which will be managed to provide a safe and enjoyable recreation experience.

Teton Range Subsection (M33 1Db)



RX	TOTAL acres
1.1.6	76,656
1.1.7	18,936
1.1.8	12,572
2.1.1	41
2.1.2	3,793
2.3	364
2.65	6,219
2.7(a)	7,064
2.8.3	7,442
3.2 b)	18,193
3.2(b)	13
3.2(j)	372
4.2(j)	57
4.2	2,517
4.3	626
5.3.5	3,602
5.4(c)	2,111
81	245
PRV	944
Total	161,767

Driggs
●



N
↑
+
↓
Not To Scale

Figure III-7

The subsection includes the Bechler - Teton Bear Management Unit. This area will experience little vegetation treatment in the near future while providing a high degree of security for grizzly bear.

The remaining lands in the subsection will provide for motorized recreation while improving big game winter range. These will be managed to reduce or eliminate conflicts with adjacent wilderness.

Of critical importance to this subsection is the high amount of mature and overmature vegetation. To achieve the desired vegetation conditions for all of the management prescriptions will require careful fire management since little of this area will be available for silviculture treatment.

GOALS AND OBJECTIVES

✓ Thru 57

Objective - Fire

By 2007 complete a fire management plan for the Teton Range subsection which will include opportunities for improving bighorn sheep habitat.

Objective - Fisheries, Water and Riparian Resources

Improve stream channel stability ratings to good or excellent by 2007 where natural conditions allow on Teton Creek, N Leigh, S Leigh, Moose Creek, Trail Creek, Fox Creek, and Kiln Creek where instability is management-caused.

Goals - Wildlife

1. Maintain or improve big game winter range.
2. Coordinate with Grand Teton National Park and the Wyoming Game and Fish Department in the management of the bighorn sheep population and habitat.
3. Provide for recreational activity while maintaining the integrity of crucial wildlife habitats.
4. Work with the Intermountain Research Station to establish a research project to study the effects of recreation on bighorn sheep in the Teton Range subsection.

Goal - Recreation

Provide for a variety of opportunities including motorized, nonmotorized, developed and dispersed recreation uses.

Goal - Roadless

Maintain remaining roadless areas in their roadless condition.

Objective - Range

Within three years of signing the ROD, assess opportunities to modify grazing allotment boundaries and permits to more effectively use natural barriers, change grazing patterns, adjust seasons of use, administratively close some additional areas, etc., to further separate domestic sheep from bighorn sheep.

STANDARDS AND GUIDELINES

Recreation

Manage the development of the Grand Targhee Ski and Summer Resort within the intent of the 1994 Master Development Plan Final Environmental Impact Statement and according to the Master Plan approved April 27, 1995 (G).

Wilderness

Implement the Jedediah Smith Wilderness Fire Management Plan (G)

Range

- 1 Domestic sheep grazing within the grizzly bear recovery area will be managed according to Management Situation 2 guidelines (S)
- 2 To better manage grizzly bear and bighorn sheep habitat, all sheep allotments in the Teton Range Subsection on the Teton Basin Ranger District will be phased out on an opportunity basis (Process Papers L and N) These allotments are the Moose Creek, Canyon Badlands, Dry Basin, Badger Twin, and Green Mountain S&G allotments Opportunities to vacate an allotment include such events as nonuse violations, term permit waivers where the permit is waived back to the government, resource protection, or permit actions resulting in cancellation of the permit If opportunities do not arise, then efforts will be made to relocate or accommodate sheep to other areas Vacated allotments in these areas will be made available as needed to resolve conflicts between grizzly bears and domestic sheep in other sheep allotments in Situation 2 habitat (S)
- 3 When all sheep allotments in the portion of the subsection within the grizzly bear recovery area have been vacated, they will be closed Likewise, when all sheep allotments in bighorn sheep habitat have been vacated, they will be closed The intent of not closing these individual allotments as they become vacated is to provide an opportunity to minimize conflicts between domestic sheep and bighorn sheep or grizzly bears (S)
- 4 The range direction in the Revised Forest Plan for the Targhee National Forest applies to the grazing activities (allotment/permit administration, forage utilization direction, AMP development, etc) for that portion of the Moose Creek S&G allotment on the Bridger-Teton National Forest (S)



BIG HOLE MOUNTAINS SUBSECTION (M331Dk)

SETTING

This subsection includes all National Forest System lands between Highway 33 in Idaho and Highway 22 in Wyoming on the north and the South Fork of the Snake River to the south. Several major highways provide access. Idaho Highways 26, 31 and 33, and Highway 22 in Wyoming. Highway 31 is a State Scenic Byway over Pine Creek Pass. Vegetation consists of mountain brush, grass/forb openings, aspen, and forests of Douglas-fir and lodgepole pine. The area has a variety of recreational opportunities including Kelly Canyon Ski Resort, Kelly Canyon Nordic Ski trails, Palisades backcountry, and trail motorbike riding. Palisades Reservoir and its many boat ramps are used by water sports enthusiasts. The Palisades Creek National Recreation Trail lies within this subsection.

Several utility corridors (electrical transmission lines) are located in this subsection. Most follow the highway system and are visible from the highway but do not dominate the landscape. Maintenance work and line upgrades can be seen along these highways. Additional power line needs have been identified and are expected in the near future within or next to these existing corridors.

There is increasing development of summer homes and year-round residences adjacent to the Forest boundary. It is possible that some inholdings within the Forest boundary may also see development in the near future.

The landscape is a mixture of vegetation community types. Some 65 percent of the landscape is forested and 35 percent is nonforested. The most common forest type is mixed lodgepole pine and Douglas-fir, comprising 47 percent of the forested acres. Aspen, pure Douglas-fir and pure lodgepole pine each account for roughly 15 percent of the forest. Mountain mahogany is found on south slopes and hawthorne, chokecherry, serviceberry, antelope bitterbrush and Rocky Mountain maple on various slopes and aspects depending on elevation. Grass/forb meadows and sagebrush are also common.

The northwestern boundary of the subsection extends into the cottonwood river bottom type along the Snake River. There is concern about the lack of cottonwood regeneration along the Snake River, due to a lack of historic river flood levels. A high-density bald eagle population inhabits this area.

Currently 95 percent of the subsection is in a mature age class which provides suitable habitat for a variety of interior wildlife species. This creates hazards for large fires, insect infestations and disease problems. In the north end of the subsection Douglas-fir beetle and western balsam bark beetle caused damage in the late 1980s and early 1990s; this tapered off in 1994. Insect information is not available for the southern portion. Due to fire suppression and lack of disturbance over the years, conifers have encroached into some sites that were historically nonforested. This has reduced overall vegetative diversity in the subsection. Only four percent of the forested stands are in the nonstocked, seedling or sapling age category. These are concentrated in the north end of the subsection where timber harvest has occurred. Most of the shrublands are also in late age classes or seral stages.

The Wyoming portion of the Palisades Roadless Area was designated by Congress as a Wilderness Study Area in 1984. The Study Area contains 132,000 acres, of which over 79,800 acres are administered by the Bridger-Teton National Forest. Some 110,520 acres of this roadless area in Idaho are recommended as wilderness but have had no congressional action taken on them.

Figure 1118 displays this subsection along with the major prescription areas.

Big Hole Mountains Subsection (M331Dk)

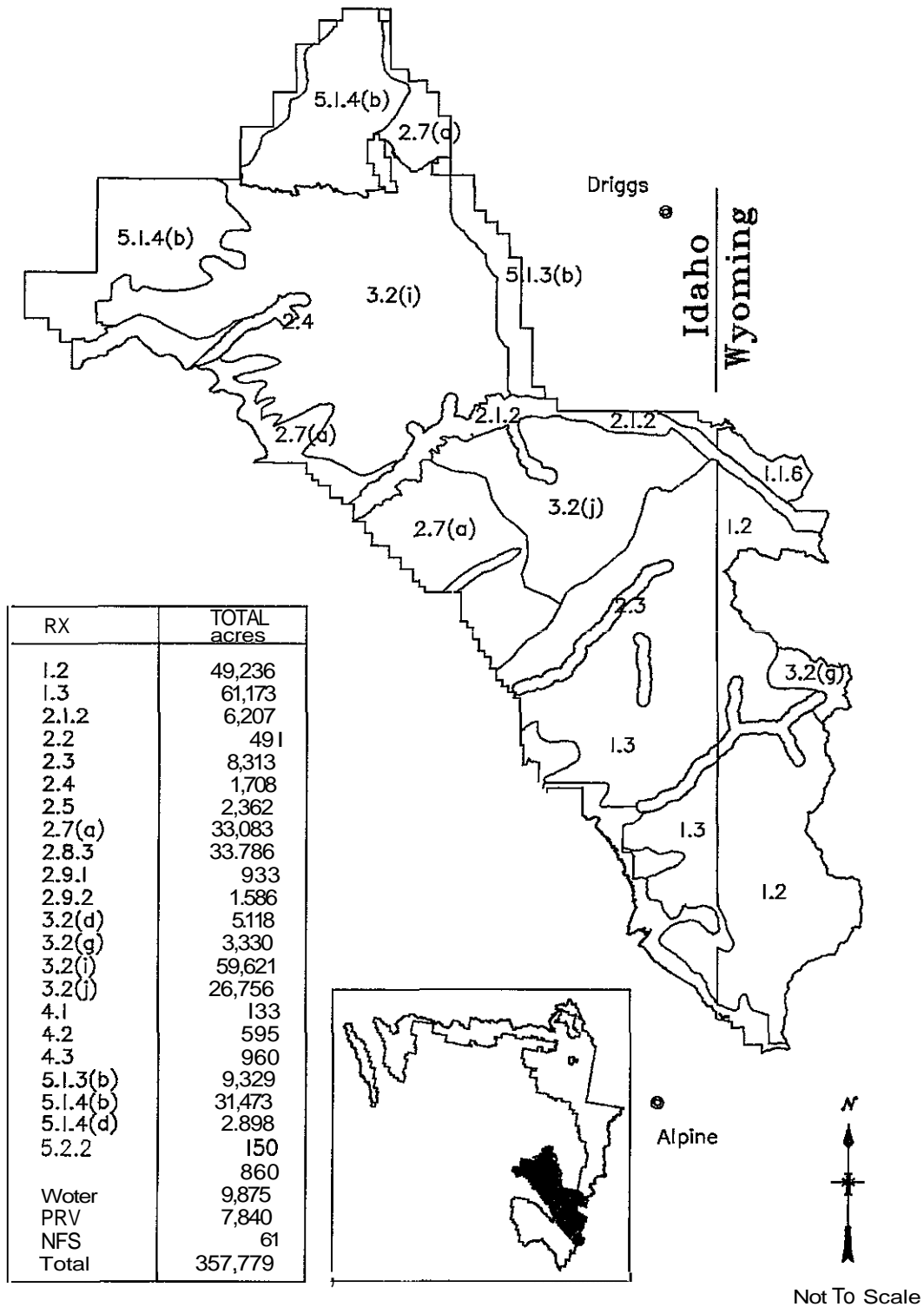


Figure 111-8

DESIRED FUTURE CONDITION

This subsection will provide a diverse range of recreation opportunities at different locations within the subsection

The Big Hole portion of the subsection will provide a wide variety of resources and recreation opportunities. This area will provide quality motorized recreation opportunity with a signed system of roads and trails for motorized use. Resource protection will be accomplished by restricting motorized use to designated routes and by locating routes along planned and selected routes.

The Palisades portion of the subsection will provide more primitive motorized and nonmotorized recreation opportunities. Emphasis will be placed on quality backcountry experience for these uses along appropriate designated trails. The Forest recommends the Idaho portion of the Palisades roadless area for wilderness designation. The Wyoming portion is managed as a wilderness study area according to existing legislation.

On lands suitable for timber harvest (mostly on the northern part of the Big Holes) the risks from insect and disease attack will be reduced using timber management while improving big game security and summer range. Prescribed fire will be used on the remainder of the subsection to improve ecosystem health and wildlife winter ranges.

The recreational use on the South Fork of the Snake River will continue but be balanced with the needs of wildlife. Management for bald eagle recovery will continue.

Much of this subsection is made up of inventoried roadless areas. With the exception of the north end of the Big Holes, most of that area is in the Garns Mountain and Palisades Roadless Areas. These areas are typified by steep mountain ranges where little development opportunity is expected.

GOALS AND OBJECTIVES

Goal - Properly Functioning Condition

Continue cooperation with other agencies in conducting research and implementing management actions to regenerate cottonwood along the South Fork of the Snake River.

Objective - Properly Functioning Condition

By 2007, develop a fire management plan which considers summer home development and risk around the Palisades Reservoir.

Goal - Fisheries, Water and Riparian Resources

Channel stability would be rated at good to excellent for individual streams.

Objective - Fisheries, Water and Riparian Resources

Improve stream channel stability ratings to good or excellent by 2007 where natural conditions allow on South Fork, Packsaddle, Horseshoe, Superior, North Fork Mahogany, Main Mahogany, Henderson, Patterson, and Murphy Creeks.

Goal - Wildlife

Provide for recreational activity while maintaining the integrity of crucial wildlife habitats such as winter range.

Goals - Recreation

1. Continue to place emphasis on winter recreation for the Big Hole portion of the subsection by continuing a grooming program for snowmachines, which is orientated towards family opportunities, continuing to work with user groups for cross-country skiing opportunities in the Kelly area.

2 Continue to improve the quality of the summer time OHV use in the Big Hole area and protect resource values by locating and maintaining trails on suitable locations

Goal - Visuals

Manage the Pine Creek Scenic Byway (Highway 31) and Highway 22 over Teton Pass for visual quality allowing needs of the utility corridor

Objective - Heritage Resources

Complete heritage resources inventory of this subsection by 2007

Goals - Roadless

1 In recommended wilderness, protect roadless area values to ensure wilderness characteristics are maintained

2 In all other areas, continue to protect resource values

Goal - Range

Continue to recognize the value of grazing on the Kelly Ski hill for forage control and fire protection. Grazing timing and duration will continue to be coordinated between grazing permittees, ski hill permittee and the Forest Service

STANDARDS AND GUIDELINES

Lands (Special Uses)

The Therold Buckland isolated cabin will continue as a life tenure permit and will not be transferred. Upon the expiration of the permit, the cabin will be evaluated and its historical qualifications determined. If the cabin is found to have historic value, it may be moved from the site, or the Forest may issue a special use permit to a Historical Association for maintenance of the cabin if warranted. If no historical value is found the cabin will be removed (S)

Old Growth Habitat

✓ Within one mile of the Palisades Reservoir and the South Fork of the Snake River, emphasis will be given to managing old growth Douglas-fir, spruce and cottonwood habitats for wildlife species (G)

Access

In the Table Rock area, the OROMTRD standard of < 2.0 mi/sq mi does not apply (S)

Range

The range direction in the Targhee Land Management Plan applies to the grazing activities (allotment/permit administration, forage utilization S&Gs, AMP development, etc) for that portion of Targhee National Forest lands administered by the Bridger-Teton National Forest, above Alpine Junction. Those lands are the Big Basin/South Elk S&G, South Indian/Cottonwood Creek S&G, Spencer/Wolf S&G, Grand Canyon S&G, and the Dog Creek S&G allotments (S)

CARIBOU RANGE MOUNTAINS SUBSECTION (M331D1)

SETTING

This subsection is the portion of the Caribou National Forest administered by the Targhee. It lies south of the South Fork of the Snake River. Steep mountain slopes and canyons dominate the landscape. The Palisades Reservoir is shared between this subsection and the Big Hole/Palisades subsection. Vegetation forms a patchwork of sagebrush/grass openings, aspen, and mixed Douglas-fir/lodgepole pine forests. Recreation use is very similar to that in the Big Hole/Palisades subsection with high mountain trails, motorized use on trails, and backcountry use as well as hunting, fishing and water sports on the reservoir and the Snake River. There are several summer home divisions and two organizational camps. Forest lands are visible from U.S. Highway 26, the major travel corridor between Idaho Falls, Idaho and Jackson, Wyoming. Very little logging has taken place in the past. Both cattle and sheep grazing occur.

One utility corridor (electrical transmission line) is located in this subsection. It is visible from the Fall Creek road but does not dominate the landscape. Maintenance work and line upgrades can be seen from travel routes.

The Caribou subsection is 60 percent forested and 40 percent nonforested. The primary forest types are aspen (31 percent) and mixed lodgepole and Douglas-fir (47 percent). The interspersed forests with sagebrush, grass/forb meadows and mountain brush provides for good diversity of plant species. The northeastern boundary area of the subsection includes cottonwood river bottom forests along the Snake River.

Age class diversity is limited. Some limited timber management has occurred in the lodgepole pine/Douglas-fir type. Almost no harvesting has taken place in the Engelmann spruce/subalpine fir type. Some 99 percent of the conifer forests are in mature or older seral stages. Douglas-fir is becoming more predominant as it encroaches on stands of lodgepole pine, aspen or shrubs. Evidence of insect attacks is readily visible in the Douglas-fir type and is increasing each year. It is likely that there is more Douglas-fir here now, and less aspen, lodgepole pine and shrubland, than existed historically. Fires have been suppressed for many years. Because stands are scattered and difficult to access, this condition is likely to persist. Treatment opportunities center around prescribed burns and limited vegetation treatment where access is more easily obtained.

Most of the shrublands are also in late seral stages. Consequently, risks of large fires, insects and disease outbreaks is high. Insect attacks in recent years have been similar to those in the Big Hole/Palisades subsection. The Snake River cottonwood stands are also predominately in the mature age class due to lack of disturbance, which they need in order to regenerate. Historic disturbance patterns consisting of periodic flooding have been interrupted since placement of the Palisades Dam.

Establishing natural regeneration of both Douglas-fir and lodgepole pine following harvest has been a problem in this subsection, and most sites have required planting.

Much of this subsection is made up of five inventoried roadless areas. Bear Creek is the largest inventoried area. Development or evidence of humans is easier to see in these roadless areas than in the Big Hole Mountains subsection. The size of the roadless areas and intrusions from motorized-use roads limit their wilderness characteristics.

Figure III-9 displays this subsection along with the major prescription areas.

Caribou Range Mountains Subsection (M331Di)

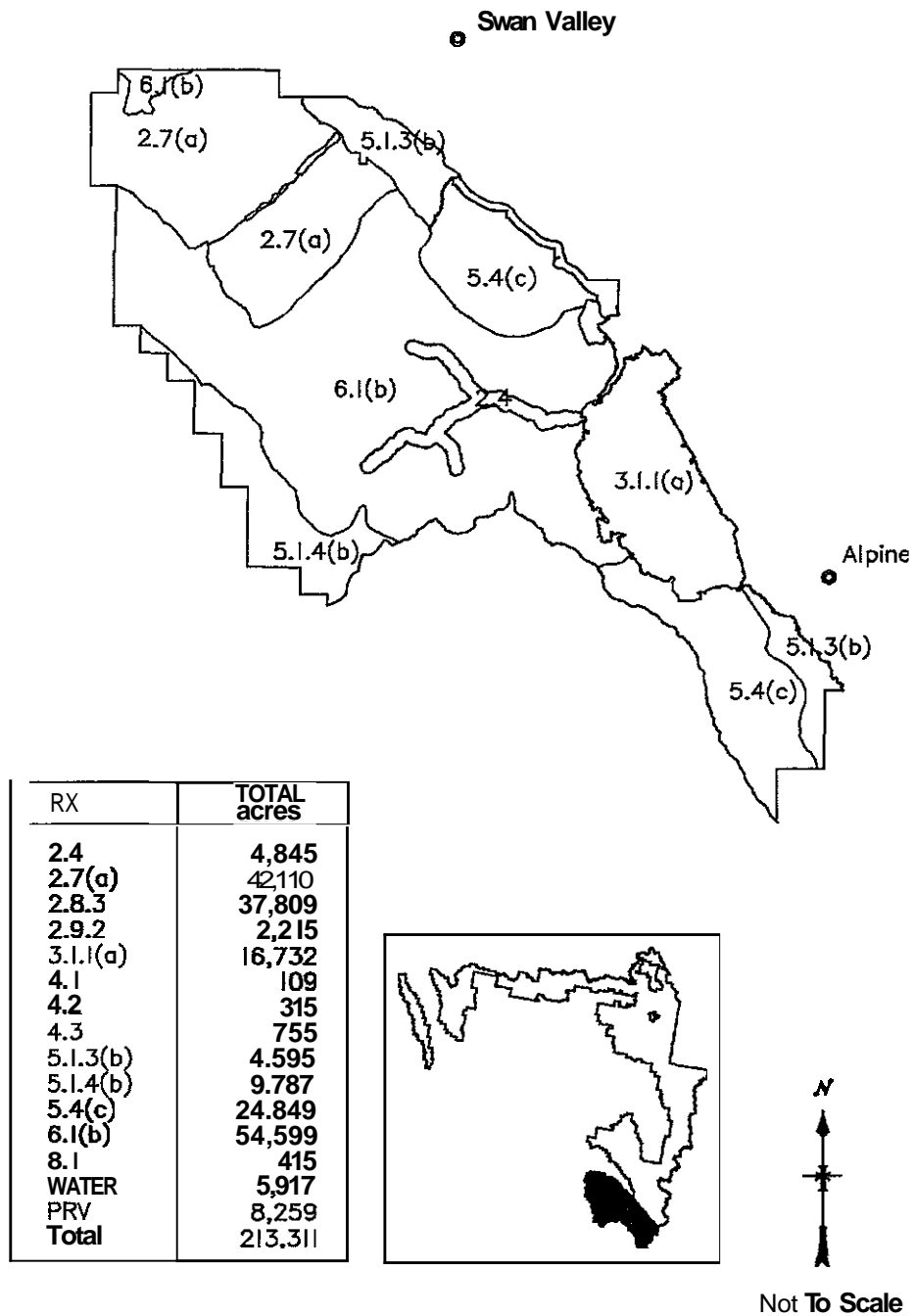


Figure III-9

DESIRED FUTURE CONDITION

Recreation will emphasize dispersed recreation opportunities, and semi-primitive backcountry experiences while providing high-quality motorized use on designated trail systems

The recreational use around Palisades Reservoir and the South Fork of the Snake River will continue but be balanced with the needs of wildlife and other resources

On lands suitable for timber harvest silvicultural management will reduce the risks of insect and disease attack while improving big game winter range conditions. Prescribed fire and some vegetation manipulation will be used on the remainder of the subsection where access permits to help restore and maintain a healthy ecosystem

Quality range management practices will continue on this subsection. High valued big game winter range in the Fall Creek area will be maintained or improved

GOALS AND OBJECTIVES

Goals - Properly Functioning Condition,

- 1 Continue cooperation with other agencies in conducting research and implementing management actions to regenerate cottonwood along the South Fork of the Snake River
- 2 Develop a fire management plan which allows for natural fire and which considers summer home development and risk around the Palisades Reservoir

Goals - Recreation

- 1 Improve the quality of summertime OHV use in this subsection and protect resource values by locating and maintaining trails at suitable locations
- 2 Emphasize winter recreation by allowing continued grooming of snow machine trails oriented towards family opportunities, and providing shelter facilities (warming huts)

Objective - Heritage Resources

Complete heritage resource inventory of this subsection by 2007

Goal - Roadless

Protect resource values on lands managed with a nonwilderness emphasis

STANDARDS AND GUIDELINES

Old Growth Habitat

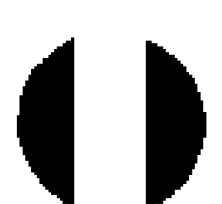
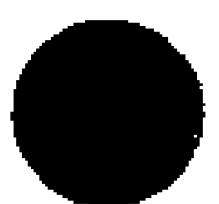
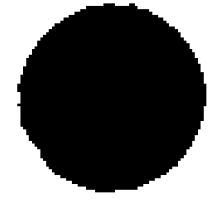
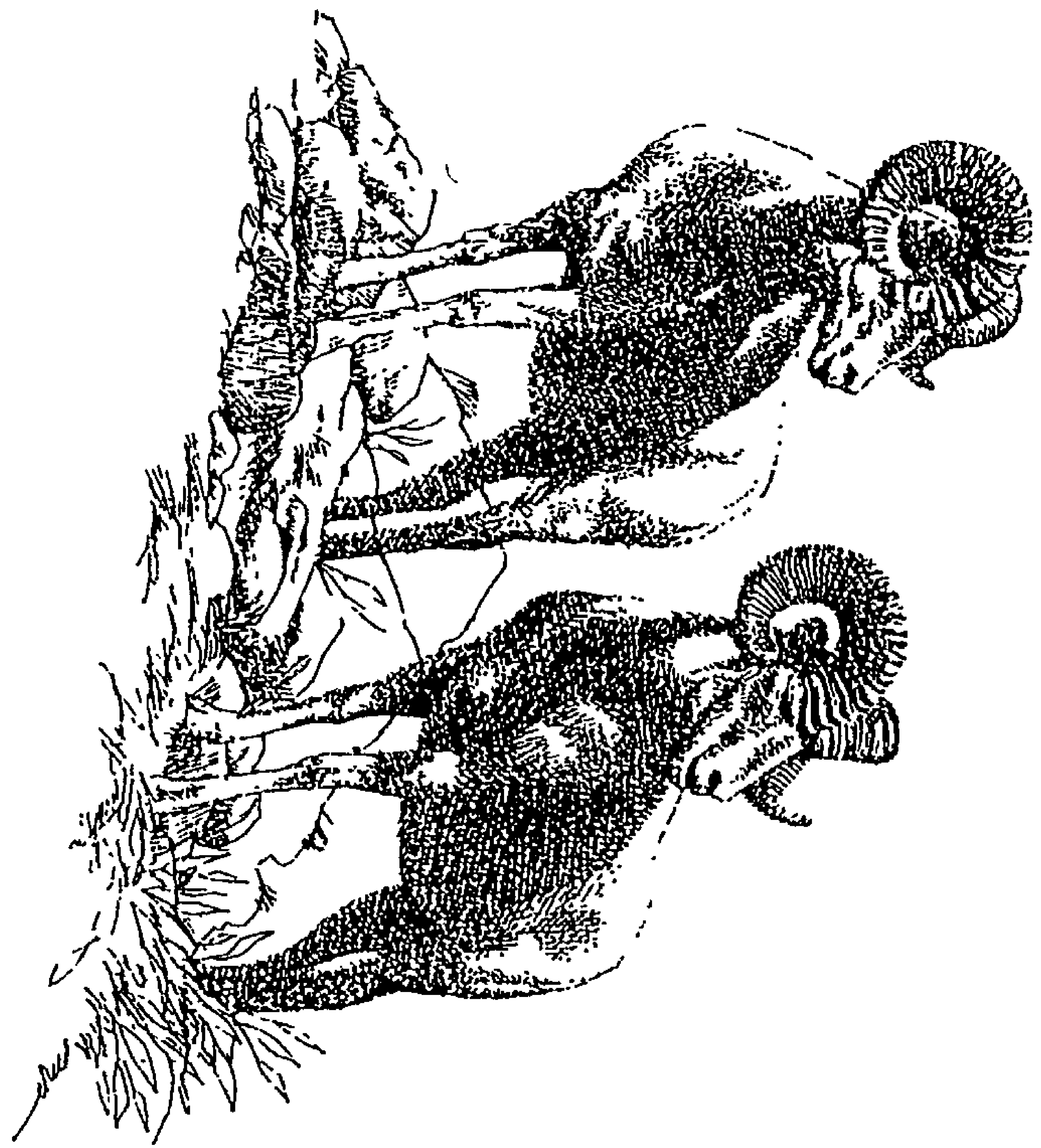
Within one mile of the Palisades Reservoir and the South Fork of the Snake River, emphasis will be given to managing old growth Douglas-fir, spruce and cottonwood habitats for wildlife species (G)

Access - Alpine Wetland Area

This area is located near the Salt River on the Palisades Reservoir. It is closed to cross-country travel except on designated routes for all wheeled vehicles and snow machines (S)

Range

On the Palisades Ranger District, the Garden-Pritchard S&G allotment will be closed immediately to grazing for watershed protection (S)





Chapter III - Part 3

Management Prescriptions



Table III-1 Acreage by Prescription, Ownership or Other Management Within the Forest Boundary

RX	NAME	TOTAL ACRES	RX	NAME	TOTAL ACRES
			3 2 (i)	Semi-Primitive Motorized	59,621
1 1 6	Wilderness, Opportunity Class I	102,345	3 2 (i)	Semi-Primitive Motorized	27,128
1 1 7	Wilderness, Opportunity Class II	19,565	4 1	Developed Recreation Sites	895
1 1 8	Wilderness, Opportunity Class III	12,572	4 2	Special Use Permit Recreation Sites	3,956
1 2	Wilderness Study, Snowmachine	49,236	4 3	Dispersed Camping Management	3,255
1 3	Wilderness, Recommended	154,137	5 1 (c)	Timber Management	82,459
2 1 1	Special Management Areas	13,627	5 1 3 (a)	Timber Management No Clearcut	34,354
2 1 2	Visual Quality Maintenance	10,000	5 1 3 (b)	Timber Management No Clearcut	13,924
2 2	Research Natural Areas	11,653	5 1 4 (a)	Timber Management Big Game	6,606
2 3	Eligible Wild River	21,709	5 1 4 (b)	Timber Management Big Game	126,437
2 4	Eligible Scenic River	15,132	5 1 4 (c)	Timber Management Big Game	23,354
2 5	Eligible Recreation River	8,033	5 1 4 (d)	Timber Management Big Game	2,898
2 6 1 (a)	Grizzly Bear Habitat	17,052	5 2 1	Visual Quality Improvement	7,017
2 6 2	Grizzly Bear Plateau Core	30,815	5 2 2	Visual Quality Maintenance	14,264
2 6 5	Grizzly Bear Bechler BMU	19,976	5 3 5	Grizzly Bear Habitat Out Core	216,480
2 7 (a)	Elk Deer Winter Range	02,257	5 4 (a)	Elk Deer Summer Range	13,300
2 7 (b)	Elk Deer Winter Range	37,565	5 4 (b)	Elk Deer Summer Range	14,289
2 8 3	Aquatic Influence Zone	163,970	5 4 (c)	Elk Deer Summer Range	46,176
2 9 1	South Fork Snake Scenic River	933	6 1 (b)	Range Management	157,386
2 9 2	South Fork Snake Recreation River	3,801	8 1	Concentrated Development Areas	4,641
3 1 1 (a)	Non-Motorized	46,070		BLM	389
3 2 (b)	Semi-Primitive Motorized	18,341		NFS (Non-Forest Service)	38,710
3 2 (c)	Semi-Primitive Motorized	9,309		PRV	31,541
3 2 (d)	Semi-Primitive Motorized	5,118		STA	25,702

INTRODUCTION

A management prescription is a composite of the specific multiple-use direction applicable to all or part of a management area that generally includes, but is not limited to, goals, objectives, standards and guidelines, and probable management practices

The terms goals, objectives, standards and guidelines were defined in the Introduction of this Chapter. The goals, objectives, standards and guidelines in this section are specific to each management prescription.

Most management prescriptions have a motorized access density standard established. Roads or trails are frequently used as a convenient geographic feature to identify management prescription area boundaries. When roads or trails are used to identify a management prescription area boundary where the TMARD (Total Motorized Access Route Density) or OROMTRD (Open Road and Open Motorized Trail Route Density) is 0.0 miles/square mile, the road or trail miles are not counted in the TMARD or OROMTRD for that particular prescription area. The road and trail miles are included in the TMARD and OROMTRD calculations in the adjacent management prescription areas. The road and trail miles are included when calculating environmental effects, such as elk vulnerability, grizzly bear cumulative effects, etc.

All areas of the Forest are allocated to one prescription area. For those areas where two management intents overlap one prescription was identified to prevail over the other. In cases where research natural areas (Prescription 2.2) or eligible wild (2.3), scenic (2.4) or recreational (2.5) rivers lie within designated wilderness (1.1.6, 1.1.7 or 1.1.8), the wilderness prescription prevails. Where any of those four prescriptions lie within a wilderness study area (1.2) or recommended wilderness (1.3), they prevail over the wilderness study area or recommended wilderness prescription. Direction on prevalence of the aquatic influence zone (Prescription 2.8.3) is given in the description of that item.

1.1.6 DESIGNATED WILDERNESS - OPPORTUNITY CLASS I

Description

This prescription applies to the Winegar Hole Wilderness and portions of the Jedediah Smith Wilderness.

The effects of human activities are not noticeable to most visitors. Camping activities are not evident, although facilities such as bearproof storage boxes may be present to assist recovery of listed threatened or endangered species. User-created routes and nonsystem trails may exist but they appear as game trails and are not shown on maps or trail guides.

Opportunities exist for individuals or small groups to experience a high quality wilderness-dependent educational experience. A low level of recreation use occurs in these remote areas which often contain rugged terrain. There is a lack of system trails, a lack of signing, and information about the area is not distributed. Trailhead facilities for these areas are minimally developed to encourage low levels of use. There is a low level of outfitter/guide use.

Low use levels allow for meeting the user's expectations of finding a recreation or wilderness experience with a high degree of solitude. Signs of the user's passing are not evident. Opportunity for discovery may exist.

Refer to the "Monitoring Plan" and the "Jedediah Smith Wilderness Environmental Assessment for Forest Plan Amendment Process Paper" for detailed descriptions of opportunity classes (I, II, III) and use levels.

This prescription meets the Interagency Grizzly Bear Committee definition for core areas

Goals

- 1 The maintenance of the natural diversity of wildlife species is given the highest priority and is dominant over other uses. There is no great alteration of wildlife behavior or use of crucial habitat by wildlife as a result of human activities.
- 2 Human activities are managed so there is no appreciable modification of natural succession. Any vegetation loss resulting from camping recovers within one growing season.
- 3 There is no measurable downward trend in plant species composition and plant diversity due to livestock grazing. Utilization levels are compatible with maintaining or enhancing ecological condition. The range is managed so that plant communities are at or trending towards potential natural community status except where natural disturbance, and not livestock or recreation use, determines the lower seral condition.
- 4 There are outstanding opportunities for solitude, self-reliance, and challenge. Users do not normally see or hear other users.
- 5 A very minor amount of human-caused bare soil persists from year-to-year in localized areas. No great human-caused soil erosion occurs.
- 6 Opportunities are provided for research that do not require permanent instrumentation or direct contact with visitors in the Wilderness.
- 7 Manage as trailless areas. Any existing trails will be abandoned and allowed to regress to a natural state unless needed to prevent resource damage.
- 8 Manage for a low level of outfitter/guide use.

Objectives

- 1 Coordinate with the Wyoming Game and Fish Department to prepare a wilderness fishery management plan within five years of implementation of the ROD, with consideration of the State's existing fishery management plan for wilderness fisheries.
- 2 Implement a wilderness education program for all users, which could include yearly contacts with local schools, yearly programs with organizational camps, information available at Forest and District offices for distribution to the public, periodic contacts at trailheads by Forest Service personnel with wilderness users, ethics orientation for wilderness use presented to permittees and Forest Service personnel, and information about grizzly bears.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is as follows:

Within the grizzly bear recovery zone, the Interagency Grizzly Bear Guidelines for Management Situation 1 habitat apply to this management prescription, except that livestock grazing in existing Management Situation 2 habitat will continue to be managed under Management Situation 2 guidelines. (S)

Ecological Processes and Patterns

Fire/Fuels

Natural and manager-ignited fires will be allowed to burn under predetermined prescriptive

conditions as described in wilderness fire management action plans (G)

Biological Elements

Fisheries, Water and Riparian Resources

1 Fish stocking for recreational fishing is permitted with species native to the Wilderness in waters previously stocked (prior to wilderness designation) by the Game and Fish Department (G)

2 Fish stocking for reestablishment of native species may occur (G)

Forest Use and Occupation

Access (S) - 1 1 6

Season	Type of Access	Cross-County Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	No
	Horse/Pack Stock	Yes	No
	Mtn Bike/Mechanized	No	No
Snow free Seasons	Motorized, <50" wide	No	No
	Motorized, >50" wide	No	No
	OROMTRD 2/	N/A	0.0 mi/sq mi
Snow Seasons	Winter Nonmotorized	Yes	No
	Snowmachine	No	No

1/ These areas are managed as trailless, there are no maintained trails. Motorized use is prohibited, except for emergencies or valid uses specified in the law

2/ OROMTRD= Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information)

Recreation

Dispersed - No dispersed facilities are provided, except facilities may be present for recovery of listed threatened and endangered species. Existing bearproof food storage boxes in Opportunity Class I zones installed prior to 1993 may remain, but no additional boxes or other facilities will be installed in these areas (S)

- No signing (S)

- No distribution of information about these areas (S)

ROS - Manage for a primitive classification (S)

VQO - Manage for a preservation classification (S)

Heritage Resources

Evaluate and protect these resources in the context of a setting where there is little public visibility (G)

Production of Commodity Resources

Range

Manage allotments at FRES levels A, B, or C (G)

1.1.7 DESIGNATED WILDERNESS - OPPORTUNITY CLASS II

Description

This prescription applies to portions of Jedediah Smith Wilderness

The effects of human activities are somewhat evident to visitors. Camping activities are set back from trails and water. Trail treads are evident but the trail may be brushy and its location blends well with the natural topography. Trails are maintained to protect the resource.

Opportunities exist for individuals and moderate sized groups to experience a quality wilderness-related educational experience.

A moderate level of recreation use occurs. Bridges generally are not provided except where needed for resource protection. Directional and resource protection signs may be provided. Campsite facilities such as bearproof food boxes may be present for recovery of listed threatened and endangered species. Trailheads used by those accessing these areas contain bulletin boards and may provide undeveloped areas for overnight camping. There may be a high level of outfitter/guide use.

There is a moderate to high opportunity for solitude during July-September. Opportunities for solitude are high at other times. Users may experience a moderate degree of self-reliance and challenge. Users normally do not see other users but may occasionally hear other groups.

Moderate use levels may result in other users seeing or hearing some evidence of recreational activities. Fixed anchors at rappel stations, impacts on approach and descent routes, and some protection left by previous parties notifies users that others have gone before.

Refer to Chapter V and the "Jedediah Smith Wilderness Environmental Assessment for Forest Plan Amendment Process Paper" for detailed descriptions of opportunity classes (I, II, III) and use levels.

This prescription meets the Interagency Grizzly Bear Committee definition for core areas.

Goals

1. The maintenance of the natural diversity of wildlife species is given high priority. There is no displacement of wildlife during critical periods (winter and birthing), and only temporary displacement during noncritical periods.
2. Human activities are managed so there is only limited modification of natural succession at campsites, trails, and grazed areas. Some vegetation loss persists from year-to-year at identified campsites.
3. There is no measurable downward trend in plant species composition and plant diversity due to livestock grazing. Utilization levels are compatible with maintaining or enhancing ecological condition. The range is managed so that plant communities are at or trending towards potential natural community status except where natural disturbance, and not livestock use or recreation use, determines the lower seral condition.
4. Some bare soil persists from year-to-year due to human activities. Human-caused soil erosion may occur.
5. Research opportunities may include a minor amount of instrumentation and only occasional contact with visitors.

Objectives

In addition to Objectives 1 and 2 in prescription 1 1 6, also add the following

Install signs at wilderness trailheads advising users they may encounter a variety of other legitimate wilderness uses including sheep and cattle grazing, llama trekking, etc

Standards and Guidelines

Forestwide standards and guidelines apply Additional direction for this prescription is listed below

Within the grizzly bear recovery zone, the Interagency Grizzly Bear Guidelines for Management Situation 1 habitat apply to this management prescription, except that livestock grazing in existing Management Situation 2 habitat will continue to be managed under Management Situation 2 guidelines

Ecological Processes and Patterns

Fire/Fuels

Natural and manager-ignited fires will be allowed to burn under predetermined prescriptive conditions as described in the Wilderness Fire Management Action Plan (G)

Biological Elements

Fisheries, Water and Riparian Resources

Same as 1 1 6 Designated Wilderness

Wildlife

Grizzly Bear - In the event future trails or campsites are developed within the grizzly bear recovery zone, avoid locations within 1/2-mile of key habitat areas such as white bark pine stands, huckleberry patches, riparian areas and wet meadows, avalanche chutes, seasonal insect feeding sites (G)

Harlequin Duck - Avoid locating new trails or campsites within 300 feet of streams which provide harlequin duck habitat (G)

Forest Use and Occupation

Access (S) - 1 1 7

Season	Type of Access	Cross-country Travel	Road and Trail Travel ^{1/}
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	No	No
Snow free Seasons	Motorized, <50" wide	No	No
	Motorized, >50" wide	No	No
	OROMTRD2/	N/A	0 0 m/sq mi
Snow Seasons	Winter Nonmotorized	Yes	Yes
	Snowmachine	No	No

Recreation

Dispersed - Additional food storage boxes may be provided in Opportunity Class II zones for protection of the grizzly bear (G)

Directional and resource protection signs may be provided (G)

Trails/Bridges - Trails have evident tread but may be brushy Bridges generally are not provided except where needed for resource protection (G)

ROS - Manage for a primitive to semi-primitive nonmotorized classification (G)

VQO - Manage for a preservation classification (S)

Heritage Resources

Evaluate and protect these resources in the context of a setting where there is some public visibility (G)

Production of Commodity Resources

Range

Same as 1 1 6 Designated Wilderness

1.1.8 DESIGNATED WILDERNESS - OPPORTUNITY CLASS III

Description

This prescription applies to areas of the Jedediah Smith Wilderness

The effects of human activities are evident to most visitors but blend in with the natural setting Camping is set back from trails and water Trail treads are very evident

Opportunities exist for individuals and large groups to experience a quality wilderness educational experience

Recreation use is relatively high Bridges are provided where needed for resource protection or visitor safety Directional, informational and regulatory signs may be provided Campsite facilities such as bear proof food boxes may be present for recovery of listed threatened and endangered species Trailheads used by those accessing these areas may contain information stations, undeveloped and developed areas for overnight camping and stock facilities There may be a moderate level of outfitter/guide use

There is a low to moderate opportunity for solitude during July-September Opportunities are high at other times Users may experience a low to moderate degree of challenge and self reliance Users may see or hear other groups especially during July-September

High use levels at peak times may result in other users seeing and hearing other visitors Visitors may encounter other groups, which may slow their progress and may impact their solitude expectations Fixed anchors at rappel sites are evident Approach and descent trails are evident, and their impacts are managed to control erosion Fixed protection anchors on climbs may be evident to hikers at the base of cliffs, but not those on system trails

Refer to Chapter V and the "Jedediah Smith Wilderness Environmental Assessment for Forest Plan Amendment Process Paper" for detailed descriptions of opportunity classes (I, II, III) and use levels

Goals

- 1 The maintenance of the natural diversity of wildlife species is given high priority but does not dominate other uses except where measures are needed to recover listed threatened and endangered species. Temporary displacement of non-TES species may occur except on crucial ranges but there is no permanent displacement. Some habituation of species may be evident.
- 2 Human activities are managed so that modification of natural succession only occurs at campsites, trails, and grazed areas. Moderate vegetation loss persists from year-to-year at identified campsites.
- 3 There is no measurable downward trend in plant species composition and plant diversity due to livestock grazing. Utilization levels are compatible with maintaining or enhancing ecological condition. The range is managed so that plant communities are at or trending towards potential natural community status except where natural disturbance, and not livestock or recreation use, determines the lower seral condition.
- 4 A moderate amount of bare soil may persist from year-to-year due to human activities. A moderate amount of human-caused soil erosion may occur.
- 5 Research opportunities may include some instrumentation and moderate contact with visitors.
- 6 Manage for a moderate level of outfitter/guide use.

Objectives

Same as Prescription 1 1 7

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Within the grizzly bear recovery zone, the Interagency Grizzly Bear Guidelines for Management Situation 1 habitat apply to this management prescription, except that livestock grazing in existing Management Situation 2 habitat will continue to be managed under Management Situation 2 guidelines.

Ecological Processes and Patterns

Fire/Fuels

Natural and manager-ignited fires will be allowed to burn under predetermined prescriptive conditions as described in the Wilderness Fire Management Action Plan (G)

Biological Elements

Fisheries, Water, and Riparian Resources

1 Stocking of native and nonnative fish is permitted only in waters previously stocked by Game and Fish Department (S)

2 Fish stocking for reestablishment of native species may occur (G)

Wildlife

Grizzly Bear- In the event future trails or campsites are developed within the grizzly bear recovery zone, avoid locations within 1/2-mile of key habitat areas such as white bark pine stands, huckleberry patches, riparian areas and wet meadows, avalanche chutes, and seasonal insect feeding sites (G)

Harlequin Duck - Avoid locating new trails or campsites within 300 feet of streams which provide harlequin duck habitat (G)

Forest Use and Occupation

Access (S)- 1 1 8

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	No	No
Snow free Seasons	Motorized, <50" wide	No	No
	Motorized, >50" wide	No	No
	ROMTRD 2/	N/A	0.0 mi/sq mi
Snow Seasons	Winter Nonmotorized	Yes	Yes
	Snowmachine	No	No

1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps. Motorized users may use roads, except for emergencies or valid uses specified in the law (FSM 2326 03)

2/ ROMTRD = Road and Motorized Trail route density includes all open roads and open motorized trails. (See Roads in Glossary for more information)

Recreation

Dispersed - Bear proof food storage boxes may be provided in Opportunity Class III zones for protection of the grizzly bear (G)

Directional, informational, regulatory and resource protection signs may be provided (G)

Trails/Bridges - Trails are well defined and brushed out. Bridges are provided where needed for resource protection and visitor safety (G)

ROS - Manage for a primitive to semi-primitive nonmotorized classification (G)

VQO - Manage for a preservation classification (S)

Heritage Resources

Evaluate, protect and interpret these resources in the context of a setting where there is moderate human influence and public visibility (G)

Production of Commodity Resources

Range

Same as 1 1 6 Designated Wilderness Opportunity Class I

1.2 WILDERNESS STUDY AREA

Description

This prescription applies to the Wyoming portion of the Palisades and Teton Basin Ranger Districts, which was designated as a Wilderness Study Area by the Wyoming Wilderness Act of 1984

The 1984 Act provided the area be administered to "maintain its present existing wilderness character and potential for inclusion in the National Wilderness Preservation System" (AMS, Roadless Areas, Page 7) The Act provided that oil and gas exploration and development be allowed in accordance with laws and regulations generally applicable to nonwilderness lands in the National Forest system, and that snowmobiling should continue to be allowed in the same manner and degree as was occurring prior to the date of enactment of the Act

This is a mostly pristine area where little sign exists of people away from trails or camping areas. They are undeveloped lands retaining their primeval character and influence, and are managed so as to preserve their natural condition. They generally appear to have been affected primarily by the forces of nature and therefore offer an excellent opportunity for solitude or a primitive and unconfined type of recreation. Occasionally, however, a visitor may see effects of human activity such as primitive campsites, rustic bridges, trails, signs, or primitive roads. A visitor may also encounter livestock, mining, or a snowmobile.

You may find areas of the forest where recent burns, insect activity, or blowdowns dominate the landscape. You would not expect to encounter very much motorized equipment, except snowmobiles.

This prescription meets the Interagency Grizzly Bear Committee definition for core areas.

Goals

1. Protect and perpetuate wilderness character.
2. Insects and disease are allowed to play, as nearly as possible, their natural ecological role in the environment.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes and Patterns

Insects and Disease

Insect and plant disease epidemics may be controlled to prevent unacceptable damage to resources on adjacent lands or an unnatural loss to the Wilderness Study Area resource due to exotic pests (G)

Fire/Fuels

Minimum Impact Suppression Tactics (MIST) will be employed to the maximum extent possible (G)

Allow prescribed fires from both natural and management-ignition when they meet the objectives of the Wilderness Study Area (G)

Physical Elements

Soil and Water

Watershed restoration will be done primarily where deteriorated soil or hydrologic conditions are caused by humans, or where their influences create a serious threat or loss of the Wilderness Study Area values (G)

Promote natural healing where a definite hazard to life or property or important environmental qualities outside and within the Wilderness Study Area are not imminent, or where natural vegetation would return in a reasonable time (G)

Use indigenous species to reestablish vegetation as the first choice. Where native species are unlikely to succeed, use appropriate self-extirpating naturalized species (G)

Permit emergency burned area rehabilitation only if necessary to prevent an unnatural loss of wilderness-like resources or to protect life, property, and other resource values outside the Wilderness Study Area (S)

Maintenance or reconstruction of existing water development structures is allowed if it does not change the location, size, or type, or which does not increase the storage capacity of a reservoir (G)

Minerals/Geology

Locatable - Withdraw from mineral entry, or remove from mineral entry through the notation rule, subject to valid existing rights (G)

Mineral Material - This area is not available for mineral material entry (S)

Biological Elements

Fisheries, Water and Riparian Resources

Fish stocking of native and nonnative species is allowed where it existed prior to establishment of the Wilderness Study Area (G)

Wildlife

Reintroduce wildlife species only if the species was once indigenous to the area and was eliminated by human-induced events (S)

Allow wildlife habitat manipulation only if (S)

- 1 The condition needing change is a result of abnormal human influence
- 2 The project can be accomplished with assurance that there will be no serious or lasting damage to wilderness characteristics
- 3 There is reasonable assurance that the project will accomplish the desired objectives

Forest Use and Occupation

Access (S) - 1 2

Season	Type of Access	Cross-country Travel	Road and Trail Travel 1/
Snow free Season	Pedestrian Horse/Pack Stock Mtn Bike/Mechanized	Yes Yes Yes	Yes Yes Yes
Snow free Season	Motorized, <50" wide Motorized, >50" wide OROMTRD3/	No 2/ No 2/ N/A	Yes No 2/ 0.2 mi/sq mi
Snow Seasons	Winter Nonmotorized Snowmachine	Yes Yes	Yes Yes
<p>1/ individual roads and trails are designated open or closed in the Forest Plan Travel Maps</p> <p>2/ Motorized use is prohibited, except for emergencies or valid uses specified in the law</p> <p>3/ OROMTRD = Open road and open motorized trail mute density includes all open roads and open motorized trails (See Roads in Glossary for more information)</p>			

Trails and bridges are constructed/maintained to accommodate heavy foot and horse traffic (G)

Roads

Roads are allowed only to the extent they already exist (S)

Recreation

ROS - Manage for primitive or semi-primitive nonmotorized classification (G)

VQO - Manage for a preservation classification (S)

Heritage Resources

Remove structures that do not qualify for the National Register of Historic Places, or allow them to deteriorate naturally unless they are (G)

- 1 Deemed necessary to support public purposes of the Wilderness Study Area, or
- 2 Serve administration purposes

Interpretation of cultural resources located in the Wilderness Study Area shall be done outside the area (S)

Production of Commodity Resources

Timber

Trees may be cut only for valid mining claims under specific conditions, when emergency conditions such as fire, insect and disease arise, for protecting public safety, or when administrative use make it necessary (G)

1.3 RECOMMENDED WILDERNESS

Description

This prescription applies to areas that are recommended for addition to the Wilderness Preservation System. They will be managed in their present condition (including existing trail use and snowmachine use, as long as existing uses will not degrade the character of the resources) until Congress takes action on that recommendation. In the Lionhead area and the Winegar Hole Addition, this management prescription meets the Interagency Grizzly Bear Committee criteria for grizzly bear core areas (IGBC Task Force Report July 1994).

These are mostly pristine areas of the Forest where you find little sign of people away from trails or camping areas. They are undeveloped lands retaining their natural condition. They generally appear to have been affected primarily by the forces of nature and therefore offer an excellent opportunity for solitude or a primitive and unconfined type of recreation. Occasionally, however, a visitor may see effects of human activity such as primitive campsites, rustic bridges, trails, signs or primitive roads. A visitor may also encounter livestock or mining activity.

You may also find areas of the forest where recent burns, insect activity, or blowdowns dominate the landscape. You may encounter mechanized equipment on designated trails during the summer or snow-machine use during the winter.

Goals

Protect and perpetuate wilderness character

In the Lionhead area and Winegar Hole Addition, maintain grizzly bear core area attributes as defined in the IGBC Task Force Report, July 1994.

Objective

Within the grizzly bear recovery zone, an active education program will be implemented each year, including patrols during the fall hunt.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

In the Lionhead area and Winegar Hole Addition, the Interagency Grizzly Bear Guidelines for Management Situation 1 habitat apply to this management prescription.

The standards and guidelines for this prescription are the same as 1.2 (Wilderness Study) except as follows:

Forest Use and Occupation

Access (S) - 1 3

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestnan Horse/Pack Stock Mtn Bike/Mechanized	Yes Yes Yes	Yes Yes Yes
Snow free Seasons	Motonzed, <50" wide Motonzed, >50" wide OROMTRD 3/	No 2/ No 2/ N/A	Yes 2/ No 2/ 0 0 mi/sq mi
Snow Seasons 4/	Winter Nonmotonzed Snowmachine	Yes Yes 2/	Yes 5 Yes 2/
<p>1/ Individual mads and trails are designated open or closed in the Forest Plan Travel Maps</p> <p>2/Motonzed use is controlled as follows</p> <p>Idaho portion of Winegar Hole Motonzed use will be managed according to direction in adjacent Management Prescription 2 6 5</p> <p>Lionhead Closed to all motonzed vehicles. except open to snowmachines beginning Thanksgiving Day</p> <p>Italian Peak Open to two wheeled motonzed vehicles only on designated mutes, and snowmachines anywhere</p> <p>Palisades The Idaho portion is open to snowmachines. but closed to all other forms of motonzed use</p> <p>3/ OROMTRD =Open road and open motonzed trail route density includes all open roads and open motonzed trails. (See Roads in Glossary for more information)</p> <p>4/ Within grizzly bear BMUs. site-specific restrictions on winter recreation activity (such as area closures, timing restrictions, etc) will be imposed to resolve human-gnuly bear conflicts</p>			

Recreation

- 1 Developed- Developed, hardened campsites are generally not allowed (G)
- 2 Existing hell-skiing operations which **do** not degrade wilderness values may continue (G)

2.1.1 SPECIAL MANAGEMENT AREAS

Description

This management prescription applies to areas with unique cultural, geologic, botanical, or zoological resource values, and sites which are listed or eligible for the National Register of Historic Places

Vegetation will vary depending on the objectives of each special area A mix of age class distributions, openings, and horizontal/vertical diversity may be present In general, vegetation will appear natural in the special management areas, however, exceptions may exist for some areas, and some human-caused vegetation manipulation will occur depending on the objectives of each special area

Facilities may or may not be present to manage the special areas. Access will range from black top roads, to trails, to no access at all. Administrative sites could have a variety of facilities such as buildings, roads, trails, microwave towers, boat ramps and pasture for the livestock used by Forest Service personnel to manage the Forest.

The amount of human activity apparent in special areas will vary, depending upon the management objectives of each area.

Special management areas may provide some forage for livestock. Timber harvest may be rare or not at all. Restricted livestock grazing and timber activities can be expected to provide additional protection to the special values in the area. Surface facilities for leasable minerals, such as oil and gas, will not be found within a special management area. To protect the values within a special management area, restrictions can be expected for valid existing rights to develop locatable minerals, such as precious metals and high value industrial minerals.

Because of the unique characteristics of these special management areas, these lands may provide economic opportunities for outfitter and guides, educational opportunities for the public and research opportunities for resource managers and academia. These areas will provide a spectrum of recreational opportunities from developed sites containing comfort facilities and visitor centers in a natural setting to sites with no access at all in a pristine setting.

Goal

- 1 Manage and protect the unique cultural, historic, botanical, geological, and/or zoological resources
- 2 Maintain or enhance the inherent values associated with each special interest area
- 3 Allow insects and disease to play their natural role in ecological succession, except where resource values will be adversely affected
- 4 Maintain or enhance the inherent wildlife habitat values associated with each special management area

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Within the grizzly bear recovery zone, the Interagency Grizzly Bear Guidelines for Management Situation 1 habitat apply to this management prescription (S)

Ecological Processes and Patterns

Fire/Fuels

Prescribed fire, utilizing both management-ignited and natural ignitions, may be used to maintain fire-dependent characteristics of the area (G)

Physical Elements

Soil and Water

Watershed restoration will be done primarily where deteriorated soil or hydrologic conditions are caused by humans (G)

Promote natural healing where natural vegetation would return in a reasonable time (G)

Use indigenous or appropriate naturalized species to reestablish vegetation where there is no reasonable expectation of natural healing (G)

Permit emergency burned area rehabilitation only if necessary to prevent an unnatural loss of resources (S)

Lands

Establish exterior boundaries of sites when necessary for protection (G)

Minerals/Geology

Same as 1 2 Wilderness Study Area

Forest Use and Occupation

Access (S) - 2 1 1

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian Horse/Pack Stock Mtn Bike/Mechanized	Yes 2/ Yes 2/ No	Yes Yes Yes
Snow free Seasons	Motorized, <50" wide Motorized, >50" wide OROMTRD3/	No No N/A	Yes Yes <= 10 mi/sq mi
Snow Seasons	Winter Nonmotorized Snowmachine	Yes 2/ Yes 2/	Yes Yes

Roads

New road construction may occur if needed to meet the management objectives for the special management area (G)

Recreation

Dispersed - Minimal recreation facilities may be provided (such as trails, board walks, toilets, etc) Generally, such recreation facilities are not encouraged, and are only provided to protect resource values (G)

ROS - Primitive to roaded natural (G)

VQO - Retention to partial retention (G)

Heritage Resource

Multiple user interpretive sites may be provided Avoid indoor interpretive sites unless warranted by special circumstances (G)

Production of Commodity Resources

Range

Livestock grazing and associated developments (such as fencing) are permissible as long as they do not adversely affect the unique resources of the special management area (G)

Timber

These areas are removed from the suitable timber base. They do not contribute to the ASQ (S)

Generally, no timber harvesting will be allowed in special management areas. Exceptions to this may occur on a site-specific basis for such things as public safety, visual quality, long term maintenance of vegetation conditions, etc (G)

2.1.2 VISUAL QUALITY MAINTENANCE

Description

This prescription emphasizes maintaining the existing visual quality within major travel corridors with high quality natural vistas, while allowing livestock production, and other compatible commodity outputs. There is no scheduled timber harvesting.

Overall you may notice signs of people camping by the roadside. The main road system is paved or gravel-surfaced and well maintained, with gentle grades well suited for sedan travel. Vistas of the surrounding areas provide a variety of high quality views.

The roadside area is dominated by a wide variety of vegetation and landscape forms (e.g. mountain peaks, valleys, meadows, streams, etc.) that are easily observed from natural vistas and natural openings along the road. Occasionally, a few older cut areas show tree seedlings, saplings and poles up to 35 feet tall and have a less-disturbed appearing forest floor. Scattered dead trees are seen throughout the forest, but generally it appears healthy and vigorous.

If you watch for wildlife, you may occasionally see an elk, deer or moose in a natural opening or alongside the road, but generally these are hidden from view by the trees. During the summer and fall, you may encounter cattle or sheep grazing in openings. Signs of intensive management practices, such as burning, spraying, seeding, fences, water developments and gates are normally visually compatible.

Nonmotorized activities, such as hiking, biking or horseback riding may originate from trail or road points along the main road. Some roads and nearby areas are available for year-around snowmobile, motorcycle, and 4 wheel-drive vehicle use.

Goals

- 1 Manage these travel corridors to protect their natural visual quality
- 2 Manage these lands in an environmentally sensitive manner to promote the production of noncommodity resources at varying levels, and limited commodity production
- 3 Manage these lands to provide various dispersed recreational opportunities
- 4 Maintain stand vigor by controlling tree density

Standards and Guidelines

Forestwide standards and guidelines apply. The Standards and Guidelines are the same as 5.2.2 except as shown below.

Forest Use and Occupation

Access (S) - 2.1.2

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motorized, <50" wide	No	Yes
	Motorized, >50" wide	No	Yes
	OROMTRD 3/	N/A	2/
Snow Seasons	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes
1/ individual roads and trails are designated open or closed in the Forest Plan Travel Maps			
2/ OROMTRD= Open road and open motorized trail. Mute density does not apply to this prescription area.			

Production of Commodity Resources

Timber

These areas are removed from the suitable timber base. They do not contribute to the ASQ (S).

2.2 RESEARCH NATURAL AREAS

Description

These management prescription areas are important ecological or natural areas established for nonmanipulative research, education, and to maintain natural diversity on National Forest system lands. They also may assist in carrying out provisions of special acts, such as the Endangered Species Act and the monitoring provisions of the National Forest Management Act.

These areas are good examples of physical or biological units in which current natural conditions are maintained insofar as possible. These conditions are ordinarily achieved by allowing natural, physical and biological processes to prevail without human intervention.

Nonmanipulative research activities occur in these areas. Some scientific instrumentation may be present. Since these areas are also used for education purposes, occasional groups of people may be present observing and being instructed about the area.

Generally, there are no developed facilities on site. Interpretation of special features will generally be done off site. A road or trail may be present to provide access primarily for research and education purposes. Recreation use is not promoted in these areas, and may be reduced or eliminated if adverse impacts are occurring.

There are nine established **RNAs** on the Targhee National Forest, as follows

Area Name	Year Established	Location	Size Acres	Area Features
Meadow Canyon'	1981	Dubois R D	3880	Alpine Tundra, Rare Plants 1/
Copper Mountain	1987	Dubois R D	550	Alpine Grassland
Thurman Creek	1991	Island Park R D	330	Spring Fed Streams
Moose Creek Plateau	1991	island Park R D	440	Obsidian Sands, Lodgepole Pine 2/
Willow Creek	1987	Ashton R D	1100	Aspen, Lumber Pine, Mtn Maple
Webber Creek	1988	Dubois R D	2245	High Mtn Grassland 1/
Burns Canyon	1996	Palisades R D	490	Sub-alpine Fir/ Ninebark Habitat 3/
Targhee Creek	1996	island Park R D	2640	Wet Meadows, Lakes, Alpine & Subalpine Ecosystems 1/, 2/
Sheep Mountain **	1996	Dubois R D	1542	Alpine Vegetation

This prescription meets the Interagency Grizzly Bear Committee definition for core areas

Goals

- 1 Maintain specially designated areas that provide representation of important terrestrial and aquatic ecosystems on the Forest
- 2 Protect and maintain these areas so that ecological processes prevail in the development of ecosystem composition and structure

Objective

By 2007, in cooperation with the Intermountain Research Station, develop a research plan and monitoring plan for each research natural area

Standards and Guidelines

Forestwide standards and guidelines apply Additional direction for this prescription is listed as follows

Within the grizzly bear recovery zone, the Interagency Grizzly Bear Guidelines for Management Situation 1 habitat apply to this management prescription (S)

Physical Elements

Minerals/Geology

Locatable - Withdraw from mineral entry, or remove from mineral entry through the notation rule, subject to valid existing rights (S)

Mineral Material - This area is not available for mineral material entry (S)

Forest Use and Occupation

Access (S) - 2 2

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian Horse/Pack Stock Mtn Bike/Mechanized	Yes 2/ Yes 2/ No	Yes Yes Yes
Snow free Seasons	Motorized. <50" wide Motorized. >50" wide OROMTRD 3/	No No N/A	Yes Yes 3/
Snow Seasons	Winter Nonmotorized Snowmachine	Yes 2/ Yes 2/	Yes Yes

Recreation

No bear baiting (S)

2.3 ELIGIBLE WILD RIVER

Description

The purpose of this prescription is to maintain and protect the free-flowing character and the "outstandingly remarkable" values which qualify the river to be considered eligible as a Wild River in the National Wild and Scenic Rivers System pending a suitability determination. This prescription shall also be applied to a river determined to be suitable as a Wild River and to a river designated as a Wild River until such time as a Wild River Management Plan can be adopted. In Targhee Creek, this management prescription meets the Interagency Grizzly Bear Committee criteria for grizzly bear core areas (IGBC Task Force Report July 1994).

Wild Rivers are intended to remain as a "vestige of primitive America" with the river corridor, within at least 1/4-mile of the ordinary high water mark on each side of the river, essentially natural and unmodified. Management maintains or improves this undeveloped character, and prevents the degradation or loss of the fish and wildlife, scenic, recreational, cultural, historic, ecologic, or other values which are determined to be outstandingly remarkable. This management prescription provides recreation opportunities that afford a high degree of independence, closeness to nature and self-reliance in an unmodified natural setting.

A few inconspicuous roads and/or motorized trails may lead to the boundary of the river area. This will not disqualify a river segment from study for wild river classification. Motorized travel on land or water could be permitted but is generally not compatible with this prescription. Most existing intrusions of roads and motorized trails would be recommended for restriction or obliteration if designated by Congress.

Interaction between users is infrequent and evidence of resource management activities and other

users is minimal. Motorized use within the area is generally not compatible with this designation. Access is usually cross-country or on constructed trails.

The forest presents a natural appearance. A variety of forest successional stages may be present, ranging from areas with recent wildfires to old growth habitat. Firewood is available for camping, but is not available for home use. Outfitter and guiding activity may be present. Domestic livestock grazing may be present in some areas, and you may see limited range improvements such as fencing. A variety of nonforested rangeland successional stages may be present.

Eligible wild river segments are as follows:

RIVER	INVENTORIED TRIBUTARIES	LOCATION	LENGTH OF SEGMENT (miles)
Robinson Creek	None	From the Yellowstone N.P. boundary to Warm River	12.00
Targhee Creek	West and East Forks of Targhee Creek	Unnamed lake north of Edwards Lake to the boundary with the State section (within recommended wilderness)	12.50 includes tributaries
Henry's Fork of the Snake	None	Riverside Campground to 11.4 mile upstream from Mesa Falls, 11.4 mile downstream from Mesa Falls to Warm River	19.00
Waterfall Canyon	None	From the waterfall to Upper Palisades Lake (within recommended wilderness)	2.00
Palisades Creek	None	From the confluence of the north Fork of Palisades Creek and Corral Canyon to Palisades Campground (within recommended wilderness)	9.00
Darby Creek	North and South Forks of Darby Creek	From the source in the Darby Badlands to the boundary of the Jedediah Smith Wilderness	7.10
North Fork of Teton Creek	South and Roaring Forks of Teton Creek		
Bitch Creek	North and South Bitch Creek	From the source of the North and South Forks in the Jedediah Smith Wilderness to the forest boundary	28.00
Big Elk Creek	North, South and Siddoway Forks	Main stem and the lower two miles of each of the three forks (partly within recommended wilderness)	12.00

Goals

Maintain and protect the free flowing character and the outstandingly remarkable values of the river and corridor which qualify it as a wild river.

In Targhee Creek, maintain grizzly bear core area attributes as defined in the IGBC Task Force Report, July 1994.

Objective

Insects and disease are allowed to play, as nearly as possible, their ecological role in the environment

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below

In Targhee Creek and Robinson Creek, the Interagency Grizzly Bear Guidelines for Management Situation 1 habitat apply to this management prescription

In Bitch Creek, the Interagency Grizzly Bear Guidelines for Management Situation 1 habitat apply, except that livestock grazing in Management Situation 2 (MS2) habitat will continue to be managed under MS2 guidelines (S)

Ecological Processes and Patterns

Insects and Disease

Insect and plant disease epidemics may be controlled to prevent unacceptable damage to resources on adjacent lands or an unnatural loss to the wild river resource due to exotic pests (G)

When control is necessary, it shall be carried out by measures that have the least adverse impact on the wild river resource and are compatible with wild river management objectives (S)

Fire/Fuels

Employ Minimum Impact Suppression Tactics to the maximum extent possible (G)

Physical Elements

Soil and Water

Watershed restoration will be done primarily where deteriorated soil or hydrologic conditions are caused by humans or their influences create a serious threat or loss of outstandingly remarkable river resource values (G)

Promote natural healing where a definite hazard to life or property or important environmental qualities outside and within this prescription area are not imminent, or where natural vegetation would return in a reasonable time (G)

Use indigenous or appropriate naturalized species to reestablish vegetation where there is no reasonable expectation of natural healing (S)

Permit emergency burned area rehabilitation only if necessary to prevent an unnatural loss of outstandingly remarkable river resource values, or to protect life, property, and other resource values outside the area (S)

Minerals/Geology

Locatable - These areas are recommended for withdrawal from mineral activity, or, should be removed from mineral entry through the Notation Rule, subject to valid existing rights. For valid existing claims, design mineral exploration, and development activities to be compatible with this prescription. Apply the following management practices to reduce resource impacts (G)

- 1 Design mineral management activities to maintain the present and continued productivity of fish habitat

- 2 Take maximum advantage of topographic and vegetation screening when locating mining facilities and equipment
- 3 Haul away, bury, burn, or scatter vegetation removed from the project area when vegetation is located adjacent to sensitive travel routes
- 4 Minimize the scale of spoil/disposal areas in relation to the surrounding landscape as seen from sensitive viewpoints
- 5 Use colors that simulate those found in the characteristic landscape. Avoid use of reflective materials in project facilities
- 6 Apply timing restrictions to instream construction as needed to protect fisheries habitat and mitigate adverse disturbance of stream sediments
- 7 Use sedimentation traps as needed to mitigate adverse stream sedimentation and meet State and Federal water quality regulations
- 8 Design reclamation plans so minerals activities leave a natural appearing condition
- 9 Shape landform modifications to simulate naturally occurring forms
- 10 Revegetate disturbed areas in accordance with project plans

Mineral Material -These areas are not available for mineral material entry (S)

Biological Elements

Fisheries, Water and Riparian Resources

Fish habitat will exist/evolve with natural ecological processes. Fish habitat manipulation can only occur if (S)

- 1 The condition needing change is a result of abnormal human influence
- 2 The project can be accomplished with assurance that there will be no serious or lasting damage to wild river values
- 3 There is reasonable assurance that the project will accomplish the desired objectives

Fish stocking of non-native species is allowed where it existed prior to establishment of the Wild River (S)

Wildlife

Reintroduce wildlife species only if the species was once indigenous to the area and was eliminated by human-induced events (S)

Wildlife habitat will exist/evolve with natural ecological processes. Wildlife habitat manipulation can only occur if (S)

- 1 The condition needing change is a result of abnormal human influence
- 2 The project can be accomplished with assurance that there will be no serious or lasting damage to outstandingly remarkable river values
- 3 There is reasonable assurance that the project will accomplish the desired objectives

Forest Use and Occupation

Access (S) - 2 3

Season	Type of Access	Cross-country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	NO	Yes
Snow free Seasons	Motorized. <50" wide	No	No 2/
	Motorized. >50" wide	No	No 2/
	OROMTRD 3/	N/A	0.0 miles/mi 3/
Snow Seasons 4/	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

1/ individual roads and trails are designated open in the Forest Plan Travel Maps

2/ This use may be allowed where currently existing and it does not degrade the outstandingly remarkable river values

3/ OROMTRD = Open road and open motorized trail route density includes all open roads and open motorized trails. Some open roads and motorized trails may currently exist, most of these intrusions would be recommended for restriction or obliteration if designated by Congress (See Roads in Glossary for more information)

4/ Within grizzly bear BMUs, site-specific restrictions on winter recreation activity (such as area closures, timing restrictions, etc) will be imposed to resolve human-grizzly bear conflicts

Roads

No new roads may be constructed that would change or modify the classification for which the river was designated (S)

Recreation

Dispersed - Recreation facilities will be of a very primitive nature, using a pack-it-in, pack-it-out philosophy (G)

ROS - Primitive to semi-primitive nonmotorized (G)

VQO - Retention (S)

Heritage Resource

Remove structures that do not qualify for the National Register, or allow them to deteriorate naturally unless they are (G)

1 Deemed necessary to support public purposes of wild rivers, or

2 Serve administration purposes

Interpretation of heritage resources located in wild river corridors shall be done outside the corridor (S)

Outfitter/Guide

Permanent caches or nonnative improvements are not allowed unless they existed prior to the establishment of the wild river and have not been phased out. Upon designation of a Wild River, any existing caches will be phased out within two years (S)

Production of Commodity Resources

Range

Minimize conflicts with recreation use (G)

Range developments (water tanks, fences, etc) that do not detract from the overall objectives of the area are acceptable (G)

Timber

Lands are removed from the suitable timber base They do not contribute to the ASQ (S)

Cutting of trees will not be allowed except when needed in association with a primitive recreation experience (such as clearing for trails and protection of users) or to protect the environment (such as control of fire) (G)

2.4 ELIGIBLE SCENIC RIVER

Description

The purpose of this prescription is to maintain and protect the free-flowing character and the "outstandingly remarkable" values which qualify the river to be considered eligible as a Scenic River in the National Wild and Scenic Rivers System pending a suitability determination This prescription shall also be applied to a river determined to be suitable as a Scenic River and to a river designated as a Scenic River until such time as a Scenic River Management Plan can be adopted.

Proposed Scenic Rivers are managed to protect and enhance the outstandingly remarkable fish and wildlife, scenic, recreational, historic, cultural or other values identified for the river, within, as a minimum, 1/4-mile of the ordinary high water mark on each side of the river Moderate levels of existing development, including roads which cross the river but are generally screened from the river banks, are allowed New development and uses must not degrade the values which qualify the river for consideration as eligible Recreation facilities of a rustic design, including boat access, cabins, access roads leading to the river and trails are appropriate The area is managed to provide a waterway and associated shorelines where activities are not visually evident to the casual observer The Scenic River management prescription may provide recreation opportunities which meet high expectations for scenic quality associated with an essentially natural appearing environment and a free-flowing river

Administrative and recreation facilities are screened from the river Nonrecreation special use structures may occur if they meet visual quality objectives and do not degrade the outstandingly remarkable values Recreation facilities are designed to be compatible with the visual quality objectives of the river and corridor Recreation opportunities range from roaded natural to primitive Outfitter and guiding activity may be present

No development of hydroelectric power facilities is permitted New structures that would have a direct adverse effect on river values are not authorized

Lands are open to mineral entry subject to regulations prescribed by the Secretary of Agriculture to protect the free-flowing character and outstandingly remarkable values of the river Existing and new activity must minimize surface disturbance, sedimentation, air pollution, visual impairment, and meet applicable State Water Quality Standards Reasonable access is permitted

Fish and wildlife habitat improvement may occur and is designed to be visually compatible with the scenic qualities of the river and corridor

Roads are generally screened from the river and infrequent road and trail crossings (bridges) may be present. Trails paralleling the river are acceptable.

Domestic livestock grazing may be present in some areas. Range improvements may occur and are designed to be visually compatible with the scenic qualities of the river and corridor.

Forested lands are classified as unsuitable, no scheduled timber harvesting is allowed. Personal use wood cutting is compatible with this land use designation provided that management objectives are met.

Eligible scenic river segments are as follows:

RIVER	INVENTORIED TRIBUTARIES	LOCATION	LENGTH OF SEGMENT (miles)
Buffalo River	None	Buffalo River Springs to the confluence with Elk Creek	5.00
Henry's Fork of the Snake	None	Coffeepot Campground to McCrea's Bridge	4.50
Henry's Fork of the Snake	None	Island Park Dam to Box Canyon Summer Homes	3.00
Henry's Fork of the Snake	None	North boundary of Harriman Park to Pinehaven Subdivision	8.20
Henry's Fork of the Snake	None	From Mesa Falls 1/4 mile upstream and downstream	0.50
Warm River	None	Warm River Springs to the confluence with the Henry's Fork	9.00
Fall River	None	From the Yellowstone Park boundary to the National Forest boundary	11.50
Burns Creek	None	Just west of Crystal Lake to the trailhead	5.00
Big Elk Creek	None	First mile main stem	1.00
Bear Creek	North Fork and Deadman Creek	Main stem west of Palisades reservoir and the two forks	15.00

Goal

Maintain and protect the free-flowing character and the outstandingly remarkable values of the river and corridor which qualify it as a Scenic River.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

In Fall River, the Interagency Grizzly Bear Guidelines for Management Situation 1 habitat apply to this prescription (S).

For those segments of Warm River and Buffalo River lying within the grizzly bear recovery zone, the Interagency Grizzly Bear Guidelines for Management Situation 1 apply to this prescription (S).

Ecological Processes and Patterns

Insects and Disease

Allow sanitation and salvage of infested timber as long as such practices are carried out in such a way that there is no substantial adverse effect on the river and its immediate environment (G)

Fire/Fuels

Same as 2 3 Eligible Wild River

Physical Elements

Soil and Water

Same as 2 3 Eligible Wild River

Lands

Same as 2 3 Eligible Wild River

Minerals/Geology

Same as 2 3 Eligible Wild River

Biological Elements

Fisheries, Water and Riparian Resources

Fish stocking of non-native species is allowed (S)

Wildlife

Same as 2 3 Eligible Wild River

Forest Use and Occupation

Access (S) - 2 4

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motorized, <50" wide	No	Yes 2/
	Motorized, >50" wide	No	Yes 2/
	OROMTRD 3/	N/A	3/
Snow Seasons 4/	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps

2/ Motorized use is allowed unless it needs to be prohibited or restricted to protect the river values

3/ OROMTRD= Open road and open motorized trail route density does not apply to this prescription area

4/ Within grizzly bear **BMUs**, site-specific restrictions on winter recreation activity (such as area closures, timing restrictions, etc) will be imposed to resolve human-grizzly bear conflicts

Roads

No new roads may be constructed or road improvements made that would change or modify the classification for which the river was designated (S)

Recreation

Dispersed- Comfort and convenience facilities, such as fireboxes and shelters may be provided as necessary within the river area. These should harmonize with the surroundings and be managed so they do not adversely affect spawning grounds (G)

Maintain existing dispersed campsites that do not degrade the outstandingly remarkable values (G)

Trails - Trails and bridges paralleling or crossing the river are acceptable, provided VQO and ROS objectives for the river and corridor are maintained (G)

No new trails may be constructed or trail improvements made that would change or modify the classification for which the river was designated (S)

ROS - Primitive to semi-primitive motorized (G)

VQO - Retention (S)

Outfitter/Guide

Permanent caches or improvements are allowed if they meet the visual quality management objectives for the river and corridor and are within the Greater Yellowstone Area Outfitter Plan (G)

Production of Commodity Resources

Range

Range management is permitted to the extent it is currently practiced and does not degrade river values (G)

Range developments (water tanks, fences, etc) that do not detract from the overall objectives of the area are acceptable (G)

Manage allotments at FRES levels B, C, or D (G)

Timber

Lands are not included in the suitable timber base. They do not contribute toward the ASQ (S)

Personal use wood cutting is allowed with restrictions to protect the outstanding remarkable values (G)

2.5 ELIGIBLE RECREATION RIVER

Description

The purpose of this prescription is to maintain and protect the essentially free-flowing character and the outstandingly remarkable values which qualify the river to be considered eligible as a Recreational River in the National Wild and Scenic Rivers System pending a suitability determination. This prescription shall also be applied to a river determined to be suitable as a Recreation River and to a river designated as a Recreation River until such time as a Recreation River Management Plan can be adopted.

Proposed Recreational Rivers are managed to protect the outstandingly remarkable fish and wildlife, scenic, recreational, historic, cultural or other values identified for the river, within, as a minimum, 1/4 mile of the ordinary high water mark on each side of the river. The area may include significant human development, residences, roads and highways, and minor existing modifications to the waterway, including diversion dams. Major water resource projects are not authorized. The area may include landscapes in a variety of visual conditions. Activities and structures may be dominant in some areas, but harmonize and blend with the generally natural-appearing environment to provide a pleasing setting for recreation activities. This management area prescription may provide recreation opportunities where the interaction between users may be moderate-to-high with evidence of current and past use prevalent. Roads are designed for conventional motorized vehicles. Facilities may exist for boat or aircraft use.

Allowed motorized use within the area may include boats, aircraft, snowmachines, construction and maintenance of needed facilities. Motorized land travel for recreation purposes may be restricted. All scheduled resource management activities are integrated in such a way that the recreation and water quality values remain paramount.

Administrative and recreation facilities are located and designed to complement and facilitate area management. Recreation opportunities range from semi-primitive nonmotorized to rural. Outfitter and guiding activity may be present.

To the extent of Forest Service authority, no development of hydroelectric power facilities is permitted. New structures that would have a direct adverse effect on river values are not authorized.

Lands are open to mineral entry subject to regulations prescribed by the Secretary of Agriculture. Existing and new activity must minimize surface disturbance, sedimentation, air pollution, visual impairment, and meet applicable State Water Quality Standards. Reasonable access is permitted.

Forested lands are classified as unsuitable, no scheduled timber harvesting is allowed. Personal use woodcutting is compatible with this land use designation provided that management objectives are met.

Design and location of roads and facilities provide for conventional motorized use. User safety and opportunities for nonmotorized recreation activities may be provided by restricting motorized use to designated routes and areas. Both motorized and nonmotorized trail opportunities may be provided.

Fish projects may be identified and implemented which create or improve fishing opportunity. Wildlife habitat emphasis is on maintaining healthy and productive habitat conditions for indigenous species and improving wildlife viewing opportunities.

Domestic livestock grazing may be present in some areas. Range improvements may occur and are designed to be compatible with the recreational qualities of the river and corridor.

Eligible Recreation River segments are as follows

RIVER	INVENTORIED TRIBUTARIES	LOCATION	LENGTH OF SEGMENT (miles)
Buffalo River	None	Confluence with Elk Creek to the backwaters of Pond's power dam	2 00
Henry's Fork of the Snake	Henry's Lake Outlet, Moose Creek	Big Springs to Coffeepot Campground, Outlet from Forest boundary to junction with Big Springs outflow. Moose Creek from source to junction with Henry's Fork	19 4 includes pail of Outlet and Moose Cr
Henry's Fork of the Snake	None	Box Canyon Summer Homes to the North boundary of Harriman State Park	1 80
Henry's Fork of the Snake	None	Pinehaven Subdivision to Riverside Campground	3 00
Pine Creek	West, North Pine Creek	Tie Canyon SW to Forest boundary	7 5

Consider the use of indigenous or appropriate naturalized species to reestablish vegetation where there is no reasonable expectation of natural healing (G)

Permit emergency burned area rehabilitation only if necessary to prevent an unnatural loss of Recreational River resource values, or to protect life, property, and other resource values outside the area (S)

Lands

Same as 2 3 Eligible Wild River

Minerals/Geology

Same as in 2 3 Eligible Wild River

Biological Elements

Fisheries, Water and Riparian Resources

Fish stocking of non-native species is allowed (S)

Wildlife

Same as 2 3 Eligible Wild River

Forest Use and Occupation

Access (S) - 2 5

Season	Type of Access	Cross-country Travel	Road and Trail Travel 1/
Snow tree Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	MotORIZED, <50" wide	No	Yes 2/
	MotORIZED, >50" wide	No	Yes 2/
	OROMTRD 3/	N/A	3/
Snow Seasons 4/	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

Recreation

Dispersed - All forms of recreation facilities may be provided, such as boat access points, trails, toilets, fire rings, grills, garbage collection, etc. Facilities are designed to be compatible with the ROS and VQO of the river and corridor and should be managed so they do not adversely affect spawning grounds (G)

Close the Henrys Fork of the Snake River from its headwaters at Big Springs downstream to the Big Springs boat launch, to all human entry including rafting, innertubing, swimming, wading, fishing and other motorized and nonmotorized activities, to protect fish habitat and other resource values (S)

Trails - Trails and bridges paralleling or crossing the river are acceptable, provided VQO and ROS objectives for the river and corridor are maintained (G)

- Both motorized and nonmotorized trail opportunities may exist (G)
- New trails could be constructed on one or both river banks. There can be several bridge crossings and numerous river access points (G)

ROS - Semi-primitive nonmotorized to urban (G)

VQO - Partial retention VQO in the foreground as seen from the river, roads, trails and recreational facilities (S)

- Modification to maximum modification for all other areas within the corridor (G)

Outfitter/Guide

Permanent caches or improvements are allowed if they meet the visual quality management objectives for the river and corridor and are within the Greater Yellowstone Area Outfitter Plan (G)

Production of Commodity Resources

Range

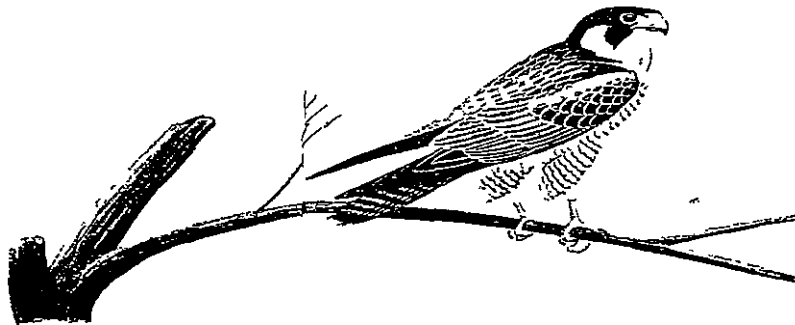
Range developments (water tanks, fences, etc) that do not detract from the overall objectives of the area are acceptable (G)

Manage allotments at FRES levels B, C, or D (G)

Timber

Lands are not included in the suitable timber base. They do not contribute to the ASQ (S)

Personal use wood cutting is allowed with restrictions to protect the outstandingly remarkable values (G)



2.6.1 (a) GRIZZLY BEAR HABITAT (NO ASQ, NO CROSS-COUNTRY, NO SHEEP)

Same as 5 3 5 except

Forest Use and Occupation

Access (S) - 2 6 1 (a)

Season	Type of Access	Crosscountry Travel	Road and Trail Travel 1/
Snow tree Seasons	Pedestrian Horse/Pack Stock Mtn BikeMechanized	Yes Yes Yes	Yes Yes Yes
Snow tree Seasons	Motorized, <50" wide Motorized, >50" wide OROMTRD 2/ TMARD	NO NO N/A N/A	Yes Yes
Snow Seasons 31	Winter Nonmotorized Snowmachine	Yes Yes	Yes Yes
<p>1/ individual roads and trails are designated open or closed in the Forest Plan Travel Maps</p> <p>21 TMARD = Total motonzed access route density includes all open and restricted roads and motorized trails (See Roads in Glossary for more informaton) Unless a figure is specified here, this is calculated on a BMU or subunit basis Please refer to the Forestwide standards and guidelines for Access</p> <p>OROMTRO = Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information) Unless a figure is specified here, this is calculated on a BMU or subunit basis Please refer to the Forestwide standards and guidelines for Access</p> <p>31 Within grizzly bear BMUs, site-specific restrictions an winter recreation activity (such as area closures, timing restrictions, etc) will be imposed to resolve human-grizzly bear conflicts</p>			

Production of Commodity Resources

Range

No domestic sheep grazing is allowed (S)

Timber

Lands are not included in the suitable timber base They do not contribute to the ASQ (S)

2.6.2 GRIZZLY BEAR CORE AREA

Description

The core area is defined as an area that provides a predictable refuge in space and time for a bear population segment or family unit This area is consistently available for use by wary bears while activities occur elsewhere The core area contains moderate to high quality bear foods, provides predictable and consistently available space to meet seasonal bear habitat needs, and achieves the lowest mortality risk possible due to human activities for a period not less than 11 years Management activities shall follow established rules The primary emphasis for this area is on providing secure habitat for grizzly bears

This is a refugium of high quality habitat available to bears where management activities do not occur during the period bears are active Habitat conditions provide space that is consistently available and

predictably locatable to bears. This area provides a portion of the foraging requirement for a reproductive female and a female's offspring for spring, summer, and fall foraging away from human activities. Secure habitat exists, and mortality risk to bears is low.

This prescription meets the Interagency Grizzly Bear Committee definition for core areas.

Goals

1. Insects and diseases are allowed to play their natural role in ecosystem development.
2. Any nonfederal lands within this area will be a high priority for acquisition.
3. Manage dispersed recreation to minimize grizzly conflicts with humans.

Objective

A fire management plan will be developed (and will be coordinated with any adjacent wilderness fire plans) to address wildfires.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

The Interagency Grizzly Bear Guidelines for Management Situation 1 Habitat apply to this management prescription.

Ecological Processes and Patterns

Fire/Fuels

No prescribed fire is allowed (S)

In the event of a fire that warrants suppression, only minimum impact suppression techniques will be allowed (S)

Physical Elements

Minerals/Geology

Same as 2-3 Eligible Wild River

Biological Elements

Wildlife

No wildlife habitat improvement projects are allowed (S)

Forest Use and Occupation

Access (S) - 2 6 2

Season	Type of Access	Crosscountry Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motorized, <50" wide	NO	NO
	Motorized, >50" wide	NO	NO
	TMARD 2/	N/A	
	OROMTRD 2/	N/A	0.0 mi/sq mi
Snow Seasons 3/	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

31 Within grizzly bear BMUs, site-specific restrictions on winter recreation activity (such as area closures, limiting restrictions, etc.) will be imposed to resolve human-grizzly bear conflicts

Roads

Construct no new roads (S)

Recreation

Special Uses - No special uses are allowed from April 1 to December 15 (S)

Trails - Construct no new trails (S)

ROS - Primitive to semi-primitive nonmotorized (G)

VQO - Retention (S)

Heritage Resource

No new interpretation/enhancement of cultural sites (S)

Outfitter/Guide

No outfitter and guide permits are allowed from April 1 to December 15 (S)

Production of Commodity Resources

Range

No livestock grazing permits of any kind are allowed (S)

Timber

Lands are not included in the suitable timber base. They do not contribute to the ASQ (S)

No vegetation management of any kind will occur (S)

2.6.5 GRIZZLY BEAR SECURITY AREA

Description

This area is consistently available for use by wary bears while activities occur elsewhere. This area contains moderate to high quality bear foods, provides predictable and consistently available space to meet seasonal bear habitat needs, and achieves the lowest mortality risk possible due to human activities for a period not less than the planning period. Management activities shall follow established rules. Emphasis for this area is on providing secure habitat for grizzly bears.

This is an area of high quality habitat available to bears where management activities are limited during the period bears are active. Habitat conditions provide space that is consistently available and predictably locatable to bears. This area provides a portion of the foraging requirement for a reproductive female and offspring for spring, summer, and fall foraging.

This prescription meets the Interagency Grizzly Bear Committee definition for core areas.

Goals

1. Insects and diseases are allowed to play their natural role in ecosystem development.
2. Any nonfederal lands within this area will be a high priority for acquisition.
3. Activities which adversely affect grizzly bear populations and/or their habitat will not be allowed.
4. Manage dispersed recreation to minimize grizzly conflicts with humans.

Standards and Guidelines

The Interagency Grizzly Bear Guidelines for Management Situation 1 habitat apply to this management prescription, except that livestock grazing in existing Management Situation 2 habitat will continue to be managed under Management Situation 2 guidelines.

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes and Patterns

Fire/Fuels

Prescribed fire is allowed to maintain or improve grizzly bear habitat (G).

Physical Elements

Minerals/Geology

Same as 2.3 Eligible Wild River.

Biological Elements

Wildlife

1. Inventory, monitoring, and short duration activities such as trail maintenance, spraying weeds, range maintenance activities, wildlife habitat improvement, etc., should be concentrated in time and space (G).

2. Wildlife habitat improvement projects are permitted which maintain grizzly bear habitat (G).

Forest Use and Occupation
Access (S) - 2 6 5

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian Horse/Pack Stock	Yes Yes Yes	Yes Yes Yes
Snow free Seasons	Motorized, <50" wide TMAARD 2/ OROMTRD 2/	No N/A N/A	No No 00 m/sq m R
Snow Seasons 3/	Winter Nonmotorized Snowmachine	Yes Yes	Yes Yes

1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps

2/ TMAARD = Total motorized access route density includes all open and restricted roads and motorized trails (See Roads in Glossary for more information) Unless a figure is specified here, this is calculated on a BMLU or subunit basis Please refer to the Forestwide standards and guidelines for Access

OROMTRD = Open road and open motorized trail route density includes all open roads and open motorized trails (see Roads in Glossary for more information) Unless a figure is specified here, this is calculated on a BMLU or subunit basis Please refer to the Forestwide standards and guidelines for Access

Two roads are designated open through this prescription area the Ashton/Flag Ranch Road (#261) and the Jackass Loop Road (#264)

3/ Within grizzly bear BMLUs site-specific restrictions on winter recreation activity (such as area closures, timing restrictions, etc) will be imposed to resolve human-grizzly bear conflicts

Roads
Same as 2 6 2 Grizzly Bear Core Area

Recreation
Special Uses

1 No new special uses are allowed from April 1 to December 15 (S)

2 Existing special use permits may be transferred (G)

Trails - Construct no new trails (relocating existing trails to maintain or improve habitat is permitted) (S)

ROS - Primitive to semi-primitive motorized (G)

VGO - Retention (S)

Heritage Resource

Same as 2 6 2 Grizzly Bear Core Area

Outfitter/Guide

No new outfitter and guide permits are allowed from April 1 to December 15 (S)

Production of Commodity Resources

Range

Forestwide standards and guidelines apply for the management of domestic sheep grazing in Management Situation 2 grizzly bear habitat (G)

Cattle grazing is allowed Allotment Management Plan will specify measures to meet agency grizzly goals and objectives (S)

Permittee's full compliance in meeting grizzly bear management goals and objectives for grizzly bear habitat will be a condition of the permit In addition, the following will be required (S)

1 Temporary cessation or modification of permitted livestock grazing activities will occur to resolve grizzly bear conflicts with humans or livestock

2 Livestock carcasses will be disposed of or rendered unattractive to bear within **24** hours after they are discovered Disposal may include removing the carcass from the area, burning, using an acceptable chemical repellent, or other methods approved by the District Ranger Disposal shall be in accordance with other governing agencies (such as the Wyoming Game and Fish Department) in order to determine cause of death for reimbursement purposes

3 Human food, refuse, and prepared livestock/pet foods associated with the livestock operation will be made unavailable to grizzlies through proper storage, handling, and disposal Proper storage includes a) inside a bearproof container, b) suspended horizontally from adjacent posts or trees, c) stored in a hard-sided vehicle or trailer, or d) other methods approved by the District Ranger The exception is when the food is being eaten or prepared for eating, or when food and similar organic matter is being transported Unburned human foods, garbage or other refuse will be carried off the Forest as often as practical

4 High quality food production areas for grizzlies such as wet alpine and subalpine meadows, stream bottoms, aspen groves, and other riparian areas will receive special grazing direction such as light, once-over grazing, special utilization standards, or complete closure These sites and their corresponding direction will be identified in the Annual Operating Plan

5 Livestock depredation believed to be associated with bears will be reported within **24** hours after they are discovered to the District Ranger and the proper State agencies

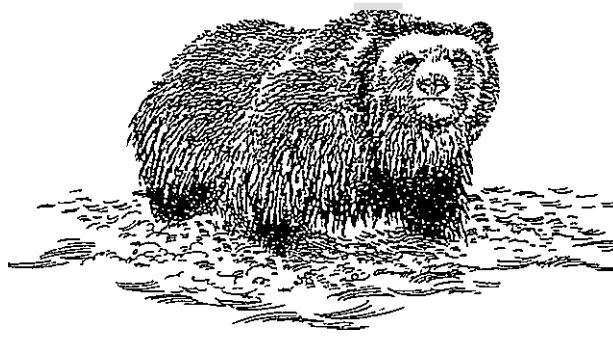
6 Any observation of grizzly bear or grizzly bear sign will be reported to the District Ranger as soon as practical

7 Any action taken by the permittee or their agents which violates the Endangered Species Act will be grounds for cancellation of their grazing permit

Timber

Lands are not included in the suitable timber base They do not contribute to the ASQ (S)

No firewood harvest is allowed other than for dispersed camping (S)



2.7 (a-b) ELK & DEER WINTER RANGE

Description

This management prescription emphasizes management actions and resource conditions which provide quality elk and deer winter habitat. Habitats are managed for multiple land use benefits, to the extent these land uses are compatible with maintaining or improving elk and deer winter habitat.

These areas are "crucial mid-to-late" natural winter ranges for deer and elk. These are the winter range areas which are considered to be the determining factor in a population's ability to maintain itself at a certain level over the long term. Moose, antelope and bighorn sheep may also be present.

Vegetation management occurs to maintain or improve winter habitat conditions. Winter range forage is abundant, includes a good mixture of grasses, forbs, and shrubs, and is well distributed throughout the area. Cover is maintained and well distributed.

Access is managed or restricted to provide security for wintering elk and deer. Area closures are emphasized where terrain and vegetation allow OHV use, with motorized use occurring only on designated routes.

Livestock grazing, timber management, recreation, and other resource management activities can occur as long as desired vegetation range conditions are being maintained.

Goals

- 1 Provide quality elk and deer winter range
- 2 Minimize forage use conflicts between big game and livestock on the winter range
- 3 Forested vegetation is managed to maintain or improve cover *or* forage conditions needed for wintering deer and elk
- 4 Nonforested vegetation is managed to maintain or improve forage production needed for wintering deer and elk
- 5 Minimize human disturbance to wintering big game animals

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed as follows:

Ecological Processes and Patterns

Fire/Fuels

Prescribed fire is allowed to maintain or improve winter habitat and enhance ecological conditions (G)

Forest Use and Occupation

Access (S) - 2 7 (a)

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian Horse/Pack Stock Mtn Bike/Mechanized	Yes 2/ Yes 2/ Yes 2/	Yes Yes Yes
Snow free Seasons	Motorized, <50" wide Motorized, >50" wide OROMTRD 31	No No N/A	Yes Yes <= 2 0 mi/sq mi
Snow Seasons	Winter Nonmotorized Snowmachine	No NO	Yes 41 Yes 41

Access (S) - 2 7 (b)

Season	Type of Access	Cross-country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian Horse/Pack Stock Mtn Bike/Mechanized	Yes Yes Yes	Yes Yes Yes
Snow free Seasons	Motorized, <50" wide Motorized, >50" wide OROMTRD 2/	No No N/A	Yes Yes <= 2 0 mi/sq mi 2/
Snow Seasons	Winter Nonmotorized Snowmachine	Yes No	Yes Yes 31
<p>1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps</p> <p>2/ OROMTRD = Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information)</p> <p>In 2 7 (b) Prescription areas <= 4 0 sq mi in size, OROMTRD does not apply</p> <p>31 Snowmachine use will be restricted to 50 feet on either side of a designated road or trail</p>			

Recreation

Dispersed- Manage recreation sites to maintain winter habitat conditions Minimal recreation facilities may be provided (such as hitch rack, rudimentary toilets, etc) Generally, recreation facilities are not encouraged (G)

ROS - Semi-primitive nonmotorized to roaded natural (G)

VQO - Retention to modification (G)

Heritage Resource

No new interpretation/enhancement of cultural sites (S)

Production of Commodity Resources

Timber

These areas are not part of the suitable timber base They are not part of the **ASQ** (S)

2.8.3 AQUATIC INFLUENCE ZONE

Description

This prescription applies to the aquatic influence zone associated with lakes, reservoirs, ponds, perennial and intermittent streams, and wetlands (such as wet meadows, springs, seeps, and bogs) These areas control the hydrologic, geomorphic, and ecological processes that shape the various water types mentioned above and directly affect aquatic life They also provide unique habitat characteristics which are important to those plant and animal species which rely on aquatic, wetland, or riparian ecosystems for all or a portion of their life cycle Many such habitats are locally rare or are sensitive to disturbance (such as fens and thermal springs) Overall, these areas serve as important reservoirs of biodiversity, critical linkages for the interchange of plant and animal genetic material, specialized areas of nutrient cycling and freshwater filtration, storage, and transport, and are important to water quality

Management emphasis is directed at the application of ecological knowledge to restore and maintain the health of these areas in ways that also produce desired resource values, products, protection, restoration, enhancement, interpretation, and appreciation of these areas

These aquatic influence zones provide a high level of aquatic protection and maintain ecological functions (e.g., sediment transport, microclimate control, nutrient regulation, and connectivity within the watershed) and processes (e.g., stream channel formation, plant community development, recruitment of organic material including large wood, and hydrologic cycles) necessary for the restoration and maintenance of habitat for aquatic and riparian dependent organisms They also maintain future management options

This management prescription is defined on the ground using boundary widths which may vary by water type, and geographic characteristics The actual boundaries of the aquatic influence zone, as determined by a person having current knowledge of fluvial geomorphology, of stream-riparian ecology, or both, could be narrower or wider than the prescribed boundary widths

The five basic water types found on the Forest are

- 1 Fish-bearing Stream Reaches,
- 2 Perennial Non-fish-bearing Stream Reaches,
- 3 Lakes,

4 Reservoirs, Ponds and Wetlands Greater Than One Acre,

5 Intermittent Streams, and Wetlands Less Than One Acre

In cases of overlap, this prescription prevails over all other prescriptions except the following

Designated Wilderness - Opportunity Class I (Prescription 1 1 6)

Designated Wilderness - Opportunity Class II (1 1 7)

Designated Wilderness - Opportunity Class III (1 1 8)

Wilderness Study Area (I 2)

Recommended Wilderness (1 3)

Special Management Areas (2 1 1)

Research Natural Areas (2 2)

Eligible Wild River (2.3)

Eligible Scenic River (2 4)

Eligible Recreation River (2 5)

South Fork Eligible Scenic River (2 9 1)

South Fork Eligible Recreation River (2 9 2)

Developed Recreation Sites (4 1)

Special Use Permit Recreation Sites (4 2)

Dispersed Camping Management (4 3)

Concentrated Development Areas (8 1)

Where this prescription area runs through areas which meet the IGBC definition for core areas, this prescription area also meets the IGBC definition for core areas

Goals

- 1 Minimize adverse effects to aquatic and riparian dependent species from past, existing and proposed management activities
- 2 Allow endemic levels of insects and disease to play their natural role in ecological succession, compatible with other resource objectives
- 3 Manage wood residue (natural and human-made), including fuelwood, to maintain or restore ecological health and function
- 4 Coordinate with Idaho Fish and Game, Wyoming Game and Fish, and other interested individuals or groups, to identify and evaluate potential beaver reintroduction sites Support reintroductions into areas that would benefit from beaver activity and where conflicts with other uses have been resolved

Objective

- 1 Within five years of the Record of Decision, all existing roads, trails, culverts, fords and stream crossings within these lands will be inventoried and evaluated as to whether they meet management prescription goals Those that do not meet management prescription goals will be scheduled for restoration or obliteration

Standards and Guidelines

Forestwide standards and guidelines apply Riparian forage utilization standards are found in the forest-wide standards and guidelines for Range Additional direction for this prescription is listed below

Boundary widths for the five water types apply until a site-specific analysis is completed The slope

distances specified for boundary widths in the five water types will vary by ecological subsection. Following are the slope distances of boundary widths, in feet, by ecological subsection (G)

BOUNDARY WIDTHS OF WATER TYPES, BY SUBSECTIONS

Water Type			
	3,4	2	1,5,6,7
Fish-bearing Stream Reaches 1/	150	200	300
Perennial Nonfish-bearing Stream Reaches 1/	75	75	150
Lakes 2/	150	200	300
Reservoirs, Ponds, Wetlands Greater Than One Acre 3/	75	75	150
Intermittent Streams, Wetlands Less Than One Acre 4/	75	75	100
<p>1/ The boundary width is the slope distance on both sides of the stream, in feet, measured from the edge of the stream, or the area from the edge of the active stream channel to the outer edges of the riparian vegetation, whichever is greater</p> <p>2/ The boundary width is the slope distance specified, in feet, measured from the high water mark of the lake, or the area from the high mark of the lake to the outer edge of the riparian vegetation or seasonally saturated soil, whichever is greater</p> <p>3/ The boundary width is the slope distance specified, in feet, measured from the edge of the body of water (edge is defined as the maximum pool elevation of the water body), or the wetland area to the outer edges of the riparian vegetation, whichever is greater</p> <p>4/ The boundary width is the slope distance on both sides of the intermittent stream, in feet, measured from the edge of the stream, or the wetland area to the outer edges of the riparian vegetation, whichever is greater</p>			

Ecological Processes and Patterns

Insects and Disease

Where catastrophic insect and disease damage results in degraded riparian conditions, unscheduled timber harvest (salvage and commercial fuelwood cutting) is allowed where needed to attain the goals of this management prescription providing other goals of this management prescription are not adversely affected (G)

Fire/Fuels

Avoid locating bases, camps, helibases, staging areas, helispots, hazardous material storage facilities, and other centers for incident activities within these lands. If the only suitable location for such activities is within this area, an exception may be granted following a review and recommendation by a resource advisor. The resource advisor will prescribe the location, use conditions, and rehabilitation requirements (G)

Avoid application of chemical retardant, foam, or additives in these areas. Exceptions may be warranted in situations where overriding safety concerns exist, or following a review and recommendation by a resource advisor, when an escape would cause more long-term damage (G)

Prescribed fire activities on adjacent lands must be compatible with management prescription goals. (S)

Use minimum impact suppression methods (G)

Physical Elements

Lands

Avoid locating utility corridors and their access roads in these lands whenever possible (G)

Minerals/Geology

Adequate reclamation plans and bonds are required in mining plans of operation. These bonds must cover the full costs of removing facilities, equipment, and materials, recontouring disturbed areas to near pre-mining topography, isolating and neutralizing or removing toxic or potentially toxic materials, salvaging and replacing topsoil, and preparing seedbeds and revegetating to meet management prescription goals (S)

Do not locate permanent structures or facilities within these lands (S)

Do not locate waste dumps, leaching pads, and other facilities within these lands where other alternatives are available. If no other alternative exists, ensure that safeguards are in place to prevent release or drainage of toxic or other hazardous materials onto these lands (S)

Do not allow debris, overburden, and other materials associated with mining activities to be placed within these lands if other alternatives are available. If no alternative is available, place them outside the active floodplain and outside the Stream Protection Zones defined by the state. In either case, place them in such a manner as to prevent their entry by erosion, high water, or other means into stream channels (S)

Discourage mineral material extraction (subject to valid permitted rights, or where permitted by plans of operation) (G)

Plans of operation will be consistent to the fullest extent possible with management prescription goals (G)

Biological Elements

Wildlife

Strive to maintain dead and defective tree habitat at a level capable of supporting 100 percent potential populations of the management indicator species for primary cavity excavators. (G)

Forest Use and Occupation

Access (S) - 2 8 3

Season	Type of Access	Cross-Country Travel 2/	Road and Trail Travel 1/
Snow free Seasons	Pedestnan	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motonzed, <50" wide	No	Yes
	Motonzed, >50" wide	No	Yes
	OROMTRD 3/	NA	3/
Snow Seasons 4/	Winter Nonmotonzed	Yes	Yes
	Snowmachine	Yes	Yes

1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps

2/ When cross-country travel is found to result in soil displacement in excess of 15 percent of an activity area, or alternation of natural stream channel morphology, reduce impacts through education, use limits, more intensive maintenance, facility modification, and/or closures

3/ OROMTRD= Open road and open motonzed trail route density includes all open roads and open motorized trails. The acres in this prescription area and the OROMTRD will be included in the calculations with the acres and OROMTRD in adjacent upland prescription areas (See Roads in Glossary for more information)

4/ Within grizzly bear BMUs, site-specific restrictions on winter recreation activity (such as area closures, timing restrictions, etc) will be imposed to resolve human-grizzly bear conflicts

Containers holding more than five gallons of spare vehicle fuel should be stored outside the AIZ or stored in such a way as to prevent leakage into riparian areas. Vehicle refueling should be done in a way that avoids contamination of water bodies (G)

Roads and Trails

No new roads, trails, or landings will be constructed within these lands until appropriate standards for construction, maintenance, and operations are in place (G)

Improve, seasonally close, close, relocate and stabilize, or obliterate roads and trails that have been identified as posing a high risk of causing unnaturally high levels of sediment input or are known to be doing so. Action to be taken will be determined based on travel management needs, terrain, the need for the road or trail, the potential environmental impacts, and resource priorities (G)

Roads and trails or sections of them that have been identified as inhibiting riparian, wetland or aquatic ecosystem processes and/or functions (e.g., plant community development, sediment transport, and stream channel development) will be improved, relocated, or obliterated. The decision to improve, relocate, or obliterate will be based on the potential environmental impact, the ecological condition of the riparian, wetland and aquatic resources affected, and the need for the road or trail (G)

Culverts and stream crossings found to pose a risk to riparian, wetland or aquatic conditions will be improved to accommodate at least a 50-year flood, including associated bedload and debris (G)

New stream crossings will be constructed and maintained to prevent diversion of streamflow out of the channel and down the road in case of failure. In locations found to have high potential for failure, the roadway will be hardened to further lessen the chance of roadway failure or severe erosion should the crossing overtop (G)

Constructed temporary stream crossings, such as log and culvert installations, may be allowed if temporary crossings will be constructed and used in such a way as to minimize sediment input and to provide for fish passage. They will be maintained during use and removed and rehabilitated as soon as they are no longer needed (G)

Construct, reconstruct, and maintain all road and trail crossings of streams which currently or historically bear fish to provide for fish passage. Exceptions are allowed where it is necessary to restrict fish movements in order to protect native or desirable nonnative fish populations (G)

Conserve surfacing materials and protect riparian resources, by properly maintaining roads and avoiding side casting during road maintenance activities (G)

Recreation and Outfitter/Guide

When dispersed recreation is found to result in soil disturbance in excess of 15 percent of an activity area, or alteration of natural stream channel morphology, address impacts through education, use limits, more intensive maintenance, facility modification, and /or closures (G)

Recreational grazing must meet range standards for utilization of riparian vegetation (S)

Permitted stock holding, watering, and handling facilities within riparian vegetation (may not include the entire AIZ boundary) are allowed only if appropriate mitigation measures are implemented to reduce negative impacts (S)

ROS - Primitive to urban (G)

VQO - Retention to modification (G)

Production of Commodity Resources

Range

Incorporate into AMPs, objectives for attainment of desired vegetation conditions for riparian plant community seral stage development and stream channel condition (G)

Proposed livestock watering facilities, corrals, and holding pastures within these lands are allowed only if appropriate mitigation measures are implemented to reduce negative impacts (S)

Existing livestock watering facilities, corrals, and holding pastures within these lands are allowed at permit issuance only if mitigation measures are implemented to reduce negative impacts (G)

Timber

These lands are not included in the suitable timber base. They are not part of the ASQ (S)

Where needed to attain management prescription goals, design silvicultural prescriptions and allow prescribed burning and stocking control, as well as the reestablishment and culturing of stands to attain desired vegetation characteristics (G)

Mechanized treatment of wood residue is minimized (G)

Burning of mechanized treated wood residues within the bankfull channel is prohibited (S)

Where catastrophic events such as fire or windstorms result in degraded riparian conditions, unscheduled timber harvest (salvage and commercial fuelwood cutting) may be selected as the most desirable management practice (G)

2.9.1 SOUTH FORK ELIGIBLE SCENIC RIVER

Description

This prescription applies to the portion of the South Fork of the Snake River that has been determined to be an eligible scenic river, consisting of the water surface, islands, sand bars, riparian vegetation, and adjacent uplands from Conant Valley powerline downstream to Riley Diversion (17 miles)

Within this corridor are campgrounds, picnic sites, boating sites/ramps, and other facilities such as trailheads, scenic and wildlife viewing areas, fishing access points and inventoried National Forest recreationsites selected for potential development. Development ranges from native material roads and campsites, with nonflush toilets, to a high degree of site modification with comfort and convenience facilities including paved roads, water systems, flush toilets, and boat launches.

Overall, you notice signs of people, generally oriented toward water use. Drifting downstream in a boat, you notice roads, buildings, picnic tables, camping spots and, occasionally, people fishing along the river bank. You hear sounds of vehicles and other human activity. You will see powerlines across the river from time to time. Other stretches of river have few roads or developments and provide a relatively quiet, peaceful, natural setting.

As you float you often see stands of cottonwood, most of them mature. In and around these cottonwood stands you may see bald eagles or peregrine falcon perched in trees, or great blue heron on the ground. During the winter you may see elk, moose, and deer on adjacent slopes.

During the summer, livestock may be seen grazing next to the river and on nearby slopes.

The management direction contained in the Snake River Activity/Operations Plan, as developed between the U S Forest Service and the Bureau of Land Management and signed in February 1991, applies to this area. This management direction will be adjusted (if necessary) to reflect direction from the required suitability study.

Goals

1. Maintain the river's scenic values.
2. Maintain or enhance critical nesting, foraging and wintering areas for bald eagles, maintain big game winter range and improve unsatisfactory big game habitat. Maintain heron rookeries and improve goose nesting opportunities.

Standards and Guidelines

Manage this area according to the standards and guidelines established in the Snake River Activity/Operations Plan (U S Forest Service & Bureau of Land Management, February 1991), except for the direction shown below (S).

Physical Elements

- Minerals/Geology
Same as 2.3 Eligible Wild River

Forest Use and Occupation

Access (S) - 2 9 1

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motorized. <50" wide	No	Yes
	Motorized. >50" wide	No	Yes
	OROMTRD 2/	N/A	2/
Snow Seasons	Winter Nonmotorized	Yes	Yes
	Snowmachine	No	Yes
1/ individual roads and trails are designated open or closed in the Forest Plan Travel Maps			
2/ OROMTRD= Open road and open motorized trail route density does not apply to this prescription area			

2.9.2 SOUTH FORK ELIGIBLE RECREATION RIVER

Description

This prescription applies to the portion of the South Fork of the Snake River that has been determined to **be** an eligible recreation river, consisting of the water surface, islands, sand bars, riparian vegetation, and adjacent uplands

The rest of the description is the same as the scenic portion of the river (2 9 I)

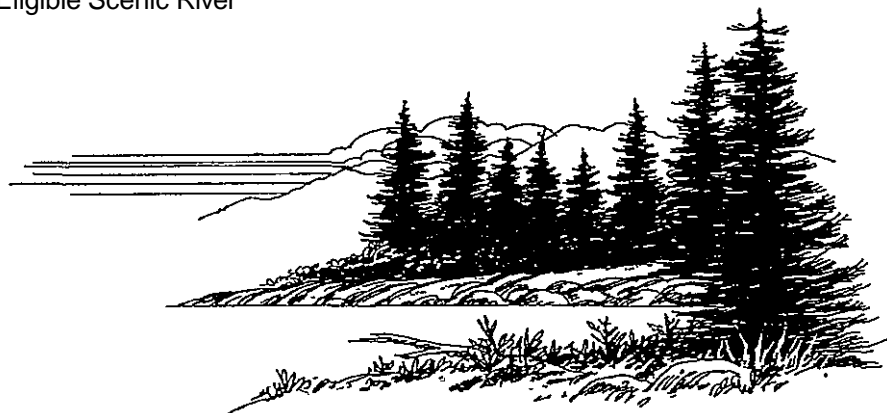
Goals

Goals are the same as the scenic portion except

Maintain the river's recreation values, from Palisades Dam to Conant Valley powerline, some 165 miles

Standards and Guidelines

Same as 2 9 1 S Fork Eligible Scenic River



3.1.1 (a) NONMOTORIZED

Description

This management prescription identifies areas where semi-primitive nonmotorized recreation **use**, like hiking and horseback riding, will occur during the summer months. The experience is similar to a primitive experience, but does allow some motorized use, like chainsaws for summer trail maintenance, snowmachines during the winter, and helicopters. Groomed snowmachine trails are not allowed.

These areas are accessible by trails or cross-country, you find no usable roads. All-terrain vehicles and motorcycles cannot use the area. Encounters with other people diminish as you move away from nearby roads and trailheads. Generally, you experience a backcountry setting with a high likelihood of solitude. However, you may occasionally meet large groups.

You may find oversnow vehicles, helicopter use, stock tanks, or fences. Otherwise, the forest generally presents a natural appearance. A variety of forest seral stages may be present, ranging from areas with recent wildfires to old growth habitat. Firewood is available for camping, but is not generally available for home use. Outfitter and guiding activity may be present. Domestic livestock grazing may be present in some areas, and you may see range improvements such as fencing and stock tanks. A variety of nonforested rangeland seral stages may be present.

Goals

1. Maintain or enhance semi-primitive nonmotorized dispersed recreation opportunities outside of the winter season.
2. Prescribed natural fire and manager-ignited fire will be managed to maintain fire's ecological role and to enhance habitat.
3. Allow insects and disease to play their natural role in ecological succession, compatible with other resource objectives.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes and Patterns

Fire/Fuels

The emphasis will be on prescribed natural fire whenever conditions permit. (G)

Employ Minimum Impact Suppression Tactics (MIST) to the maximum extent possible. (G)

Physical Elements

Soil and Water

Watershed restoration will be done primarily where deteriorated soil or hydrologic conditions are caused by humans or their influences create a serious threat or loss of resource values. (G)

Promote natural healing where a definite hazard to life or property or important environmental qualities outside and within this prescription area are not imminent, or where natural vegetation would return in a reasonable time. (G)

6

Use indigenous or appropriate naturalized species to reestablish vegetation where there is no reasonable expectation of natural healing (G)

Permit emergency burned area rehabilitation only if necessary to prevent an unnatural loss of semi-primitive nonmotorized resources or to protect life, property, and other resource values outside the area (S)

Minerals/Geology

Same as 1 2 Wilderness Study Area

Forest Use and Occupation

Access (S) - 3 1 1 (a)

Season	Type of Access	Cross-country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motorized, <50" wide	No	No 2/
	Motorized, >50" wide	No	No 2/
	OROMTRD 3/	N/A	0 0 mi/sq mi 3/
Snow Seasons	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps

2/ Motorized use is not allowed, except that motorized equipment is allowed for trail construction/maintenance. Motorized transport of Forest Service employees is not allowed except on contracts where motorized maintenance equipment is being used.

YOROMTRD = Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information)

Roads

Existing system or nonsystem roads will be closed as soon as practicable (S)

No new road construction (S)

Recreation

Dispersed- Minimal recreation facilities may be provided (such as hitch rack, rudimentary toilets, etc) not to exceed Development Level I (see Glossary) Generally, recreation facilities are not encouraged (G)

High impact campsites should be restored to meet Frissell Condition Class 3 (see Glossary) (G)

Trails - Trails and bridges are constructed/maintained to a level to accommodate heavy foot and horse traffic, where allowed (G)

- Motorized/mechanized trail maintenance and construction equipment may be used (G)

ROS - Primitive to semi-primitive nonmotorized (G)

VQO - Retention to partial retention (G)

Production of Commodity Resources

Range

Livestock Grazing - Range developments (water tanks, fences, etc) that do not detract from the overall objectives of the area are acceptable (S)

Timber

These areas are removed from the suitable timber base They do not contribute to the ASQ (S)

No timber harvesting, except for 'minor' forest products such as camp firewood, posts and poles for fencing on Forest only, administrative use, etc Harvesting does not trigger the need for reforestation Chainsaws are allowed (S)

3.1.2 NONMOTORIZED

Description

This management prescription identifies areas where semi-primitive nonmotorized recreation use, like hiking and horseback riding, will occur during the summer months The experience is similar to a primitive experience, but does allow some motorized use, like chainsaws for summer trail maintenance, snowmachines during the winter, and helicopters Groomed snowmachine trails are not allowed

This management prescription meets the Interagency Grizzly Bear Committee criteria for grizzly bear core areas (IGBC Task Force Report, July 1994)

These areas are accessible by trails or cross-country, you find no usable roads All-terrain vehicles and motorcycles cannot use the area Encounters with other people diminish as you move away from nearby roads and trailheads Generally, you experience a backcountry setting with a high likelihood of solitude However, you may meet large groups occasionally

You may find oversnow vehicles, helicopter use, stock tanks, and fences Otherwise, the forest presents a natural appearance. A variety of forest successional stages may be present, ranging from areas with recent wildfires to old growth habitat Firewood is available for camping, but is not available generally for home use Outfitter and guiding activity may be present Domestic sheep grazing is greatly reduced or absent to provide better management in grizzly bear habitat Cattle grazing may be present in some areas, and you may see range improvements such as fencing and stock tanks A variety of nonforested rangeland successional stages may be present

Goals

- 1 Maintain or enhance semi-primitive nonmotorized dispersed recreation opportunities outside of the winter season
- 2 Maintain grizzly bear core area attributes as defined in the IGBC Task Force Report, July 1994

Standards and Guidelines

Forestwide standards and guidelines apply Within the grizzly bear recovery zone, the Interagency Grizzly Bear Guidelines for Management Situation 1 habitat apply to this management prescription, except that livestock grazing in existing Management Situation 2 habitat will continue to be managed under Management Situation 2 guidelines Additional direction for this prescription is listed below

Ecological Processes and Patterns

Insects and Disease

Allow insects and disease to play their natural role in ecological succession, compatible with other resource objectives (G)

Fire/Fuels

Wildfire will be managed using the appropriate suppression response. The emphasis will be on prescribed natural fire whenever conditions permit (S)

Employ Minimum Impact Suppression Tactics (MIST) to the maximum extent possible (G)

Use management-ignited fire to maintain fire's ecological role and to enhance habitat (G)

Physical Elements

Soil and Water

Watershed restoration will be done primarily where deteriorated soil or hydrologic conditions are caused by humans or their influences create a serious threat or **loss** of resource values (G)

Promote natural healing where a definite hazard to life or property or important environmental qualities outside this prescription area are not imminent, or where natural vegetation would return in a reasonable time (G)

Use indigenous or appropriate naturalized species to reestablish vegetation where there is no reasonable expectation of natural healing (S)

Permit emergency burned area rehabilitation only if necessary to prevent an unnatural loss of semi-primitive nonmotorized resources or to protect life, property, and other resource values outside and within the area (G)

Minerals/Geology

All operating plans and special use permits will specify measures to meet grizzly bear management goals and objectives for grizzly bear habitat. The following will be required (S)

- 1 Temporary cessation or modification of permitted activities will occur to resolve grizzly bear conflicts
- 2 Human food, refuse, and prepared livestock/pet foods associated with the permitted activity will be made unavailable to grizzlies through proper storage, handling, and disposal. Proper storage includes a) inside a bearproof container, b) suspended horizontally from adjacent posts or trees, c) stored in a hard-sided vehicle or trailer, or d) other methods approved by the District Ranger. The exception is when the food is being eaten or prepared for eating, or when food and similar organic matter is being transported. Unburned human foods, garbage or other refuse will be carried off the forest as often as practical.
- 3 Any observation of grizzly bear or grizzly bear sign will be reported to the District Ranger as soon as practical.
- 4 Access roads that are not open on the travel plan will be low standard roads and gated to allow access only to the operators. Nonwinter motorized use behind locked gates is authorized only for permitted activities.

Forest Use and Occupation

Access (S) - 3 1 2

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motorized, <50" wide	NO	No 2/
	Motorized, >50" wide	NO	No 21
	TMARO 3/	N/A	
	OROMTRD 3/	N/A	0.0 m/sq mi
Snow Seasons 4/	Winter ** motorized	Yes	Yes
	Snowmachine	Yes	Yes

1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps

21 Motorized use is not allowed, except that motorized equipment is allowed for trail construction/maintenance. Motorized transport of Forest Service employees is not allowed except on contracts where motorized maintenance equipment is being used.

3/ TMARO = Total motorized access route density includes all open and restricted roads and motorized trails (See Roads in Glossary for more information). Unless a figure is specified here, this is calculated on a BMU or subunit basis. Please refer to the Forestwide standards and guidelines for Access.

OROMTRD = Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information). Unless a figure is specified here, this is calculated on a EMU or subunit basis. Please refer to the Forestwide standards and guidelines for Access.

4/ Within grizzly bear BMUs, site-specific restrictions on winter recreation activity (such as area closures, timing restrictions, etc.) will be imposed to resolve human-grizzly bear conflicts.

Roads

Construct no new roads (S)

Recreation

Dispersed - Minimal recreation facilities may be provided (such as hitch rack, rudimentary toilets, etc.) not to exceed Development Level I. Generally, recreation facilities are not encouraged (G)

High impact campsites should be restored to meet Frissell Condition Class 3 (G)

Trails - Trails and bridges are constructed/maintained to a level to accommodate heavy foot and horse traffic, where allowed (S)

Motorized/mechanized trail maintenance and construction equipment may be used (G)

ROS - Primitive to semi-primitive nonmotorized (S)

VQO - Preservation to partial retention (G)

Production of Commodity Resources

Range

Forestwide standards and guidelines apply for the management of domestic sheep grazing in Management Situation 2 grizzly bear habitat (G)

Cattle grazing is allowed (S)

Allotment Management Plans will specify measures to meet agency grizzly goals and objectives (S)

Permittee's full cooperation in meeting grizzly bear management goals and objectives for Situation 2 grizzly bear habitat will be a condition of the permit. In addition, the following will be required (S)

- a Temporary cessation or modification of permitted livestock grazing activities may occur to resolve grizzly bear conflicts with humans or livestock
- b Livestock carcasses will be disposed of or rendered unattractive to bear within 24 hours after they are discovered. Methods may include removing the carcass from the area, burning, using an acceptable chemical repellent, or others approved by the District Ranger. Disposal shall be in accordance with other governing agencies (such as the Wyoming Game and Fish Department) in order to determine cause of death for reimbursement purposes
- c Human food, refuse, and prepared livestock/pet foods associated with the livestock operation will be made unavailable to grizzlies through proper storage, handling, and disposal. Proper storage includes a) inside a bearproof container, b) suspended horizontally between adjacent posts or trees, c) stored in a hard-sided vehicle or trailer, or d) other methods approved by the District Ranger. The exception is when the food is being eaten or prepared for eating, or when food and similar organic matter is being transported
- d High quality food production areas for grizzlies such as wet alpine and subalpine meadows, stream bottoms, aspen groves, and other riparian areas will receive special grazing direction such as light, once-over grazing, special utilization standards, or complete closure. These sites and their corresponding direction will be identified in the Annual Plan of Use
- e Livestock depredation believed to be associated with bears will be reported within 24 hours after they are discovered to the District Ranger and the proper State agencies
- f Any observation of grizzly bear or grizzly bear sign will be reported to the District Ranger as soon as practical
- g Any action taken by the permittee or their agents which violates the Endangered Species Act will be grounds for cancellation of their grazing permit

Range developments (water tanks, fences, etc.) that do not detract from the overall objectives of the area are acceptable (S)

Timber

These areas are removed from the suitable timber base. They are not part of the ASQ (S)

No timber harvesting, except for 'minor' forest products such as camp firewood, posts and poles for fencing on Forest only, administrative use, etc. Harvesting does not trigger the need for reforestation. Chainsaws are allowed (S)

3.2 (b,c,d,g,i,j) SEMI-PRIMITIVE MOTORIZED

Description

This management prescription identifies areas with a semi-primitive backcountry recreation experience, associated with some motorized vehicle use. These areas are accessible by roads and trails. Cross-country motorized vehicle use is only allowed in prescription areas 3.2 (b) and 3.2 (f). Roads and trails are designed and maintained to allow easy passage. You will find occasional to frequent encounters with trail users. You may meet large groups occasionally.

Generally, the forest presents a natural appearance. A variety of forest successional stages may be present, ranging from areas with recent wildfires to late successional habitat. Firewood is available for camping and home use. Outfitter and guiding activity may be present. Domestic livestock grazing may be present in some areas, and you may see range improvements such as fencing and stock tanks. A variety of nonforested rangeland successional stages may be present.

Goals

1. Maintain or enhance semi-primitive motorized dispersed recreation opportunities.
2. Prescribed natural fire and management-ignited fire will be managed to maintain fire's ecological role and to enhance habitat.

Standards and Guidelines

Within the grizzly bear recovery zone, the Interagency Grizzly Bear Guidelines for Management Situation 1 habitat apply to management prescription 3.2 (c), except that livestock grazing in existing Management Situation 2 habitat will continue to be managed under Management Situation 2 guidelines.

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes and Patterns

Insects and Disease

Allow insects and disease to play their natural role in ecological succession (G)

Fire/Fuels

The emphasis will be on prescribed natural fire whenever conditions permit (G)

Employ Minimum Impact Suppression Tactics (MIST) to the maximum extent possible (G)

Physical Elements

Minerals/Geology

All operating plans and special use permits will specify measures to meet grizzly bear management goals and objectives for grizzly bear habitat. The following will be required (S)

1. Temporary cessation or modification of permitted activities will occur to resolve grizzly bear conflicts.

2. Human food, refuse, and prepared livestock/pet foods associated with the permitted activity will be made unavailable to grizzlies through proper storage, handling, and disposal. Proper storage includes a) inside a bearproof container, b) suspended horizontally from

adjacent posts or trees, c) stored in a hard-sided vehicle or trailer, or d) other methods approved by the District Ranger. The exception is when the food is being eaten or prepared for eating, or when food and similar organic matter is being transported. Unburned human foods, garbage or other refuse will be carried off the forest as often as practical.

3 Any observation of grizzly bear or grizzly bear sign will be reported to the District Ranger as soon as practical.

4 Access roads that are not open on the travel plan will be low standard roads and gated to allow access only to the operators. Nonwinter motorized use behind locked gates is authorized only for permitted activities.

Biological Elements

Wildlife

Maintain snags at 60 percent of biological potential for woodpeckers (G)

Forest Use and Occupation

Access (S) - 3 2 (b)

Season	Type of Access	Cross Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestnan Horse/Pack Stock Mtn Bike/Mechanized	Yes Yes Yes	Yes Yes Yes
Snow free Seasons	Motorized. <50" wide Motorized. >50" wide OROMTRD	Yes 2/ No N/A	Yes Yes <= 1 0 mi/sq mi 3/
Snow Seasons	Winter Nonmotorized Snowmachine	Yes Yes	Yes Yes
<p>2/ Motorized use is not allowed on slopes > 40%. on unstable soils, or during the period from October 1 to December 30</p> <p>3/ OROMTRD = Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information) In the Spring Mtn Canyon area (Lemhi Mtns ,Dubois R D) OROMTRD is <= 1 3 miles/square mile</p>			

Access (S) - 3 2 (c)

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motorized, <50" wide	No	Yes 2/
	Motorized, >50" wide	NO	Yes 2/
	OROMTRD 3/	N/A	
Snow Seasons 4/	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps

2/ Motorized use is generally not allowed on designated trails during the period from October 1 to December 30, except where noted on the Forest Plan Travel Maps

3/ OROMTRD = Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information) Unless a figure is specified here, this is calculated on a EMU or subunit basis Please refer to the Forestwide standards and guidelines for Access

4/ Within grizzly bear BMUs, site-specific restrictions on winter recreation activity (such as area closures, timing restrictions, etc) will be imposed to resolve human-grizzly bear conflicts

Access (S) - 3 2 (d)

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motorized, <50" wide	No	Yes
	Motorized, >50" wide	No	Yes
	OROMTRD	N/A	<= 10 milsq mi 2/
Snow Seasons	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps

2/ OROMTRD = Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information)

In 3 2 (d) Rescription areas <= 3 5 sq mi in size. OROMTRD does not apply

Access (S) - 3 2 (g)

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motorized, <50" wide	NO	Yes
	Motorized, >50" wide	No	Yes
	OROMTRD	N/A	<= 1 0 mi/sq mi 2/
Snow Seasons 3/	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps

2/ OROMTRD = Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information) In grizzly bear habitat, this is calculated on a BMU or subunit basis Please refer to the Forestwide standards and guidelines for Access In 3 2 (g) prescription areas which are narrow linear road corridors (ie Pass Creek Eightmile Creek, Irving Creek, East Dry Creek). OROMTRD does not apply This figure applies to other areas outside the BMU's

3/ Within grizzly bear BMUs, site-specific restrictions on winter recreation activity (such as area closures, timing restrictions, etc) will be imposed to resolve human-grizzly bear conflicts

Access (S) - 3 2 (l)

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motorized, <50" wide	No	Yes
	Motorized, >50" wide	No	Yes
	OROMTRD 2/	N/A	<= 1 2 mi/sq mi 2/
Snow Seasons	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps

2/ OROMTRD = Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information)

Access (S) - 3 2 (j)

Season	Type of Access	Cross-country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motorized, <50" wide	No	Yes
	Motorized, >50" wide	No	Yes
	OROMTRD 2/	N/A	<= 0.5 mi/sq mi 2/
Snow Seasons	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes
1/ individual roads and trails are designated open or closed in the Forest Plan Travel Maps			
2/ OROMTRD= Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information)			

Roads

Generally, construct no new roads (G)

Recreation

Dispersed- Dispersed recreation facilities may be provided to reduce adverse resource impacts at heavily used sites (G)

- Development level shall not exceed Level 2 for developed recreation sites (see Glossary) (S)

- High impact campsites should be restored to meet Frissell Condition Class 3 (see Glossary) (G)

Trails - Trails and bridges are constructed/maintained to a level to accommodate heavy foot, horse, and motorized vehicle traffic, where allowed (G)

ROS - Semi-primitive nonmotorized and roaded natural (G)

VQO - Retention to partial retention (G)

Production of Commodity Resources

Range

Range developments (water tanks, fences, etc) that do not detract from the overall objectives of the area are acceptable (G)

Forestwide standards and guidelines apply for the management of domestic sheep grazing in Management Situation 2 grizzly bear habitat (3 2 (c), 3 2 (g)) (G)

Timber

These areas are removed from the suitable timber base They are not part of the ASQ (S)

Timber management is allowed for such products as camp firewood, home use firewood, posts and poles for fencing on Forest, Christmas trees, wildlife habitat, administrative use, etc Harvesting generally does not trigger the need for reforestation (G)

Commercial post and pole sales are allowed provided no new temporary or system road construction occurs (G)

4.1 DEVELOPED RECREATION SITES

Description

This prescription applies to existing campgrounds, picnic areas, boating sites/ramps, and other facilities such as trailheads, snow parks, scenic and wildlife viewing areas, fishing access points, and inventoried National Forest recreation sites selected for potential development located throughout the Targhee National Forest. Development ranges from native material roads and campsites, with nonflush toilets, to a high degree of site modification with comfort and convenience facilities including paved roads, water systems, mobility impaired access, flush toilets and boat launches. (See Developed Recreation Sites - Development Scales 1-5 in the Glossary)

Overall, you find many signs of people. You see little or no evidence of resource development except for recreation. Picnic tables, roads, buildings, and camping spots are obvious. You often hear sounds of vehicles and other human activity. Signs advise that off-highway vehicle use is not allowed except to enter and depart the site on roads.

You can gather down firewood for camping, but you cannot gather it for home use. Access to fishing may be rather easy if the facility is near a stream or river, but the fishing may be less satisfactory than in more remote areas.

You generally will not find livestock within campgrounds, but they may be visible nearby. Signs and sounds of logging may also be apparent from time to time.

Wildlife, in the form of chipmunks, squirrels, birds, and occasional big game may be seen.

Generally you will find a variety of vegetation conditions from sagebrush to forested land within these areas. The forest cover will vary from mature trees to young seedling and sapling trees. The forest will generally be in a healthy, vigorous condition to provide for safety and provide for a friendly, relaxed outdoor experience. The area around the campground will generally exhibit a variety of visual conditions, depending on past insect, disease, and fire activity and management's response to those disturbances.

Goals

- 1 Provide for a variety of concentrated public recreation uses in a roaded-natural setting based on the character of the areas and visitors' needs
- 2 Protect and enhance a natural appearing environment within and adjacent to the existing sites to the extent possible while maintaining the existing array of developed recreation sites
- 3 Promote wildlife viewing opportunities when compatible with developed recreation use
- 4 Provide an appropriate mix of reservation and nonreservation sites in campgrounds
- 5 Provide short trails to facilities and opportunities for interpretation
- 6 Manage aspen for its value in providing seasonal color

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes and Patterns

Insects and Disease

Control insects and disease consistent with recreational objectives (S)

Fire/Fuels

All wildfires that threaten these areas will be aggressively suppressed (S)

Prescribed fire generally will not apply here. It may be used, however, to obtain natural regeneration in preference to soil-disturbing techniques (G)

Natural fuels will be reduced or otherwise treated so the potential fireline intensities will not exceed 100 BTU per second per foot on 90 percent of the days during the regular fire season (Burning Index < 40) (G)

Physical Elements

Soil and Water

Where standards are not being met, actively rehabilitate these areas. Use rehabilitation techniques that do not detract from the recreation opportunity (S)

Avoid new construction on unstable or highly erosive soil (G)

On new developments provide adequate vegetation filters to maintain and/or enhance riparian-dependent resources (G)

Lands

Corridor rights-of-way should avoid campgrounds and other facilities (G)

Minerals/Geology

Same as 1.2 Wilderness Study Area

Biological Elements

Wildlife

Animal Damage Control - Animal damage control generally will not be done on these sites because of potential conflicts with recreation users and their pets, except for control of problem bears, beavers, porcupines, etc (G)

Forest Use and Occupation

Access (S) - 4.1

Season	Type of Access	Cross-County Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	No	Yes
	Mtn Bike/Mechanized	No	Yes
Snow free Seasons	Motorized, <50" wide	No	Yes 2/
	Motorized, >50" wide	No	Yes 2/
	OROMTRD 3/	N/A	N/A
Snow Seasons	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps

2/ Motorized use is allowed only on existing roads and is limited to entering, leaving, and visiting other sites within the facility

3/ OROMTRD = Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information)

Recreation

Developed

Campgrounds and picnic areas that have a seasonal use level of 40 percent or higher should be managed at the Standard Service Level (see Glossary) (G)

Campgrounds and picnic areas that have a season-long use level of 20 to 40 percent should be managed at less than the Standard Service Level (G)

Those with less than 20 percent average season-long use may require closure of sites first and then, if needed, closure of the entire facility (G)

Trailhead facilities adjacent to designated wilderness will be developed to a level appropriate to the adjacent wilderness management prescription (G)

Development Level Developed sites should be built, improved, and maintained in accordance with the established Recreation Opportunity Spectrum (ROS) classification for the management prescription area and the development standards as follows (G)

ROS Class	Site Development Scale
Primitive	None
Semi-primitive Nonmotorized	Not to exceed 1
Semi-primitive Motorized	Not to exceed 2
Roaded Natural	Not to exceed 3
Urban	Not to exceed 4

ROS - Semi-primitive motorized to urban (G)

VQO - Manage for a full range from retention to modification. Facilities are often evident but harmonize and blend with the natural setting (G)

Production of Commodity Resources

Range

Grazing at trailheads, boatramps, picnic areas, etc. may be allowed when developments or recreation use is not adversely affected (G)

Timber

Developed recreation sites are removed from the suitable timber base. These lands do not contribute to the ASQ (S)

4.2 SPECIAL USE PERMIT RECREATION SITES

Description

This prescription applies to ski areas, resorts, summer home sites and organization camps (such as Boy Scouts and Girl Scouts of America) that are allowed under a special use permit.

The emphasis is on providing privately operated types of recreation on National Forest land for large concentrated groups of people. Overall, you find many signs of people. You see little or no evidence of resource development except for recreation. Cabins and buildings used by permittees are visible but blend into the surroundings. Roads are generally gravelled, but may be paved in higher use areas. OHV use is limited to entry and departure routes and for administrative purposes. In some areas you may see extensive development associated with ski areas or resorts—for example, buildings, ski lifts, maintenance equipment, etc. Many pedestrians and cars may be seen in these areas.

You generally will not find livestock within these areas, but they may be visible nearby. Signs and sounds of logging may also be apparent from time to time.

Wildlife, in the form of chipmunks, squirrels, birds, and occasional big game may be seen.

Generally you will find a variety of vegetation conditions from sagebrush to forested land within these areas. The forest cover will vary from mature trees to young seedling and sapling trees. The forest will generally be in a healthy, vigorous condition to provide for safety and provide for a friendly, relaxed outdoor experience. The area around the special use facility will generally exhibit a variety of visual conditions, depending on past insect, disease, and fire activity and management's response to those disturbances.

Goals

- 1 Provide for privately operated recreation **use**
- 2 Protect and enhance a natural appearing environment to the extent possible while providing for private and group recreation opportunities
- 3 Strive to incorporate opportunities for watchable wildlife

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes and Patterns

Insects and Disease

Control insects and disease consistent with visual objectives (S)

Fire/Fuels

All wildfires that threaten these areas will be aggressively suppressed (S)

Prescribed fire generally will not apply here. It may be used, however, to achieve resource objectives (G)

Natural fuels will be reduced or otherwise treated so the potential fireline intensities will not exceed 100 BTU per second per foot on 90 percent of the days during the regular fire season (Burning Index < 40) (G)

Physical Elements

Soil and Water

Use rehabilitation techniques that do not detract from the recreation opportunity (G)

Avoid new construction on unstable or highly erosive soils (G)

On new developments provide adequate vegetation filters to maintain and/or enhance riparian-dependent resources (G)

Lands

Corridor rights-of-way will avoid summer homes and group facilities (G)

Continue existing recreation residence permits under specific subsection direction and the following conditions for specific areas

a) Implement the Big Springs Summer Home Agreement (S)

b) New recreation residence tracts (summer homes) will not be established. No new residences will be permitted on vacant lots that are no longer leased unless necessary to replace lots damaged by landslides at the Hoffman site or to implement the Big Springs court order (S)

Do not consider Buffalo, Moose Creek, and Big Springs summer home areas for land exchange (S)

Minerals/Geology

Locatable- Withdraw from mineral entry, or remove from mineral entry through the notation rule, subject to valid existing rights (G)

Mineral Material - No entry for mineral materials (S)

Biological Elements

Wildlife

Projects that allow selected wildlife species to be more visible to recreation users may be allowed when compatible with special use permit recreation sites (G)

Animal Damage Control - Animal damage control generally will not be done on these sites because of potential conflicts with recreation users and their pets, except for control of problem bears, beavers, porcupines, etc (G)

Plants

Projects or events that focus on the identification and/or uses of plants are allowed where compatible with special use permits and the activities do not degrade the vegetation at the facility (G)

Forest Use and Occupation

Access (S) - 4 2

Season	Type of Access	Cross-country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian Horse/Pack Stock Mtn Bike/Mechanized	Yes No 2/ No	Yes Yes Yes
Snow free Seasons	Motonzed, <50" wide Motorized, >50" wide OROMTRD 4/	No No N/A	Yes 3/ Yes 3/ not applicable
Snow Seasons	Winter Nonmotorized Snowmachine	Yes Yes 5/	Yes Yes 5/

Recreation

Developed - Natural vegetation should be favored around facilities However, mowing natural vegetation around facilities may be allowed (G)

Trails - Trails may be allowed for the convenience of people using these sites (G)

Short trails are allowed which provide access to facilities and opportunities for interpretation (G)

ROS - Roaded natural to urban (G)

VQO - Manage for a full range from partial retention to maximum modification Facilities are often evident. but harmonize and blend with the natural setting (G)

Production of Commodity Resources

Range

Unless grazing activities are needed to meet recreation objectives, or unless authorized by special use or grazing permit, grazing of recreation stock and other livestock will not be allowed in special use recreation sites (G)

Grazing activities may be allowed in and around facilities designed for livestock use (G)

Timber

Developed recreation sites are removed from the suitable timber base. These lands do not contribute to the ASQ (S)

All vegetation treatment options are available, but only as required to meet specific recreation objectives (G)

Stipulate removal of unsafe and/or dead trees in the special use permit. Native species may be planted to provide cover when naturally-occurring vegetation is inadequate (G)

4.3 DISPERSED CAMPING MANAGEMENT

Description

The purpose of this prescription is to maintain a quality dispersed recreation experience for the public and still protect other resource values that occur in the same area. This prescription applies to highly attractive and desirable, heavy summer use areas such as around lakes or reservoirs, along roads and streams, or at trailheads where there are multiple campsites accessed by conventional wheeled vehicles (> 50" wide) or boats. Included would be heavy use areas where dispersed camping occurs in potential conflict with other resources or where site damage is occurring or likely to occur.

While dispersed recreation is the main theme, protecting the resource values of the area is also critical. Therefore this prescription is intended to create a balance between the users and the resource they came to enjoy. This prescription is intended to be applied in those areas where special concerns or consideration must be given to dispersed recreation use in order to maintain the recreation opportunities.

This prescription includes areas not considered developed, but which are used by the public on a reoccurring basis. They include sites where developed status does not fit, but use by the public is more than occasional use during the recreation use period. These sites may have some limited developed facilities which may include one or two, but not the majority of the following: fire-rings, tables, toilet facilities, signs, and/or water. These sites are not fee areas and have very limited capital investment.

Management emphasis is directed at managing dispersed or undeveloped type camping opportunities, such that other resources are not unacceptably affected. Minor development is allowed to protect the site or prevent resource damage, but development should not put sites into a developed site management emphasis. Restrictions may be placed on camping locations to allow used areas to recover or to protect natural resources.

Goals

- 1 Provide facilities to a level only to meet resource protection needs
- 2 Provide a balance between recreation use and other resource needs so that the resources which provide attractions to the area are protected to a point they continue to be important recreational attractions
- 3 Maintain or improve the quality of the dispersed camping sites that now exist in the area
- 4 Avoid allowing heavy buildup of fuels in these areas to reduce risk of accidental fire ignition

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes and Patterns

Fire/Fuels

Avoid application of chemical retardant, foam, or additives in these areas. Exceptions may be warranted in situations where overriding safety situations exist, or following a review and recommendation by a resource advisor, when an escape would cause more long-term damage. (G)

Use minimum impact suppression methods. (G)

Physical Elements

Minerals/Geology

Adequate reclamation plans and bonds are required in mining plans of operation. These bonds include costs of removing facilities, equipment, and materials, recontouring disturbed areas to near pre-mining topography, isolating and neutralizing or removing toxic or potentially toxic materials, salvaging and replacing topsoil, and preparing seedbeds and revegetating to meet management prescription goals. (G)

Avoid locating permanent structures or facilities within these lands. Limit road construction to the minimum necessary for the approved activity. (G)

Avoid locating waste dumps, leaching pads, and other facilities within these lands or within the viewshed where other alternatives are available. If no other alternative exists, ensure that visual mitigation such as screening is in place to prevent degradation of visual quality on these lands. (G)

For leasable minerals, avoid surface occupancy for exploration and development activities where leases do not already exist. (G)

Mineral material extraction should be discouraged (subject to valid permitted rights, or permitted plans of operation as allowed by Law). (G)

Forest Use and Occupation

Access (S) - 4 3

Season	Type of Access	Cross-country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motorized, <50" wide	No 2/	Yes
	Motorized, >50" wide	No 2/	Yes
	OROMTRD 3/	N/A	N/A
Snow Seasons	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

Roads and Trails

No new roads, trails, or landings will be constructed within these lands until appropriate standards for construction, maintenance, and operations are in place (G)

Improve, seasonally close, close, relocate and stabilize, or obliterate roads and trails (or sections of them) that have been identified as posing a high risk of causing unnaturally high levels of sediment input into fish spawning areas. Action to be taken will be determined based upon travel management needs, terrain, the need for the road or trail, and resource priorities (G)

Roads and trails that have been identified as inhibiting riparian, wetland or aquatic ecosystem processes and/or functions (e.g., plant community development, sediment transport, and stream channel development) will be improved, relocated, or obliterated. The decision to improve, relocate, or obliterate will be based on the potential environmental impact, the ecological condition of the riparian, wetland and aquatic resources affected, and the need for the road or trail (G)

Culverts and stream crossings found to pose a risk to riparian, wetland or aquatic conditions will be improved to accommodate at least a 50-year flood, including associated bedload and debris (G)

New stream crossings will be constructed and maintained to prevent diversion of streamflow out of the channel and down the road in case of failure(s). In locations found to have high potential for failure, the roadway will be hardened to further lessen the chance of roadway failure or severe erosion should the crossing overtop (G)

Constructed temporary stream crossings, such as log and culvert installations, may be allowed. Temporary crossings will be constructed and used in such a way as to minimize sediment input and to provide for fish passage. They will be maintained during use and removed and rehabilitated as soon as they are no longer needed (G)

Construct, reconstruct, and maintain all road crossings of streams which currently or historically bear fish to provide for fish passage. Exceptions are allowed where it is necessary to restrict fish movements in order to protect native or desirable nonnative fish populations (G)

Conserve surfacing materials and riparian and other resources by properly maintaining roads and avoiding sidecasting during road maintenance activities (G)

Recreation and Outfitter/Guide

When dispersed recreation is found to result in soil displacement in excess of 15 percent of an activity area (e.g., aquatic influence zone, riparian areas, dispersed campsites, etc.), or alteration of natural stream channel morphology, address impacts through education, use limits, more intensive maintenance, facility modification, and/or closures (G)

Recreational grazing must meet range standards for utilization of riparian vegetation (S)

Permitted stock holding, watering, and handling facilities within riparian vegetation (does not include the entire aquatic influence zone) are only allowed if appropriate and mitigation measures are implemented to reduce negative impacts (S)

Road surfacing or hardening should be encouraged in areas of high use and evident resource damage. Both parking location and access roads should be considered (G)

Fire circles created by the public, should not exceed one per site. Where more than one circle is inventoried, action should be taken to reduce the number to one. Action could include education, signing, facility installation closure order, surfacing, etc. Restrictions to require use of fire pans or contained fires may be necessary and should be considered in the area management plan (G)

Boat launching along streams, river sections, lakes or reservoirs should be restricted to developed sites or if no sites exist, consideration should be made to develop a facility to meet the public needs (G)

For all groups in excess of 20 persons, the site should have toilet facilities. Where facilities do not exist, portable toilet units should be provided by groups of 20 or more persons (G)

When portable toilet units are used, they shall be placed away from water and must be packed out when use has ended (S)

Solid waste disposal will be accomplished using the Pack In-Pack Out program (G)

ROS - Primitive to urban (G)

VQO - Retention to modification (G)

Production of Commodity Resources

Range

Incorporate into AMPs, objectives for attainment of site-specific DFCs for riparian or wetland plant community seral stage development and stream channel condition (G)

Proposed livestock watering facilities, corrals, and holding pastures within these lands are allowed only if appropriate, and mitigation measures are implemented to reduce negative impacts (S)

Existing livestock watering facilities, corrals, and holding pastures within these areas are allowed at permit issuance only if mitigation measures are implemented to reduce negative impacts (G)

Salting sites should be placed 1/4 mile from dispersed sites (G)

Timber

These lands are not included in the suitable timber base. They are not part of the ASQ (S)

Where needed to attain management prescription goals, design silvicultural prescriptions and allow prescribed burning and stocking control, as well as the reestablishment and culturing of stands to attain desired vegetation characteristics (G)

5.1 (c) TIMBER MANAGEMENT

Description

The emphasis is on scheduled wood-fiber production and use, on livestock production, and on other compatible commodity outputs, and consideration for long-term forest health

Overall, you notice many signs of people. You see a fairly extensive roading system and timber harvest activity in some areas. The main road system is gravel-surfaced and well maintained, with gentle grades well suited for sedan travel. You may see timber harvest equipment on roadsides and meet logging traffic along the roadway. You will see other people driving for pleasure or hauling out a load of firewood. Driving a sedan you can travel about two-thirds of the main road system. About one-third of the main road system is closed for wildlife security or roadway protection.

You notice frequent low-standard branch roads with native and gravel surfaces. Most of these low-standard roads are closed annually or seasonally to vehicle access. Some branch roads remain open for public access, for commodity production and for Forest Service administration.

The forest is a mosaic of different sizes, ages and heights. Older, taller trees tend to dominate the landscape, but openings with smaller trees are obvious. Recently cut areas show tree stumps, slash and disturbed soil. Recently cut areas have a partial canopy of older trees. Older clearcut areas have seedlings, saplings, poles, and older trees up to 35 feet tall and have a less disturbed appearing forest floor. Dead trees from the mountain pine beetle infestation are seen in older stands and scattered throughout the rest of the forest.

Firewood is available in designated areas, by permit, from live and dead trees, designated aspen areas, and from slash and logs decked for that purpose.

If you watch wildlife, you will see a variety of species, particularly those which prefer young seral stages of forest vegetation to those which prefer later stages. Elk and deer numbers have generally increased somewhat in recent years. However, in areas of active timber harvest activity, some elk and other big-game species may have been displaced to areas with greater security. Because of the setting, outfitted hunting may not be as common as it is in less-developed areas.

During the summer and fall you encounter cattle or sheep and notice signs of intensive management practices, such as burning, spraying, seeding, fences, cattleguards, water developments and gates. You see some cattle within streamside riparian areas and on nearby slopes. Away from the streams, you see scattered groups of livestock. You may find traffic delays when livestock is being moved.

You find such nonmotorized activities as hiking, biking and horseback riding along roads closed to vehicle traffic. Some roads and areas are available for snowmobile, motorcycle, and 4-wheel-drive vehicle use.

Goals

- 1 Manage lands to promote the production of commodity and noncommodity resources
- 2 Establish fire protection objectives for the area and desired fuel conditions

3 Fire management strategies emphasize preservation and protection of timber and range values scheduled for current use

4 Effectively control insects and disease and sustain forest growth

5 Provide a wide array of dispersed recreation opportunities

Standards and Guidelines

Forestwide standards and guidelines apply Additional direction for this prescription is listed below

Ecological Processes and Patterns

Insects and Disease

Practices to prevent or control insects and disease through direct control or silvicultural practices may be considered (G)

Fire/Fuels

Wildfires will normally be suppressed using control strategies during the fire season Pre- and post-fire season strategies may include containment, confinement, or control (G)

Prescribed fire may be used to reduce fuel loading, obtain natural regeneration; improve livestock forage conditions, for wildlife habitat improvement, and for other purposes that meet the needs of this prescription (G)

Biological Elements

Wildlife

Maintain snag habitat at greater than 40 percent of the biological potential for woodpeckers (G)

Forest Use and Occupation

Access (S) - 5 1 (c)

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Nonmechanized	Yes	Yes
Snow free Seasons	Motorized, <50" wide	No	Yes
	Motorized, >50" wide	No	Yes
	OROMTRD 2/	N/A	<= 1.5 mi /sq mi
Snow Seasons	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

ROS- Recreation is managed to provide a combination of semi-primitive nonmotorized to roaded natural opportunities (G)

VQO - The VQO is generally Partial Retention to Modification. In visually sensitive foreground areas, the VQO is Retention (G)

Production of Commodity Resources

Range

Livestock grazing may be allowed on transitory forage produced following timber harvest where and when that use will not conflict with regeneration efforts or other concerns (G)

Timber

Lands are included in the suitable timber base. They contribute toward the **ASQ** (S)

Regeneration systems should rely on natural regeneration to the greatest extent possible (G)

Reforested sites may be protected from rodent and livestock damage to encourage the greatest possible survival and growth over time, consistent with other resource needs (G)

Harvest and treatment residues should be made available for firewood and other products in a manner compatible with site preparation, productivity, and restocking requirements. Designated aspen areas should be made available for firewood (G)

5.1.3 (a-b) TIMBER MANAGEMENT (NO CLEARCUTTING, URBAN INTERFACE FUELS MANAGEMENT)

The purpose of this prescription is to allow timber management with no clearcutting, and to allow **fuels** management within and adjacent to urban areas of the Forest.

Description

The emphasis is on scheduled wood-fiber production and use, on fuels management within and adjacent to urban areas of the Forest, on livestock production, and on other compatible commodity outputs, with consideration for long-term forest health.

Overall, one would notice the same conditions as in Management Prescription 5.1 (b) and (c).

Goal

Manage vegetation and fuels to minimize fire risk for urban facilities within the interface.

Standards and Guidelines

Forestwide standards and guidelines apply. The same standards and guidelines apply as 5.1 except

Forest Use and Occupation

Access (S) - 5 1 3 (a)

Season	Type of Access	Cross-country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian HorsePack Stock Mtn Bike/Mechanized	Yes Yes Yes	Yes Yes Yes
Snow free Seasons	Motonzed, <50" wide Motorized, >50" wide OROMTRD 2/	Yes No N/A	Yes Yes ≤ 3 0 mi /sq mi 2/
Snow Seasons	Winter Nonmotorized Snowmachine	Yes Yes	Yes Yes

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian HorsePack Stock Mtn Bike/Mechanized	Yes Yes Yes	Yes Yes Yes
Snow free Seasons	Motonzed. <50" wide Motorized, >50" wide OROMTRD 2/	No No N/A	Yes Yes ≤ 3 0 mi /sq mi 2/
Snow Seasons	Winter Nonmotorized Snowmachine	Yes Yes	Yes Yes

Production of Commodity Resources

Timber

No clearcutting is allowed in this prescription area (S)

5.1.4 (a-d) TIMBER MANAGEMENT (BIG GAME SECURITY EMPHASIS)

The purpose of this prescription is to provide commodity resource development with special emphasis on big game security

Description

The emphasis is on scheduled wood-fiber production and use, big game security, other compatible commodity outputs, and consideration for long-term forest health. It combines the forested security block emphasis of 5.4 with cross-country motorized use allowed in 5.1, but restricts that motorized use during the big game hunts.

This management prescription emphasizes management actions and resource conditions which provide increased security for big game species, and hunting opportunities with limited access. Habitats are managed for multiple land use benefits, but these are managed over time and space to provide security and cover for hunted big game species.

Spring, summer, and fall forage is abundant and well distributed throughout the area. Hiding and thermal cover is abundant and in large patches to provide security for big game throughout the spring, summer, and fall seasons. Big game movements and migrations are facilitated due to well distributed forage and cover.

Timber management emphasizes providing a variety of forested seral stages, with large blocks of forested vegetation providing hiding cover. Security areas are provided adjacent to areas where timber harvesting is occurring.

Motorized access is managed to provide big game security. You notice frequent low-standard branch roads with native and gravel surfaces. Most of these low-standard roads are closed annually or seasonally to vehicle access. Some branch roads remain open for public access, for commodity production and for Forest Service administration.

Hiking off-road conditions, forest stand conditions, ability to view wildlife, presence of cattle and sheep, and nonmotorized activities are the same as 5.1.

Goals

1. Protect the long-term productivity of the land and meet areawide standards that protect resource values such as fisheries, water quality, wildlife habitat (including big game security areas) and visual quality.
2. Manage for big game security in greater than 250 acre forested blocks.

Standards and Guidelines

Forestwide standards and guidelines apply. The same standards and guidelines apply as 5.1 except'

Forest Use and Occupation

Access (S) - 5 1 4 (a)

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian Horse/Pack Stock Mtn Bike/Mechanized	Yes Yes Yes	Yes Yes Yes
Snow free Seasons	Motorized, <50" wide Motorized, >50" wide OROMTRD 31 OROMTRD 31	Yes 2/ No N/A N/A	Yes Yes <= 15 mi/sq mi prior to and after the fall big game hunt <= 10 mi/sq mi during the fall big game hunt
Snow Seasons	Winter Nonmotorized Snowmachine	Yes Yes	Yes Yes
<p>1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps</p> <p>2/ Open to travel from June 15 to September 30</p> <p>3/ OROMTRD = Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information) Standard changes from 15 mi/sq mi to 10 mi/sq mi on October 1</p>			

Access (S) - 5 1 4 (b)

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian Horse/Pack Stock Mtn Bike/Mechanized	Yes Yes Yes	Yes Yes Yes
Snow free Seasons	Motorized, <50" wide Motorized, >50" wide OROMTRD	No No N/A	Yes Yes <= 15 mi/sq mi 2/
Snow Seasons	Winter Nonmotorized Snowmachine	Yes Yes	Yes Yes
<p>1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps</p> <p>2/ OROMTRD = Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information)</p>			

Access (S) - 5 1 4 (c)

Season	Type of Access	Cross-country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian Horse/Pack Stock Mtn Bike/Mechanized	Yes Yes Yes	Yes Yes Yes
Snow free Seasons	Motorized, <50" wide Motorized, >50" wide OROMTRD 3/ OROMTRD 3/	Yes 2/ No N/A N/A	Yes Yes ≤ 15 m/sq mi prior to and after the fall big game hunt ≤ 10 m/sq mi during the fall big game hunt
Snow Seasons	Winter Nonmotorized Snowmachine	Yes Yes 4/	Yes Yes
<p>1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps</p> <p>2/ Open to travel from June 15 to September 30</p> <p>3/ OROMTRD= Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more Information)</p> <p>4/ Cross-country snowmachine use is allowed from January 1 to April 30</p>			

Access (S) - 5 1 4(d)

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian Horse/Pack Stock Mtn Bike/Mechanized	Yes Yes Yes	Yes Yes Yes
Snow free Seasons	Motorized, <50" wide Motorized, >50" wide OROMTRD	No No N/A	Yes Yes ≤ 15 m/sq mi 2/
Snow Seasons	Winter Nonmotorized Snowmachine	Yes No	Yes Yes 3/
<p>1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps</p> <p>2/ OROMTRD= Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more Information)</p> <p>3/ Designated mutes only (Buckskin-Morgan mute open season long, and Road #218 from Forest Boundary at ski area to the Buckskin-Morgan mute is open only during the off-season of Kelly Canyon Ski Area) Snowmachine use is allowed to groom cross-country ski trails</p>			

Production of Commodity Resources

Timber

Manage for big game cover in forested blocks over 250 acres in **size** (a forested block is defined as adjacent stands of sapling, pole, mature and old growth trees) **(S)**

For the forested component within the prescription area, no more than 20 percent of the acres will be in a created opening at any point in time (a created opening is defined as a) clearcuts (nonstocked and seedling stages), b) seed cuts of a shelterwood (nonstocked and seedling stages), or c) group selection (nonstocked and seedling stages) (S)

Naturally occurring forested blocks **less** than 250 acres in size, may have 20 acre harvest units, with no more than 20 percent of the block in the created opening category at one time (G)

For scheduling harvest activity areas, big game security areas will be provided Security should provide the following conditions

- 1 Security areas will be greater than 250 acres in size, or depending on the size of the timber sale area boundary, as large as necessary to meet big game security needs (G)
- 2 Within the security area, OROMTRD must be < the density established for this management prescription (S)
- 3 No timber harvesting activity or similar type of disturbance activity (i.e. involving heavy equipment, noise, concentrated human activity) can occur within the security area during the time it is designated as a security area while the adjacent timber harvesting activity is occurring (S)

5.2.1 VISUAL QUALITY IMPROVEMENT

Description

This prescription emphasizes improving or maintaining visual opportunities for visitors along major travel corridors through heavily timbered areas, while allowing livestock production, timber harvest, and other compatible commodity outputs. The purpose of this prescription is to maintain or create openings in timber stands to provide scenic vistas.

Overall you may notice signs of people camping by the roadside or as part of a commercial timber harvest.

As you drive, you see occasional timber harvest activity in some areas. The main road system is paved or gravel-surfaced and well maintained, with gentle grades suited for sedan travel. Clearcuts and harvest areas have been designed and located to provide vistas of the surrounding area.

There will be occasional places to pull off the road and have a picnic, read an interpretive sign or photograph a pleasing landscape.

The road side area is dominated by a mix of older stands of trees, young stands, and created openings to provide scenic vistas. A few areas show tree stumps, hand-piled slash, and disturbed soil. Occasionally, older cut areas show tree seedlings, saplings and poles up to 35 feet tall and have a less-disturbed appearing forest floor. Scattered dead trees are seen throughout the forest, but generally it appears healthy and vigorous.

If you watch for wildlife, you may occasionally see an elk, deer or moose in a natural opening or alongside the road, but generally they are hidden from view by the trees. During the summer and fall, you may encounter cattle or sheep grazing in openings. Signs of intensive management practices, such as burning, spraying, seeding, fences, water developments and gates are normally visually compatible.

Nonmotorized activities, such as hiking, biking or horseback riding may originate from trail or road points along the main road. Some roads and nearby areas are available for year-around snowmobile, motorcycle, and 4 wheel-drive vehicle use.

Goals

1. Manage these major travel corridors to improve or maintain their visual quality.
2. Manage these lands in an environmentally sensitive manner to promote the production of commodity and noncommodity resources at varying levels through a variety of silvicultural prescriptions.
3. Establish fire protection objectives for the area and desired fuel conditions.
4. Fire management strategies emphasize preservation and protection of timber and range values scheduled for current use.
5. Effectively control the insects and disease and sustain forest growth.
6. Provide a wide array of dispersed recreation facilities.

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes and Patterns

Insects and Disease

Practices to prevent or control insects and disease through direct control or silvicultural practices may be considered (G)

Fire/Fuels

Wildfires will normally be suppressed using control strategies during the fire season. Pre- and post-fire season strategies may include containment, confinement, or control (G)

Prescribed fire may be used to reduce fuel loading, obtain natural regeneration, improve livestock forage conditions, improve wildlife habitat, and for other purposes that meet the needs of this prescription (G)

Biological Elements

Wildlife

Maintain snag habitat at 40 percent or greater of the biological potential for woodpeckers (G)

Forest Use and Occupation

Access (S) - 5 2 1

Season	Type of Access	Cross-country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motorized, <50" wide	Yes	Yes
	Motorized, >50" wide	Yes	Yes
	OROMTRD 2/	N/A	N/A
Snow Seasons	Winter Nonmotorized Snowmachine	Yes	Yes
		Yes	Yes

Roads

Management of the area does not require an extensive road system, and will consist of short spurs from the main travel routes (G)

Recreation

Trails - Motorized trails should be developed using primarily local roads and trails not being actively used for commodity recovery (G)

ROS - Recreation is managed to provide a combination of semi-primitive nonmotorized to roaded natural opportunities (G)

VQO - The Visual Quality Objective (VQO) is Retention to Maximum Modification (G)

Production of Commodity Resources

Range

Livestock grazing may be allowed on transitory forage produced following timber harvest where and when that use will not conflict with regeneration efforts or other concerns (G)

Timber

Lands are included in the suitable timber base They contribute toward the ASQ (S)

Any silvicultural system may be used, depending on the visual quality that is being emphasized (G)

Regeneration systems should rely on natural regeneration to the greatest extent possible (G)

Reforested sites may be protected from rodent and livestock damage to encourage the greatest possible growth over time, consistent with other resource needs (G)

Maximum created opening size could be 40 acres, but will generally be 1 to five acres in size to create scenic vistas (G)

Harvest and treatment residues should be made available for firewood and other products in a manner compatible with the visual quality objective. Designated aspen areas should be made available for firewood to ensure the color provided by these stands is maintained over time. (G)

5.2.2 VISUAL QUALITY MAINTENANCE

Description

This prescription emphasizes maintaining the existing visual quality within major travel corridors with high quality natural vistas, while allowing livestock production, limited timber harvest, and other compatible commodity outputs.

Overall you may notice signs of people camping by the roadside. Signs of commercial timber harvesting will generally not be evident.

The natural vistas include a wide variety of vegetation and landscape forms (mountain peaks, valleys, meadows, streams, etc.) easily observed from openings along the road. Occasionally, older cut areas show tree seedlings, saplings and poles up to 35 feet tall and have a less-disturbed appearing forest floor. Scattered dead trees are seen throughout the forest, but generally it appears healthy and vigorous.

If you watch for wildlife, you may occasionally see an elk, deer or moose in a natural opening or alongside the road, but generally they are hidden from view by the trees. During the summer and fall, you may encounter cattle or sheep grazing in openings. Signs of intensive management practices, such as burning, spraying, seeding, fences, water developments and gates are normally visually compatible.

Nonmotorized activities, such as hiking, biking or horseback riding may originate from trail or road points along the main road. Some roads and nearby areas are available for year-around snowmobile, motorcycle, and 4 wheel-drive vehicle use.

Other signs of activity are the same as 5.2.1.

Goals

1. Manage these travel corridors to protect their visual quality.
2. Silvicultural practices are designed to emphasize or maintain visual quality of the area.

Standards and Guidelines

Forestwide standards and guidelines apply. The standards and guidelines are the same as 5.2.1 except.

Biological Elements

Wildlife

No assigned snag habitat biological potential for woodpeckers.

Forest Use and Occupation

Access (S) - 5 2 2

Season	Type of Access	Cross-County Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motonzed, <50" wide	Yes 2/	Yes
	Motorized, >50" wide	Yes 2/	Yes
	OROMTRD 3/	N/A	N/A
Snow Seasons	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes
1/ individual roads and trails are designated open or closed in the Forest Plan Travel Maps			
2/ Allowed unless visual features are degraded by disturbances to vegetation or soils Where this prescription is used in the Centennial sub-section, cross-country motorized travel is prohibited in the snow free seasons			
3/ OROMTRD = Open road and open motorized trail route density does not apply to this prescription area			

Recreation

VQO - The Visual Quality Objective (VQO) is Retention to Partial Retention (G)

Production of Commodity Resources

Range

Livestock grazing may be allowed on transitory forage produced following timber harvest where and when that use will not conflict with regeneration efforts or other concerns (G)

Timber

Lands are included in the suitable timber base They contribute to the ASQ (S)

Regeneration systems should rely on natural regeneration to the greatest extent possible (G)

Reforested sites may be protected from rodent and livestock damage to encourage the greatest possible survival and growth over time, consistent with other resource needs (G)

Maximum created opening size shall generally be less than five acres (G)

Harvest and treatment residues should be made available for firewood and other products in a manner compatible with the visual quality objective Designated aspen areas should be made available for firewood to ensure the color provided by these stands is maintained over time (G)

5.3.5 GRIZZLY BEAR HABITAT (NIC FOR ASQ, NO CROSS-COUNTRY, PHASE OUT SHEEP)

Description

This management prescription emphasizes a high degree of security and resource conditions which contribute toward the conservation and recovery of the grizzly bear, and benefits to other wildlife Habi-

tats will be managed to meet the goals of grizzly bear recovery Other uses may be allowed when compatible with these goals

Grizzly habitat maintenance and improvement, and grizzly-human conflict minimization will receive the highest management priority Management decisions will favor the needs of the grizzly bear when grizzly habitat and other land use values compete Land uses which can affect grizzlies and/or their habitat will be made compatible with grizzly needs or such uses will be disallowed or eliminated Grizzly-human conflicts will be resolved in favor of grizzlies unless the bear involved is determined to be a nuisance bear (IGBC, 1986)

The abundance and distribution of natural food sources (such as huckleberry habitats, whitebark pine, etc) are maintained or improved by natural events such as fire and insect disturbances, or by designed vegetation management activities A variety of forested seral stages are present, and are the result of natural disturbances such as fire and insects or by designed vegetation management activities Habitat conditions which contribute to the movement of bears to adjacent bear management units are maintained Human activities are managed or restricted so that human conflicts with grizzlies are unlikely, this includes restricting human activities and generally reduced public access

Goals

- 1 Make nonfederal lands within this area a high priority for acquisition
- 2 Maintain grizzly bear security through a low density of open, motorized roads and trails.
- 3 Manage recreation to minimize grizzly conflicts with humans
- 4 Wildlife habitat improvement projects will maintain or improve grizzly bear habitat Vegetation manipulation to improve grizzly bear habitat includes treatment to maintain long term ecosystem vegetation patterns

Objective

By 1998, develop a fire management plan for this prescription area

Standards and Guidelines

Forestwide standards and guidelines apply Additional direction for this prescription is listed below

The Interagency Grizzly Bear Guidelines for Management Situation 1 habitat apply to this management prescription, except that livestock grazing in existing Management Situation 2 habitat will continue to be managed under Management Situation 2 guidelines

Ecological Processes and Patterns

Effects of proposals will be analyzed at multiple scales Analysis areas will follow ecological boundaries, watersheds, and topographic breaks Cumulative effects will be analyzed on no less than a BMU subunit scale (G)

Insects and Disease

Insects and disease are allowed to play their natural role in ecosystem development, unless this conflicts with the maintenance of grizzly bear habitat (G)

Fire/Fuels

Prescribed fire is allowed to maintain or improve grizzly habitat (G)

Physical Elements

Minerals/Geology

All operating plans and special use permits will specify measures to meet grizzly bear management goals and objectives for grizzly bear habitat. The following will be required (S)

- 1 Temporary cessation or modification of permitted activities will occur to resolve grizzly bear conflicts
- 2 Human food, refuse, and prepared livestock/pet foods associated with the permitted activity will be made unavailable to grizzlies through proper storage, handling, and disposal. Proper storage includes a) inside a bearproof container, b) suspended horizontally from adjacent posts or trees, c) stored in a hard-sided vehicle or trailer, or d) other methods approved by the District Ranger. The exception is when the food is being eaten or prepared for eating, or when food and similar organic matter is being transported. Unburned human foods, garbage or other refuse will be carried off the forest as often as practical
- 3 Any observation of grizzly bear or grizzly bear sign will be reported to the District Ranger as soon as practical
- 4 Access roads that are not open on the travel plan will be low standard roads and gated to allow access only to the operators. Nonwinter motorized use behind locked gates is authorized only for permitted activities

Biological Elements

Wildlife

Maintain snag habitat at greater than 60 percent of the biological potential for woodpeckers (G)

Environmental analysis areas (for NEPA purposes) will be at least 7,000 acres in size (G)

Long-term activities, for purposes of this prescription, are those activities which may last more than one field season, or may be expected to recur in different areas year after year. They may occur over a larger geographic area than short-term activities. These include timber sales, firewood harvesting, prescribed burns, road reclaiming, tree thinning, and trail construction

Long-term activities must be concentrated in activity areas on an annual basis between April 1 and September 15. Each activity area shall not exceed 7,000 acres in size (S)

Long-term activities should be concentrated in space and be of as short a duration as is practical (G)

Long-term activity areas should generally follow ecological boundaries, watersheds and topographic breaks. Activity areas should be distributed such that no less than 7,000 acres lie between them (G)

Short-term activities, for purposes of this prescription, are those activities that are typically accomplished within one field season and will not necessarily recur on an annual basis. These activities generally occur over a more limited spatial extent than long-term activities. These include tree planting, trail maintenance, spraying weeds, and range maintenance activities

Inventory, monitoring, and short-term activities should be concentrated in time and space (G)

Short-term management activities should be planned to be concentrated in one consecutive 30-day period. Exceptions should be implemented over as short a duration as is practical (G)

Management activities may take place during winter (December 15 to April 1) and shall be addressed on a case-by-case basis. The primary concern during the winter will be the changes the activity may have on habitat quality and quantity (G)

Administrative Responsibilities- Emergency cessation or modification of activities will occur when those activities are in conflict with grizzly bear management objectives. Scheduled activities will not occur during the season of bear use in areas where foraging opportunities are limited in their availability, in area, or time (S)

Forest Use and Occupation

Access (S) - 5 3 5

Season	Type of Access	Cross-Country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian Horse/Pack Stack Mtn Bike/Mechanized	Yes Yes Yes	Yes Yes Yes
Snow free Seasons	Motorized, <50" wide Motorized, >50" wide TMARD 2/ OROMTRD 2/	No No N/A N/A	Yes Yes
Snow Seasons 3/	Winter Nonmotorized Snowmachine	Yes Yes	Yes Yes

Roads

New or relocated roads should meet the following guidelines (G)

- 1 Avoid high quality (such as whitebark pine habitat) grizzly bear habitat
- 2 Minimize sight lines on temporary roads and skid trails
- 3 Revegetate temporary roads following use
- 4 Follow minimum required construction standards

Motorized administrative use on restricted roads and restricted motorized trails by personnel of resource management agencies is acceptable at low intensity levels as defined in existing cumulative effects analysis models. This includes contractors and permittees in addition to agency employees. (See Roads and Trails in the Glossary for definitions) (S)

Recreation

Special Uses - Special Use Activities which adversely affect grizzly bear populations or their habitat will not be permitted (S)

Trails - New or relocated trails will meet the following

- 1 Avoid high quality grizzly bear habitat (G)
- 2 Locate so as to minimize the risk of human/bear interactions (for example, do not place trails along roaring streams where bears cannot hear humans approaching) (G)

ROS - Primitive to semi-primitive motorized (G)

VQO - Retention to partial retention (G)

Heritage Resource

No new interpretation/enhancement of cultural sites (S)

Production of Commodity Resources

Range

Forestwide standards and guidelines apply for the management of domestic sheep grazing in Management Situation 2 grizzly bear habitat (G)

Cattle grazing is allowed Allotment Management Plans will specify measures to meet agency grizzly goals and objectives (S)

Permittee's full compliance in meeting grizzly bear management goals and objectives for grizzly bear habitat will be a condition of the permit In addition, the following will be required (S)

- 1 Temporary cessation or modification of permitted livestock grazing activities will occur to resolve grizzly bear conflicts with humans or livestock
- 2 Livestock carcasses will be disposed of or rendered unattractive to bear within 24 hours after they are discovered Disposal may include removing the carcass from the area, burning, using an acceptable chemical repellent, or other methods approved by the District Ranger Disposal shall be in accordance with other governing agencies such as the Wyoming Game and Fish Department in order to determine cause of death for reimbursement purposes
- 3 Human food, refuse, and prepared livestock/pet foods associated with the livestock operation will be made unavailable to grizzlies through proper storage, handling, and disposal Proper storage includes a) inside a bearproof container, b) suspended horizontally from adjacent posts or trees, c) stored in a hard-sided vehicle or trailer, or d) other methods approved by the District Ranger The exception is when the food is being eaten or prepared for eating, or when food and similar organic matter is being transported Unburned human foods, garbage or other refuse will be carried off the Forest as often as practical
- 4 High quality food production areas for grizzlies (wet alpine and subalpine meadows, stream bottoms, aspen groves, and other riparian areas) will receive special grazing direction such as light, once-over grazing, special utilization standards, or complete closure These sites and their corresponding direction will be identified in the Annual Operating Plan
- 5 Livestock depredation believed to be associated with bears will be reported within 24 hours after they are discovered to the District Ranger and the proper State agencies

6 Any observation of grizzly bear or grizzly bear sign will be reported to the District Ranger as soon as practical

7 Any action taken by the permittee or their agents which violates the Endangered Species Act will be grounds for cancellation of their grazing permit

Timber

These lands are included in the suitable timber base They contribute toward the ASQ, but are a NIC (S)

There will be no vegetation manipulation in riparian areas in the spring or in whitebark pine areas in the fall (except in years of poor cone crops) (G)

Scarification is limited to 15 percent or less of an area where soil disturbance impedes the reestablishment of grizzly bear foods (for example where berry producing shrubs are present such as blue huckleberry, mountain ash, chokecherry, buffaloberry, grouse whortleberry, etc , where wet site species are present such as horsetail, cow parsnip, camas, wet-site carex spp , etc) (S)

Scarification of elk sedge (*Carex geyeri*) and Ross's sedge (*Carex rossii*) is allowed at levels above 15 percent since these species readily reestablish following scarification (G)

Cover - Maintain greater than 70 percent of the forested acres in each analysis area in vegetation that provides security cover for the grizzly bear Where security cover is below 70 percent, no treatments are allowed which would further reduce the number of acres meeting security cover (S)

Security cover is defined as forested acres (all tree species) which have not been managed or burned in the last 20 years, and managed or burned forested areas within the last 20 years which meet the following criteria. (G)

Overstory Basal Area of trees 5 0"+	Understory Trees/ac 0-4 9" and 7'+	Acreage Multiplier
130+ sq ft per acre	250+	1 0 (Good)
80-129 sq ft per acre	150-249	0 7 (Medium)
30-79 sq ft per acre	50-149	0 4 (Poor)

The overstory and understory categories for security cover are to be considered separately A stand having either 130 sq ft of basal area per acre or 250 understory trees per acre over seven ft tall would meet the requirements for full security cover Both live and dead tree basal areas are used for overstory calculations (S)

Maintain greater than 20 percent thermal cover in each analysis area Where thermal cover is below 20 percent, no treatments are allowed which would further reduce the number of acres meeting thermal cover criteria Thermal cover is defined as forest stands with over 80 sa ft of basal area per acre (live and dead trees), greater than 45 percent canopy closure, and trees over 40 feet tall (S)

For created openings maximum distance to security cover should be 300 feet (G)

Created openings will be located at least 1,500 feet from open roads. A clearcut and seedtree cut result in created openings. Final removal of a shelterwood or an overstory removal result in a created opening if the stand is less than seven feet tall or less than stocking standards. (S)

No new created openings are allowed adjacent to existing openings (including meadows and created openings). Maintenance of natural openings is allowed. (S)

Leave strips between openings will be the larger of 600 feet or 3 times the sight distance (the distance needed to hide 90 percent of a grizzly bear). (S)

Dead & Down Component - If available, leave at least two pieces per acre over 12 inches in diameter. Woody material should be in various stages of decay if possible. If a treatment area is below forestwide standards, use the treatment to increase down woody material to recommended amounts. (Note: This requirement accrues toward the requirements in the forestwide standards and guidelines. It is not cumulative to them.) (G)

Security Areas - Maintain a minimum 7,000 acre security area adjacent to each timber sale area. (S)

Security areas must provide the following conditions. (S)

1. Within the security area, TMARD and OROMTRD must be less than or equal to the density established for the BMU (see forestwide standards and guidelines, Access)
2. Within the security area, security cover must be greater than or equal to the amount established for this management prescription
3. No timber harvesting activity or similar type of disturbance activity can occur within the security area during the time it is designated as a security area

5.4 (a,b,c) ELK SUMMER RANGE

Description

This management prescription emphasizes management actions and resource conditions which provide increased security for elk, and hunting opportunities with limited access. Habitats are managed for multiple land use benefits, but these uses are managed over time and space to provide security and cover for elk. These habitat conditions are also favorable for many other wildlife species.

Spring, summer, and fall forage is abundant and well distributed throughout the area. Hiding and thermal cover is abundant and in large patches to provide security for elk throughout the spring, summer, and fall seasons. Elk movements and migrations are facilitated due to well distributed forage and cover.

Timber management emphasizes providing a variety of forested age classes, with large blocks of forested vegetation providing hiding cover. Security areas are provided adjacent to areas where timber harvesting is occurring.

Motorized access is managed to provide security for elk. Motorized summer **use** will occur only on designated routes.

Livestock grazing exists in some areas, forage utilization, water developments, grazing systems, and other livestock management actions are managed to be compatible with elk habitat needs.

Dispersed recreation, mining activity, and other multiple uses are managed in time and space to help provide security habitat for elk

Goals

- 1 Provide elk security areas while allowing for other resource activities
- 2 Utilize silvicultural techniques which prevent or lessen insect and disease epidemics to maintain cover values for elk

Standards and Guidelines

Forestwide standards and guidelines apply Additional direction for this prescription is listed below

Ecological Processes and Patterns

Fire/Fuels

Use prescribed fire to improve forage production, assist in forest regeneration and enhance ecological conditions (G)

Biological Elements

Wildlife

Maintain snag habitat at greater than 60 percent of the biological potential for woodpeckers (G)

Forest Use and Occupation

Access (S) - 5 4 (a)

Season	Type of Access	Cross-country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/mechanized	No	Yes
Snow free Seasons	Motorized, <50" wide	No	Yes
	Motorized, >50" wide	No	Yes
	OROMTRD 2/	N/A	<= 1 0 milesq mi
Snow Seasons	Winter Nonmotorized Snowmachine	Yes	Yes
		Yes	Yes

Season	Type of Access	Cross-County Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Nechanized	No	Yes
Snow free Seasons	Motorized, <50" wide	No	Yes
	Motorized, >50" wide	No	Yes
	OROMTRD 2/	N/A	0.5 m/sq mi
Snow Seasons	Winter Nonmotorized	Yes	Yes
	Snowmachine	No	No

1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps

2/ OROMTRD = Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information)

Access (S) - 5.4 (c)

Season	Type of Access	Cross-country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Nechanized	Yes	Yes
Snow free Seasons	Motorized, <50" wide	No	Yes
	Motorized, >50" wide	No	Yes
	OROMTRD 2/	N/A	<= 1.25 m/sq mi
Snow Seasons	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps

ZOROMTRD = Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information)

Recreation

ROS - Primitive to urban (G)

VQO - Retention to partial retention (G)

Production of Commodity Resources

Timber

These lands are part of the suitable timber base. They contribute toward the ASQ (S)

Manage for elk cover in forested blocks greater than 250 acres (a forested block is defined as adjacent stands of saplings, pole, mature and old growth trees) (S)

For the forested component within the prescription area, no more than 20 percent of the acres will be in a created opening at any point in time (a created opening is defined as a) clearcuts (nonstocked and seedling stages), b) seed cuts of a shelterwood (nonstocked and seedling stages), or c) group selection (nonstocked and seedling stages) (S)

Naturally occurring forested blocks less than 250 acres in size, may have 20 acre harvest units, with no more than 20 percent of the block in the created opening category at one time (G)

Adjacent to harvest activity areas, big game security areas will be provided Security areas must provide the following conditions (S)

- 1 Security areas will be greater than 250 acres in size, or as large as the timber sale area boundary, whichever is greater
- 2 Within the security area, OROMTRD must be < the density established for this management prescription
- 3 No timber harvesting activity or similar type of disturbance activity can occur within the security area during the time it is designated as a security area

6.1 (b) RANGE MANAGEMENT

Description

The purpose of this management prescription is to achieve and maintain healthy nonforested rangelands for livestock forage production and good watershed condition

Forage is provided on a sustained-yield basis that protects rangeland values, including domestic livestock grazing and wildlife habitat Cattle, sheep, horses, and perhaps other domestic livestock can often be seen Important seasonal ranges for big game animals exist in many of these areas Not all areas are grazed by domestic livestock, some areas may be reserved for wildlife and watershed restoration work Range improvements such as fencing, corrals, and water developments are present Roads, trails, and stock driveways exist, as needed, to provide access for livestock management Vegetation manipulation (with the use of fire, mechanical means, or herbicides) may occur to achieve or maintain healthy rangeland conditions A variety of rangeland vegetation successional stages can be observed Herders, range riders, camps, and transport vehicles may be seen at various times and places Dispersed recreation activity generally occurs throughout these areas

Goal

Provide forage on a sustained-yield basis that protects rangeland values, including domestic livestock grazing, and wildlife habitat

Standards and Guidelines

Forestwide standards and guidelines apply Additional direction for this prescription is listed as follows

Ecological Processes and Patterns

Fire/Fuels

Prescribed fire is allowed to achieve desired forage or ecological condition (G)

Forest Use and Occupation

Access (S) - 6 1 (b)

Season	Type of Access	Cross-County Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motorized, <50" wide	No	Yes
	Motorized, >50" wide	No	Yes
	OROMTRD 2/	N/A	<= 2 m/sq mi 2/
Snow Seasons	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

1/ Individual roads and trails are designated open or closed in the Forest Plan Travel Maps

2/ OROMTRD = Open road and open motorized trail route density includes all open roads and open motorized trails (See Roads in Glossary for more information)

In 6 1 (b) Prescription areas <= 4 0 sq mi in size. OROMTRD does not apply

Recreation

Dispersed- Limited recreation facilities, which are not detrimental to intensive range management, and other resources may be provided in this prescription (G)

Opportunities may exist for some interpretative signs for public education (G)

ROS - Semi-primitive nonmotorized to roaded natural (G)

VQO - Retention to modification (G)

Outfitter/Guide

Outfitter/Guide stock are allowed, AUMs are specified in outfitter/guide permits and Rangeland Project Decisions (RPDs) (G)

Production of Commodity Resources

Timber

These areas are removed from the suitable timber base They are not part of the ASQ (S)

Timber may be harvested to improve wildlife habitat and to provide miscellaneous products (such as posts & poles, firewood, etc) as long as the harvest does not trigger the need for reforestation (G)

8.1 CONCENTRATED DEVELOPMENT AREAS

Description

This prescription applies to all existing concentrated developments including active mines, borrow pits, gravel pits, electronic sites, utility corridors (electric transmission lines of 50 Kv or greater, and major natural gas conduits), and administrative sites (including guard stations and rental cabins). Concentrated development is normally small, but may be extensive on occasion. A wide variety of vegetation and landtypes may be present. This category is often surrounded by other management areas.

These are generally highly developed areas with much evidence of people, structures, roads, and often disturbed ground. High noise levels sometimes emanate from these sites due to the use of heavy equipment or blasting at various times. Other sites are collections of buildings and storage structures from which the administration of the National Forest is carried out. Some closed gates and restrictions on travel may be present in order to protect equipment and developments.

Goal

Allow concentrated development in small areas for mineral development and infrastructure needs.

Objectives

1. Restrict development of concentrated development sites to the smallest area possible.
2. Obtain materials from commercial sources or borrow sites identified in the Forest "Compendium for Material Sources".

Standards and Guidelines

Forestwide standards and guidelines apply. Additional direction for this prescription is listed below.

Ecological Processes and Patterns

Insects and Disease

Attempt to control epidemics at small outbreak sizes. Salvage of dead and dying trees of commercial value is possible. (G)

Fire/Fuels

All wildfire will be aggressively suppressed. (S)

Physical Elements

Lands

Energy/utility corridors will be no more than 600 feet in width. (S)

Forest Use and Occupation

Access (S) - 8 1

Season	Type of Access	Cross-country Travel	Road and Trail Travel 1/
Snow free Seasons	Pedestrian	Yes	Yes
	Horse/Pack Stock	Yes	Yes
	Mtn Bike/Mechanized	Yes	Yes
Snow free Seasons	Motorized. <50" wide	No 2/	Yes
	Motorized. >50" wide	No 2/	Yes
	OROMTRD 31	N/A	N/A
Snow Season	Winter Nonmotorized	Yes	Yes
	Snowmachine	Yes	Yes

Recreation

Dispersed - Do not encourage use of areas in proximity to these sites (G)

Trails - Protect existing trails and wherever possible avoid development of trails in or near concentrated development sites Where feasible move existing trails away from these areas (G)

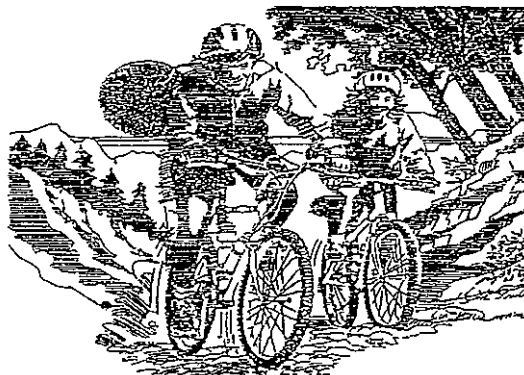
ROS - Semi-primitive nonmotorized to urban (G)

VQO - The Visual Quality Objective (VQO) is generally Partial Retention to Maximum Modification (G)

Production of Commodity Resources

Timber

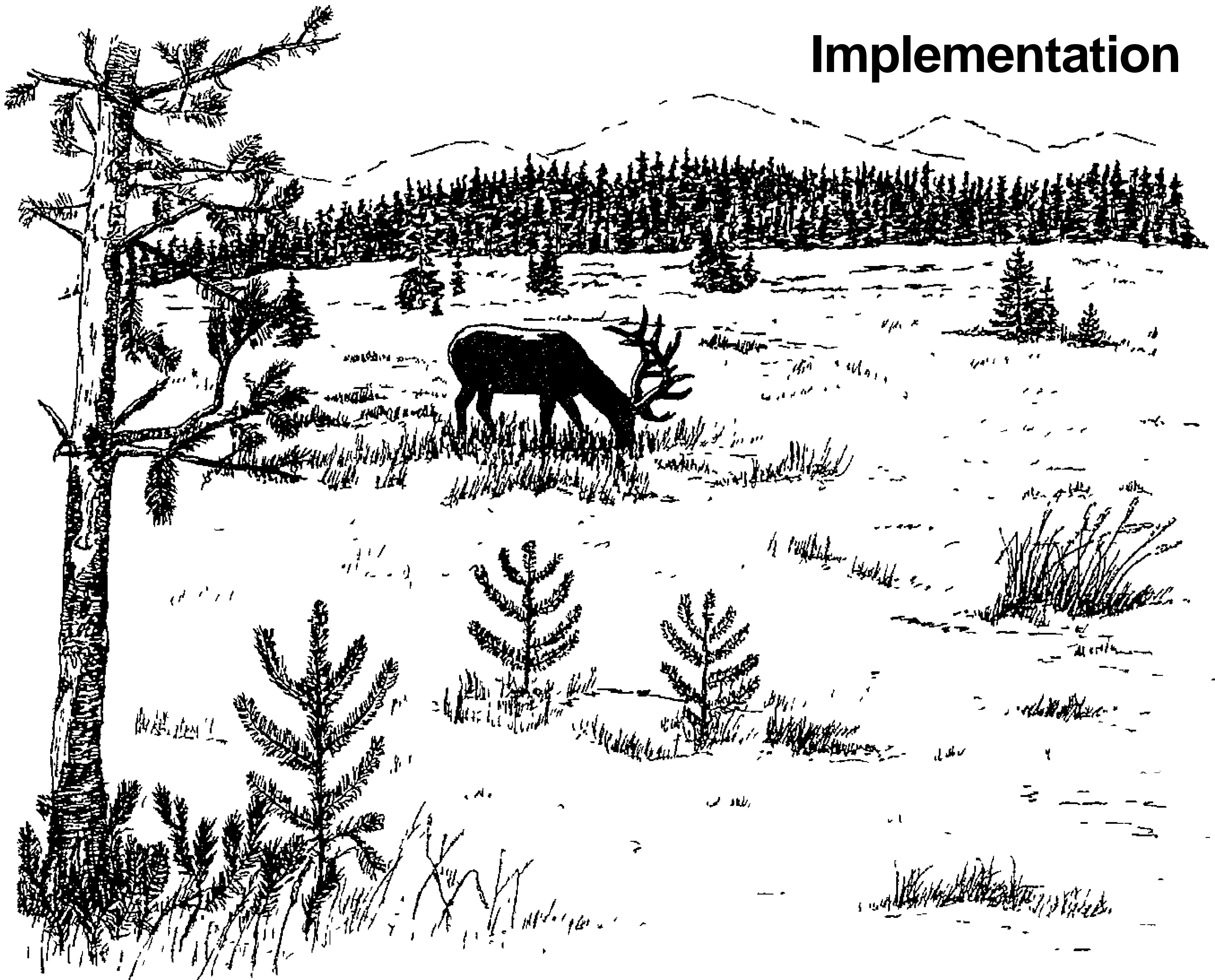
These lands are removed from the suitable timber base They do not contribute to the ASQ (S)



Chapter

IV

Implementation



CHAPTER IV FOREST TIMBER SCHEDULE

The following tables display the timber sale program by watershed over the first ten years of this revised forest plan. Volumes are in MMBF. Miles of road construction is based on an estimate of 0.23 miles per MMBF. Miles of road reconstruction is based on an estimate of 0.15 miles per MMBF.

The figures in these tables represent our best estimate as to how the ASQ will be achieved. These estimates will change as new information becomes available, and as site-specific analysis for individual projects reveals the need for adjustments. Some of these sales may not occur at all, other sales not identified herein may occur.

The lands described in the following table are in the noninterchangeable component on ASQ lands. Figures represent a proportion of the average annual ASQ.

LANDS	VOLUME (MMBF)
	2.0 MMBF
Roadless areas/steep slopes	0.0 MMBF
Roadless areas/no steep slopes	1.1 MMBF
Steep slopes	0.1 MMBF
TOTAL NIC	3.2 MMBF

The roadless areas which may be entered for timber harvest over the next decade are:

- Garfield Mountain
- Mount Jefferson
- Pole Creek
- Caribou Creek
- Bear Creek
- Garns Mountain
- West Slope Tetons

Watershed 002 Indian Creek						District Palisades (D-4)					
Estimated Harvest			Allowable Logging Method			Allowable Silvicultural System				Est Miles of Road	
Sale Name	Volume	Acres	Trac	Sky	Hel	CC	SW	CT	SEL	Const.	Recon
TOTAL	400	100								0.09	0.06

Watershed 003 Elk Creek						District Palisades (D-4)					
Estimated Harvest			Allowable Logging Method			Allowable Silvicultural System				Est Miles of Road	
Sale Name	Volume	Acres	Trac	Sky	Hel	CC	SW	CT	SEL	Const.	Recon
1997	234	60	Y	Y	Y	Y	Y	Y	Y	0.05	0.04
TOTAL	234	60								0.05	0.04

Watershed 004 Palisades Creek						District Palisades (D-4)					
		Estimated Harvest		Allowable Logging Method			Allowable Silviculture System			Est Miles of Road	
SaleName	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
Small Sales	117	30	Y	Y	Y	Y	Y	Y	Y	003	002
TOTAL	117	30								003	002

Watershed 005 Rainey Creek						District Palisades (D-4)					
No Sales Scheduled											

Watershed 006 Pine Creek						District Palisades (D-4)					
No Sales Scheduled											

Watershed 007/33 Heise/Kelly Canyon						District Palisades (D-4)					
		Estimated Harvest		Allowable Logging Method			Allowable Silviculture System			Est Miles of Road	
Sale Name	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
Small Sales	741	190	Y	Y	Y	Y	Y	Y	Y	017	011
TOTAL	741	190								017	011

Watershed 008 Henry's Fork Headwaters						District Island Park (D-2)					
		Estimated Harvest		Allowable Logging Method			Allowable Silviculture System			Est Miles of Road	
Sale Name	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
Small Sales	300	80	Y	Y	Y	N	Y	N	Y	000	000
TOTAL	2,300	520								200	003

Watershed 009A Island Park - Centennials						District Island Park (D-2)					
Estimated Harvest		Allowable Logging Method				Allowable Silviculture System				Est Miles of Road	
Sale Name	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
2003	3,000	600	Y	Y	Y	Y	Y	Y	Y	1 00	0 40
	2,672	685	Y	Y	Y	Y	Y	Y	Y	0 00	0 45
	669	172	Y	Y	Y	Y	Y	Y	Y	0 61	0 00
TOTAL	6,341	1,457								1 61	0 85

Watershed 009B Island Park - Bishop Mountain						District Island Park (D-2)					
Estimated Harvest		Allowable Logging Method				Allowable Silviculture System				Est Miles of Road	
Sale Name	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
1997	92	39	Y	Y	Y	Y	Y	Y	Y	0 02	0 01
1998	4,000	1,025	Y	Y	Y	Y	Y	Y	Y	0 92	0 60
2005	1,000	300	Y	Y	Y	Y	Y	Y	Y	5 00	0 15
	669	172	Y	Y	Y	Y	Y	Y	Y	0 15	0 10
TOTAL	5,761	1,536								6 09	0 86

Watershed 010 Buffalo River						District Island Park (D-2)					
Estimated Harvest		Allowable Logging Method				Allowable Silviculture System				Est Miles of Road	
Sale Name	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
1997	41	45	Y	Y	Y	Y	Y	Y	Y	0 00	0 01
2005	1,000	300	Y	Y	Y	Y	Y	Y	Y	0 00	0 15
TOTAL	1,041	345								0 00	0 16

Watershed 011 Middle Henry's Fork District Island Park (D-2) & Ashton (D-3)											
Sale Name	Estimated Harvest		Allowable Logging Method			Allowable Silviculture System				Est Miles of Road	
	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
1997	100	50	Y	Y	Y	N	N	N	Y	0 00	0.02
	25	8	Y	Y	Y	Y	N	N	N	0.00	0 00
1998	500	128	Y	Y	Y	N	Y	N	Y	0.00	0 08
TOTAL	625	186								0.00	0 10

Watershed 012 Warm River District Ashton (D-3)											
No Sales Scheduled											

Watershed 013 Robinson Creek District Ashton (D-3)											
SaleName	Estimated Harvest		Allowable Logging Method			Allowable Silviculture System				Est Miles of Road	
	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
										0 00	0 23
TOTAL	1,500	300								0 00	0 23

Watershed 014 Big Bend Ridge District Ashton (D-3)											
Sale Name	Estimated Harvest		Allowable Logging Method			Allowable Silviculture System				Est Miles of Road	
	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
SS 2002	2,000	400	Y	Y	Y	Y	Y	Y	Y	000	030
2001	3,000	600	Y	Y	Y	Y	Y	Y	Y	000	045
TOTAL	8,619	1,928								083	129

Watershed 015 Conant Creek						District Ashton (D-3)					
Sale Name	Estimated Harvest		Allowable Logging Method			Allowable Silviculture System				Est Miles of Road	
	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
Small Sales	5,070	1,300	Y	Y	Y	Y	Y	Y	Y	1.17	0.76
TOTAL	5,070	1,300								1.17	0.76

Watershed 016 Falls River						District Ashton (D-3)					
Sale Name	Estimated Harvest		Allowable Logging Method			Allowable Silviculture System				Est Miles of Road	
	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
2001	2,000	400	Y	Y	Y	Y	Y	Y	Y	0.00	0.30
2002	1,400	250	Y	Y	Y	Y	Y	Y	Y	0.00	0.21
2003	1,500	250	Y	Y	Y	Y	Y	Y	Y	0.00	0.23
Small Sales	3,405	894	Y	Y	Y	Y	Y	Y	Y	0.80	0.52
TOTAL	8,385	1,794								0.80	1.26

Watershed 017 Trail Creek						District Teton Basin (D-5)					
No Sales Scheduled											

Watershed 018 Darby Creek						District Teton Basin (D-5)					
No Sales Scheduled											

Watershed 019 Teton Creek						District Teton Basin (D-5)					
SaleName	Estimated Harvest		Allowable Logging Method			Allowable Silviculture System				Est Miles of Road	
	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
Small Sales	273	70	Y	Y	Y	Y	Y	Y	Y	0.06	0.04
TOTAL	273	70								0.06	0.04

Watershed 020 Leigh Creek						District Teton Basin (D-5)					
Sale Name	Estimated Harvest		Allowable Logging Method			Allowable Silviculture System				Est Miles of Road	
	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
Small Sales	858	220	Y	Y	Y	Y	Y	Y	Y	0.2	0.13
TOTAL	858	220								0.2	0.13

Watershed 021 Badger Creek						District Teton Basin (D-5)					
Sale Name	Estimated Harvest		Allowable Logging Method			Allowable Silviculture System				Est Miles of Road	
	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
SS	4,290	1,100	Y	Y	Y	Y	Y	Y	Y	0.94	0.64
TOTAL	4,290	1,100								0.94	0.64

Watershed 022 Mahoanv Creek						District Teton Basin ID-51					
Sale Name	Estimated Harvest		Allowable Logging Method			Allowable Silviculture System				Est Miles of Road	
	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
Small Sales	1,365	350	Y	Y	Y	Y	Y	Y	Y	0.32	0.20
TOTAL	1,365	350								0.32	0.20

Watershed 023/024 Canyon & Moody Creek						District Palisades (D-4) & Teton Basin (D-5)					
Sale Name	Estimated Harvest		Allowable Logging Method			Allowable Silviculture System				Est Miles of Road	
	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
Small Sales											
D-4	400	100	Y	Y	Y	Y	Y	Y	Y	0.09	0.06
D-4	400	100	Y	Y	Y	Y	Y	Y	Y	0.09	0.06
D-5	1,462	380	Y	Y	Y	Y	Y	Y	Y	0.33	0.22
TOTAL	2,262	580								0.51	0.34

Watershed 025 Camas Creek District Dubois (D-1) & Island Park (D-2)											
Sale Name	Estimated Harvest		Allowable Logging Method			Allowable Silviculture System				Est Miles of Road	
	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
Small Sales											
1997	580	115	Y	Y	Y	N	N	Y	N	0 00	0 09
	570	230	Y	Y	Y	N	N	Y	N	0 00	0 09
	570	225	Y	Y	Y	N	N	Y	N	0 00	0 09
	200	47	Y	Y	Y	N	N	Y	N	0 00	0 01
	3,860	2,200	Y	Y	Y	N	N	Y	N	0 00	0 58
2006	4,500	900	Y	Y	Y	Y	Y	Y	Y	0 00	0 68
SS	1,139	292	Y	Y	Y	Y	Y	Y	Y	0 26	0 17
TOTAL	11,419	4,009								0 26	1 71

Watershed 026A Beaver Creek District Dubois (D-1)											
Sale Name	Estimated Harvest		Allowable Logging Method			Allowable Silviculture System				Est Miles of Road	
	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
1997	20	40	Y	Y	Y	Y	Y	Y	Y	0 00	0 00
1999	4,300	800	Y	Y	Y	Y	Y	Y	Y	0 00	0 65
2000	4,300	850	Y	Y	Y	Y	Y	Y	Y	0 00	0 65
2004	4,300	850	Y	Y	Y	Y	Y	Y	Y	2 00	0 65
									Y	0 05	0 03
TOTAL	113,143	2,600								2 05	1 98

Watershed 026B Beaver Creek District Dubois (D-1)											
No Sales Scheduled											

Watershed 027/028 Medicine Lodge/Indian Creek District Dubois (D-1)										Est Miles of Road	
Estimated Harvest		Allowable Logging Method				Allowable Silviculture System					
Sale Name	Volume	Acres	Trac	Skv	Heli	CC	SW	CT	SEL	Const	Recon
1997	583	115	Y	Y	Y	Y	Y	Y	Y	0 13	0 09
	22	40	Y	Y	Y	Y	Y	Y	Y	0 00	0 01
	1,111	285	Y	Y	Y	Y	Y	Y	Y	0 26	0 17
TOTAL	1,716	440								0 39	0 27

Watershed 029 Warm Springs District Dubois (D-1)	
No Sales Scheduled	

Watershed 030A Upper Birch Creek (West) District Dubois (D-1)	
No Sales Scheduled	

Watershed 0308 Upper Birch Creek (East) District Dubois (D-1)	
No Sales Scheduled	

Watershed 031A Lower Birch Creek (West) District Dubois (D-1)	
No Sales Scheduled	

Watershed 031B Lower Birch Creek (East) District Dubois (D-1)	
No Sales Scheduled	

Watershed 034 Snow Creek District Ashton (D-3)	
No Sales Scheduled	

Watershed 035 Burns-Pat Creek						District Palisades (D-4)						
		Estimated Harvest		Allowable Logging Method			Allowable Silviculture System				Est Miles of Road	
Sale Name	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon	
Small Sales	500	120	Y	Y	Y	Y	Y	Y	Y	0 18	0 12	
TOTAL	500	120								0 18	0 12	

		Estimated Harvest		Allowable Logging Method			Allowable Silviculture System				Est Miles of Road	
SaleName	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon	
Small Sales	800	180	Y	Y	Y	Y	Y	Y	Y	0 18	0 12	
TOTAL	800	180								0 18	0 12	

Watershed 037 Elk-Bear Creeks						District Palisades (D-4)					
No Sales Scheduled											

Watershed 038 Fall Creek						District Palisades (D-4)						
		Estimated Harvest		Allowable Logging Method			Allowable Silviculture System				Est Miles of Road	
Sale Name	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon	
SS 1998	400	100	Y	Y	Y	Y	Y	Y	Y	0 09	0 06	
SS 2002	600	150	Y	Y	Y	Y	Y	Y	Y	0 13	0 09	
SS 2006	320	80	Y	Y	Y	Y	Y	Y	Y	0 07	0 05	
TOTAL	1,640	410								0 36	0 25	

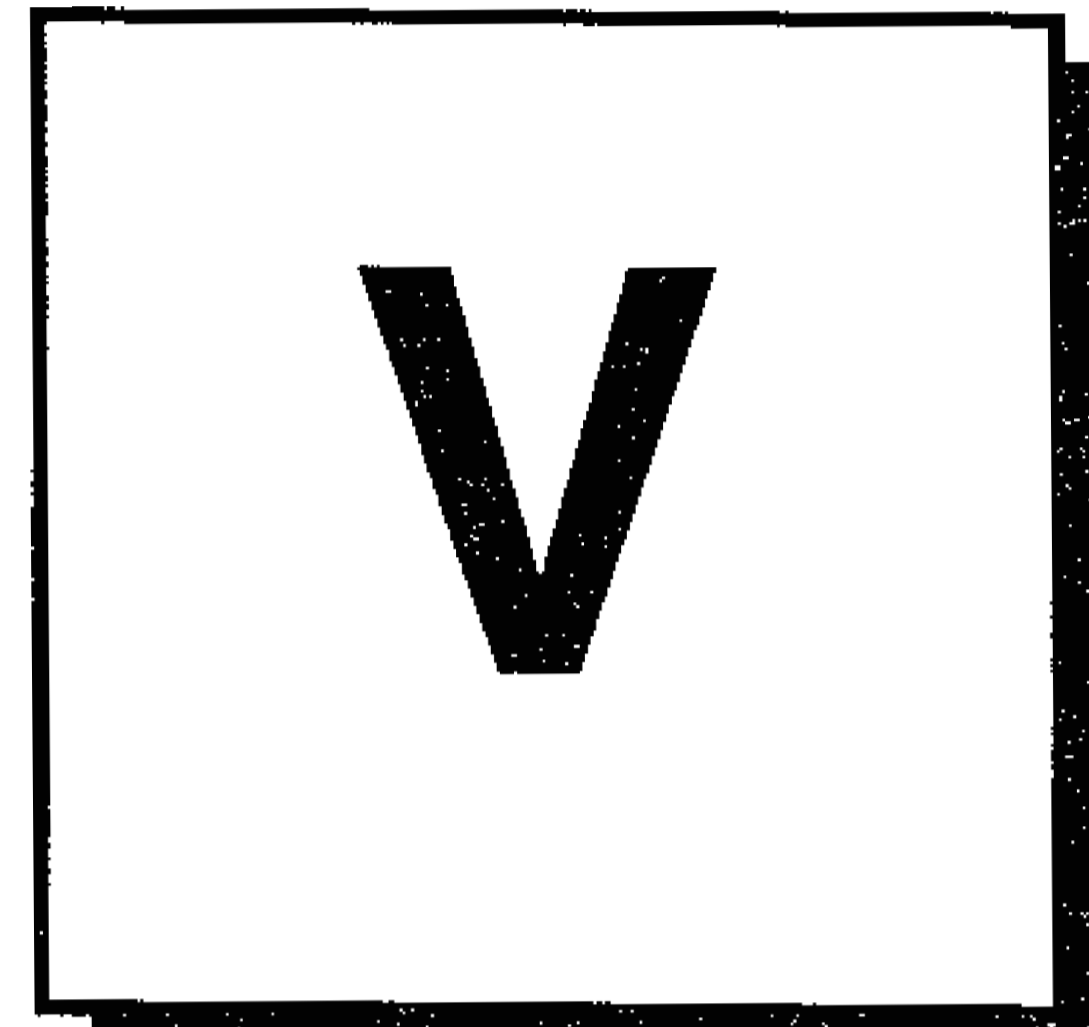
Watershed 039 Pritchard Creek						District Palisades (D-4)					
No Sales Scheduled											

Watershed 040 Brockman Creek						District Palisades (D-4)					
Estimated Harvest			Allowable Logging Method			Allowable Silviculture System				Est Miles of Road	
SaleName	Volume	Acres	Trac	Sky	Heli	CC	SW	CT	SEL	Const	Recon
Small Sales	600	150	Y	Y	Y	Y	Y	Y	Y	014	009
TOTAL	600	150								014	009

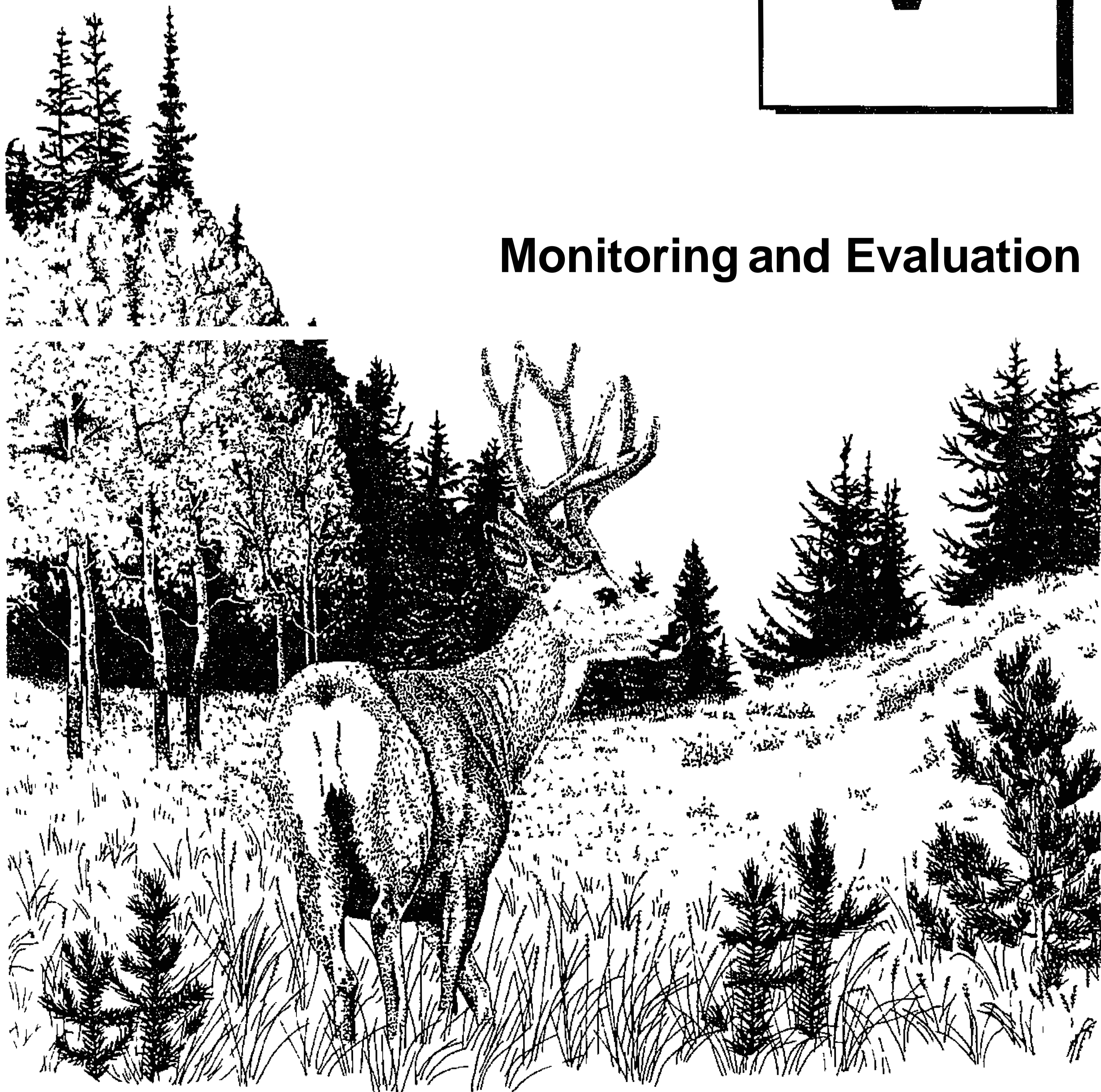
Forest Total	80,000	19,975								1843	1166
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Chapter



Monitoring and Evaluation



CHAPTER V

MONITORING AND EVALUATION

INTRODUCTION

In the preceding chapters of the Revision, the Forest Service identified general management direction in terms of goals and objectives and commitments to carry out that direction. Monitoring and evaluation provides an opportunity for the agency to demonstrate how it is complying with the standards and guidelines, and whether or not the standards and guidelines are performing in the predicted manner. In essence, it answers the question, "Are we doing what we said we would do?", and "Are the assumptions on which we based decisions and allocations correct?"

A monitoring and evaluation plan is required by Forest Service planning regulations, which stipulate a report will be issued at the midpoint of the planning cycle. The Forest will issue a monitoring report annually to demonstrate progress toward meeting goals and objectives, and to identify as early as possible any needed changes to the Revised Forest Plan.

RELATIONSHIP TO OTHER MONITORING ACTIVITIES

This plan shows how the Forest will monitor compliance with, and performance of, standards and guidelines and assumptions in the Revision. The monitoring activities listed in this plan are only a part of a larger range of monitoring activities which take place on the Forest.

Monitoring requirements are often determined in planning and analysis which support specific projects (known as the NEPA process). Though these monitoring activities are conducted independently of Revision monitoring, there will often be an overlap between the two in that project monitoring can give some indication of how Revision standards and guidelines are working, or accomplishment of Revision goals and objectives. Monitoring of randomly-selected projects for compliance with Revision standards and guides is also conducted.

The Forest conducts some monitoring which is required by law or regulation and which may not necessarily demonstrate how the Revision is working. An example of this type of monitoring is regeneration surveys which are done in timber harvest units. Additionally, some contract administration provides information on how Revision goals and objectives are being met, and provides information on compliance with standards and guides.

The research branch of the Forest Service conducts a wide range of trials and experiments to determine the causes of resource problems, or to improve resource management. The results of these scientifically-rigorous experiments are documented in research technical reports and serve to validate current goals, objectives, standards and guidelines, or to recommend changes to them. This type of monitoring is crucial to the Forest's adaptive management approach.

Collectively, all of the above-mentioned efforts, and other day-to-day work not discussed here, comprises a large body of monitoring work of which Revision monitoring is an important part. While not all of the items monitored by these other efforts are expressly listed in the Revision Monitoring Plan, they often overlap and are closely related.

TYPES OF MONITORING

Three types of monitoring can assess performance of the Revision. The three types of monitoring are implementation, effectiveness and validation.

Implementation monitoring answers the question, "Are projects and activities being implemented in compliance with the standards and guidelines?" Implementation monitoring forms the basis for the other types of monitoring, since those cannot be conducted unless projects and activities comply with Revision standards and guidelines. Thus this monitoring type may be the most important of the three types, and needs to be conducted most often.

Effectiveness monitoring answers the question, "Is implementation of the standards and guidelines giving us the results we expected?" Effectiveness monitoring often means quantitatively assessing the effects of management actions. Since this may require quite a bit of data, effectiveness monitoring is generally conducted on a limited basis and deals with sensitive areas and activities that pose higher risks of adverse effects on Forest resources, or addresses items of high public interest. Once the question of whether effects are as expected is answered, then implementation monitoring is sufficient.

Validation monitoring answers the questions, "Are these results what we really want? Are there better ways to meet the Revision goals and objectives?" Validation monitoring is usually conducted when there is reason to question basic assumptions or coefficients, such as when these are not reasonably supported by existing research. Validation monitoring focuses on items of strong public interest, agency concern, diversity of opinion, or that have the potential to be unduly lax or restrictive. This type of monitoring may require a partnership with the Research branch and long-term investigations. Once an item is validated, as with effectiveness monitoring, then implementation monitoring is sufficient.

ITEMS TO BE MONITORED

To maximize the efficiency of the overall monitoring effort, the Forest has focused on certain critical items, identified partners, and will measure as many items as possible with the least number of indicators. The items selected for Revision monitoring met these important criteria, among others:

- critical planning assumptions
- activities with the greatest risk to resources
- most potentially constraining on outputs

The items are listed in brief in the accompanying Monitoring Item Summary, and in greater detail in the individual Monitoring Item Descriptions on the following pages.

MONITORING AND THE BUDGET

The monitoring program outlined here is the optimal level, assuming the Revision is fully funded. It is unlikely that annual budgets will fully fund the monitoring effort shown here. Priorities for the annual monitoring effort will be based on annual budgets and program direction, and on the priority of the item, in descending order, from Forest Priority Group 1 to Forest Priority Group 3.

In order to maximize efficiency and promote cooperation, the Forest will seek to develop monitoring partnerships with federal and state agencies and other entities as appropriate, to further shared goals and carry out agency responsibilities.

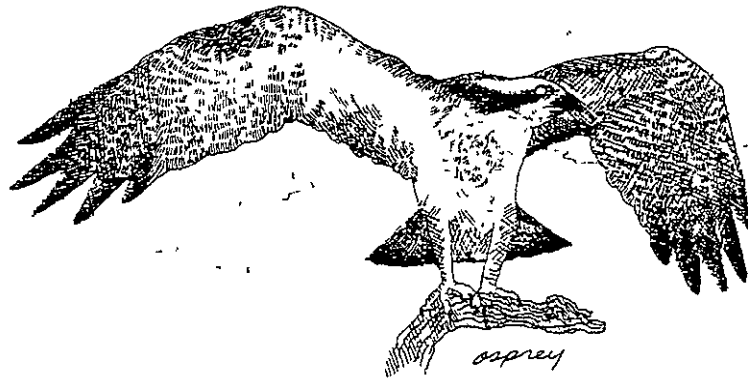
The cost of annually monitoring the items in Priority Groups 1, 2 and 3 is as follows:

Priority Group	Cost for Entire Group
1 (27 items):	between \$283,525 and \$285,525;
2 (6 items):	between \$76,690 and \$86,690;
3 (12 items):	between \$100,800 and \$115,300;
Total Program Cost (45 items):	between \$461,015 and \$487,515.

MONITORING ITEM SUMMARY

Monitoring Item	Forest Priority Group	Page
PHYSICAL ELEMENTS		
Air Quality		
Long-term Visual Range in Class I and II Airsheds	3	V-6
Soils		
Hydrologic Disturbance in Watersheds	2	V-7
Woody Residue Needs for Soil and Wildlife	1	V-7
Detrimental Soil Disturbance	2	V-9
Fine Organic Matter Retention	3	V-9
BIOLOGICAL ELEMENTS		
Fisheries, Water and Riparian Resources		
Improvement of WQL Streams	1	V-11
Application of BMPs	3	V-11
Native Cutthroat Trout Habitat Features	1	V-12
Vegetation		
Timber Volume Removed From Unsuitable and Suitable-Unscheduled Lands	1	V-13
Pest Increase in Managed Stands	1	V-14
Ute Ladies'-Tresses Populations	1	V-14
Vegetation Structure, Composition and Distribution of Sagebrush/Grassland Habitats	3	V-15
Wildlife		
Cavity Nesters	1	V-16
Standing Dead Tree Habitat	3	V-17
Grizzly Bear Population	1	V-18
Grizzly Bear Habitat Improvement	1	V-19
Bald Eagle Nesting Population	1	V-20
Gray Wolf Population	1	V-21
Peregrine Falcon Nesting Population	1	V-22
Furbearer Population Trends	1	V-23
Goshawk Population Trends	1	V-24
Forest Owl Population	1	V-25
Trumpeter Swan Nesting Population	1	V-26
Spotted Frog Population	1	V-27
Common Loon Population	1	V-28
Harlequin Duck Population	1	V-29
Elk Vulnerability and Elk Habitat Effectiveness	1	V-30
Red Squirrel Population	1	V-31
FOREST USE AND OCCUPATION		
Forest Users		
User Satisfaction	2	V-32
Forest Operation		
Budget	1	V-33

Recreation		
Seasonal Trail Use Impacts to Soil and Vegetation	2	V-33
Recreation/Wildlife Conflicts	2	V-34
Dispersed Campsite Soil Displacement	3	V-35
Jedediah Smith Wilderness LAC	3	V-35
Roads and Trails Access		
Authorized Use Level	2	V-39
Road Closure Effectiveness	1	V-39
Achievement of Road Density Standards	1	V-41
PRODUCTION OF COMMODITY RESOURCES		
Range		
Streambank Disturbance/Stubble Height/ Channel Stability	1	V-42
Riparian Forage Utilization Within Key Areas	1	V-42
Upland Forage Utilization Within Key Areas	3	V-43
Riparian and Upland Long-Term Trend in Benchmarks	3	V-44
Timber		
Changes to Land Suitability	1	V-44
Maximum Created Opening Size	3	V-45
Security Cover Retention	3	V-46
Large Forested Block Retention	3	V-46



HOW THE MONITORING INFORMATION WILL BE USED

The results of annual monitoring activities will be evaluated to either verify the propriety of current actions, standards and guidelines, or to determine the need to change them. This evaluation will be assembled into an annual report and made available to Forest stakeholders.

Based on the information in the annual report the Forest will identify any changes needed to actions, standards or guidelines. Depending on the magnitude of the change required the Forest may choose to amend the Revised Plan through either the minor (nonsignificant) or major (significant) amendment processes. If the changes needed are of such a large magnitude that it is not feasible to amend the Plan, a Revision may be called for. Through the constant updating of direction due to yearly monitoring or advances in knowledge the Forest will strive to minimize the need to revise the Plan.

The monitoring item descriptions contain certain information in a standard format, which is briefly explained below:

Monitoring Item - The subject of the monitoring. This can often be tied back to a particular standard or guideline in the Revised Plan.

Type of Monitoring - Implementation, Effectiveness or Validation. The item may address more than one type of monitoring, such as effectiveness and validation.

Priority - The relative importance assigned to the item by the Forest leadership team, with one being highest priority and three the lowest.

Where Applies - Shows areas of the Forest where the monitoring would be conducted.

Indicator - Describes the parameter(s) that will be used to show compliance or change. For example, trails meeting acceptable standards could be measured in miles, areas meeting standards for down woody residue might be measured in acres, and so on.

Method - Explains how the monitoring will be conducted. For example, line transects could be used to monitor vegetation conditions, user surveys could be used to monitor recreation use and experience, and so on. If partnerships can be developed for doing the monitoring, that might be explained here.

Expected Precision and Reliability

- **Precision** - Shows how correct the monitoring result can be expected to be. For methods which allow scientifically replicable measurements these may be expressed in terms of how closely the estimate approaches the average of a cluster of sample values. For methods which are less scientifically rigorous precision may be expressed in terms of high, medium (or moderate) and low.

- **Reliability** - Measures the confidence which may be placed in the correctness of the estimate. Reliability may be expressed in terms of high, medium (or moderate) and low.

Tolerance or Variability Indicating Action - Explains the point at which management review or corrective action will be taken.

Frequency of Monitoring - Shows how often the monitoring will be conducted.

Lead Responsibility - Designates Forest personnel accountable for conducting the monitoring.

Estimated Annual Cost - Gives an estimate of the yearly cost to the Forest to conduct the monitoring.

MONITORING AND EVALUATION STRATEGY
Monitoring Item Description

PHYSICAL ELEMENTS

Air Quality

Monitoring Item - Long-term Visual Range in Class I and Class II Airsheds

Type of Monitoring - Implementation The standards have not been quantified so there is also a need to establish a baseline

Priority - Forest Priority Group 3

Where Applies - Monitoring should be conducted in designated wilderness on the Forest, and other nonwilderness areas upwind from and adjacent to Class I airsheds and Class II wilderness airsheds managed by other entities

Indicator - *Visibility in miles*

Method - The following methods will be used

1 Mounted, timed-exposure camera(s) established at fixed photopoint(s) The exposures should be evaluated periodically by density-monitoring devices in addition to ocular means

2 Aerosol particle evaluation, to supplement information gathered by photographic means on days not meeting visual standards These devices gather and evaluate information at the site only, not at remote locations on the visual evaluation track, and can help determine the particulate components of air not meeting standards to help discover the cause

There appears to be ample opportunity for partnerships in this effort Other federal agencies such as the Environmental Protection Agency, the U S Fish and Wildlife Service, and the National Park Service are already engaged in efforts of this type The adjacent national parks, especially Grand Teton National Park, have been conducting some of this type of monitoring for some time, most recently in conjunction with their own prescribed burning activities which have increased since the 1988 Yellowstone fires Within the Forest Service, the Bridger-Teton National Forest has conducted air quality monitoring for years in connection with oil and gas development activities The Rocky Mountain Regional Office and Rocky Mountain Research Station both have shown interest in, and have expertise in, air quality monitoring

Expected Precision and Reliability

- Precision - High
- Reliability - High

Tolerance or Variability Indicating Action - Reference standards

Frequency of Monitoring - This will depend on local activities Initially the frequency should be higher, until a baseline is established, perhaps at intervals of two to three times a week After ambient conditions are determined, frequency could be relaxed and targeted toward times when conditions exceed naturally-occurring ambient conditions, or the Forest is planning and conducting activities which threaten to exceed standards

Lead Responsibility - The Forest fire management group

Estimated Annual Cost

Installation of camera	\$2,000 per unit, or \$200/year
Annual operation and evaluation cost	\$1,500 per unit
Installation of aerosol monitoring unit	\$5,000 per unit, or \$500/year
Annual operation and evaluation cost	\$1,500 per unit

TOTAL COST \$3,700/year

Soils

Monitoring Item - Hydrologic Disturbance in Watersheds

Type of Monitoring - Implementation, Validation Designed to measure implementation of the standard and verify its applicability

Priority - Forest Priority Group 2

Where Applies - Watersheds 10, 11 and 12 (currently at or above the 30 percent level), and watersheds 13 and 25 (which are approaching the 30 percent level)

Indicator - Bank instability (natural versus management-induced) along representative stream reaches within the above-mentioned watersheds

Method - Rosgen stream-typing and Intermountain Region streambank stability ratings

Expected Precision and Reliability

- Precision - Moderate
- Reliability - Moderate

Tolerance or Variability Indicating Action - Determine if bank instability is occurring within the watersheds currently exceeding the 30 percent guideline Determine the sufficiency of the 30 percent guideline

Frequency of Monitoring - Annually, until the 30 percent figure is validated or changed by appropriate study

Lead Responsibility - The forest soil scientist will coordinate an integrated effort by watershed specialists and aquatic scientists

Estimated Annual Cost - \$4,500

Monitoring Item - Woody Residue Needs for Soil and Wildlife ✓

Type of Monitoring - Effectiveness/Validation

Priority - Forest Priority Group 1

Where Applies - Subsection, Watershed, Stand (~25 acres), Site

Indicator -

1 Size class, length, composition class to meet standards

1 logs of > 7" diameter @ small end and > 20' length

2 number of logs per acre consisting of logs in appropriate decomposition classes as shown in the Forestwide S&Gs for soil and wildlife

2 Acre/acres (patch) dependent upon analysis approach, and area size, species or life form (such as cavity-nesters) of interest

3 Distribution/condition/availability

1 stand

2 subwatershed or watershed

3 landscape (incl species type and sere(s))

4 subsection

4 Follow requirements for woody residue and dead and down material in the Forestwide S&Gs

Method - Sampling in project or analysis areas by subsection by watershed/subwatershed, by type, elevation, and soil productivity class (integrated resource inventory)

Also, follow procedures such as those outlined within "Guidelines for Sampling Some Physical Conditions of Surface Soils", by Steve Howes, John Hazard, and J Michael Geist, Pacific Northwest Region, July 1983 (R6-RWM-146-1983) Sampling would be on line transects

Role of partners will depend on the availability of funds and relation of partner skills to task needs

Expected Precision and Reliability

- Precision - Variable by type but generally high

- Reliability - High

Tolerance or Variability Indicating Action - Changes in management will be necessary when

A Baseline studies (inventory) refine dead/down needs in varied forest types for species needs,

B Monitoring of projects and comparison of results among treated areas demonstrate that current guidelines are in need of change

Measures and need for change in both (A) and (B) should be determined through evaluations of site, stand and landscape conditions coupled with baseline forestwide (systematic) species inventories and improved knowledge of regional life history characteristics and requirements for various species of wildlife that use dead and down logs

Frequency of Monitoring - (Soils) Prior to and following project analyses for each subsection Analyses and evaluations should include site, stand and landscape conditions For soils, monitoring would be conducted annually, until an adequate determination can be made for ground-disturbing resource management practices

Lead Responsibility - (Soils) Monitoring teams including soils, vegetation and wildlife/ecology specialists

Estimated Annual Cost - Will vary by the number of projects anticipated and planned to affect the distribution and abundance of dead and down material. Per analysis and project costs will vary, but will likely range from \$2,000 to \$4,000, depending on size of analysis area and levels of previous and expected disturbance. Costs do not include baseline inventories nor NEPA preparation.

Monitoring Item - Detrimental Soil Disturbance

Type of Monitoring - Implementation and Effectiveness

Priority - Forest Priority Group 2

Where Applies - Forestwide (select representative sites where various land treatments have occurred)

Indicator - At least 85 percent of the total area within an activity area must have soil in satisfactory condition, or, no more than 15 percent of an activity area may have detrimentally-disturbed soil. Detrimen- tally-disturbed soil is soil that has been displaced, compacted, puddled, or severely burned.

Method - Follow procedures such as those outlined in "Guidelines for Sampling Some Physical Condi- tions of Surface Soils", by Steve Howes, John Hazard, and J. Michael Geist, Pacific Northwest Region, July 1983 (R6-RWM-146-1983). Sampling would be done on line transects.

Expected Precision and Reliability

- Precision - Moderately high
- Reliability - Moderately high

Tolerance or Variability Indicating Action - For those resource practices consistently exceeding the 15 percent threshold, determine if techniques can be improved or another method found. Evaluate areas with greater than 15 percent soil disturbance for rehabilitation opportunities.

Frequency of Monitoring - Annually, until an adequate determination can be made for various resource practices that are ground-disturbing.

Lead Responsibility - Forest or District soil scientist

Estimated Annual Cost - \$5,000

Monitoring Item - Fine Organic Matter Retention

Type of Monitoring - Implementation and Effectiveness

Priority - Forest Priority Group 3

Where Applies - Forestwide (select representative sites, or habitat types, where various land treatments have occurred)

Indicator - At least 50 percent (evenly distributed) of the total area within an activity area must retain its fine organic matter (duff layer plus materials less than 3-inches in diameter) within forested ecosystems,

provide for a minimum of 65 percent ground cover (plants, litter and rock - greater than 3/4-inch in diameter) on rangeland ecosystems, or, in both ecosystems, an equivalent percentage if the site cannot naturally attain the minimum percentages mentioned above

Method - Follow procedures such as those outlined within "Guidelines for Sampling Some Physical Conditions of Surface Soils" by Steve Howes, John Hazard, and J Michael Geist, Pacific Northwest Region, July 1983, (R6-RWM-146-1983) Sampling would consist of line transects and 1/10th acre plots

Expected Precision and Reliability

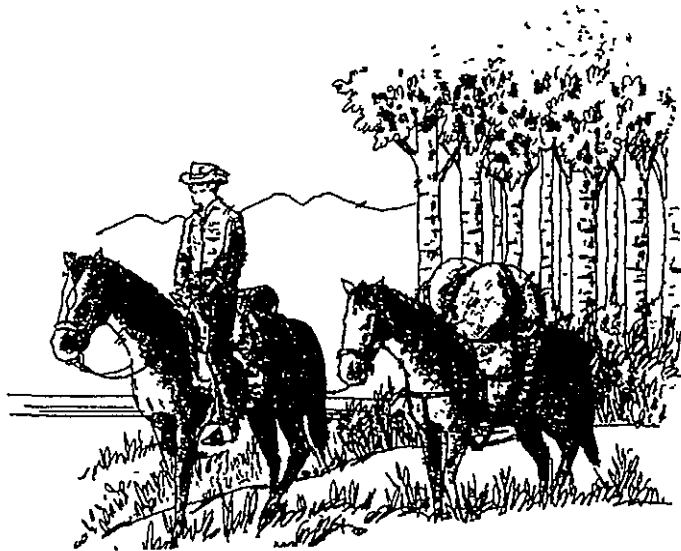
- Precision - Moderately high to high
- Reliability - Moderately high to high

Tolerance or Variability Indicating Action - For those resource practices consistently exceeding the threshold, determine if techniques can be improved or another method found Evaluate areas exceeding the standard for rehabilitation opportunities

Frequency of Monitoring - Annually, until an adequate determination can be made for various ground-disturbing resource management practices

Lead Responsibility - Forest or District soil scientist

Estimated Annual Cost - \$1,000



BIOLOGICAL ELEMENTS

Fisheries, Water and Riparian Resources

Monitoring Item - Improvement of Water Quality Limited Streams

Type of Monitoring - Validation This monitoring should answer the question, Is water quality in these streams at the point where they can be delisted?

Priority - Forest Priority Group 1

Where Applies - First on streams listed as Water Quality Limited, and then, if necessary, monitoring will be extended to their tributaries and watersheds This item will follow updates to the State WQL lists

Indicator - Depends on the reason for listing, e g , on streams listed for nutrient concerns, nitrate + nitrite and orthophosphate are used as indicators If monitoring of streams for the specific compound or component turns up concerns, monitoring would be extended to find the source of the concern

Method - Approved protocols for the constituent of concern Procedures include those used by Idaho DWR - Division of Environmental Quality (BURP Methods), methods approved for the State of Wyoming, the U S Geological Survey, or in publications such as "Monitoring Protocols to Evaluate Water Quality Effects of Grazing Management on Western Rangeland Streams" by Stephen Bauer and Timothy Burton, October 1993 (EPA 910/R-93-017) Methods will change as water quality standards and assessment procedures change

Expected Precision and Reliability

- Precision - Depends on the parameter/constituent being measured (e g , nutrients may be in mg/l, but sediment measurements vary widely)
- Reliability - if conditions remain constant, should be able to reproduce Some constituents, though, vary with streamflow There are some things that are difficult to reproduce when dealing with a fluid medium

Tolerance or Variability Indicating Action - When it can be reliably determined that water quality standards are being violated, or that the stream cannot be removed from the WQL list because of deteriorated conditions

Frequency of Monitoring - Depends on the constituent being monitored Generally, one can expect to have to visit sites several times during the summer

Lead Responsibility - Forest hydrologist

Estimated Annual Cost - Monitoring all WQL streams has an estimated annual cost of approximately \$15,000 This would include a full-time person to do the monitoring at the GS-5 level

Monitoring Item - Application of Best Management Practices (BMPs)

Type of Monitoring - Implementation and Effectiveness Measures whether BMPs related to maintaining and improving water quality are being applied

Priority - Forest Priority Group 3

Where Applies - Project areas where BMP's are applied (such as timber sale areas, new roads, etc)

Indicator - Variable, depending upon the BMP which was applied

Method - For implementation monitoring, reviews would be conducted of projects by teams including the project planner, administrator, and interested specialists For effectiveness monitoring, water quality, soil characteristics (such as erosion), and fish habitat would be monitored for selected projects

Expected Precision and Reliability

- Precision - Variable, depending on the project and the impacts being measured
- Reliability - Results should be reasonably reproducible, unless conditions change between monitoring times

Tolerance or Variability Indicating Action - If BMP's are not being applied in situations which call for their use, a review would be conducted to determine the reasons If instream beneficial uses may be put at risk, or if unacceptable soil degradation is occurring, a review would be conducted to determine the reasons

Frequency of Monitoring -

Implementation monitoring: Once after projects are finished

Effectiveness monitoring Variable Water quality monitoring might be conducted several times per year Monitoring for changes in soils, fish habitat or channel condition may be conducted once per year

Lead Responsibility - Soil scientist, fisheries biologist, hydrologist

Estimated Annual Cost - Average cost would be between \$2,000 and \$10,000 per year, depending on what is being monitored

Monitoring Item - Native Cutthroat Trout Habitat Features ✓

Type of Monitoring - Validation Test the following critical planning assumptions 1) the "expected values" for water temperature and width/depth ratio, for a given Rosgen stream type, represent good habitat conditions for native cutthroat trout at the watershed scale, and 2) these conditions are attainable

Priority - Forest Priority Group 1 Monitoring needed to meet a Forest Plan objective Relates to many Forest Plan goals and provides a basis by which several guidelines were developed Monitoring needed to validate the "expected values" for water temperature and width/depth ratio because they are not strongly supported by site specific research There is strong public interest and agency concern over fisheries guidelines which may be unduly restrictive or lax

Where Applies - Within Native Trout Watersheds (17 identified at present)

Indicator - Number of Native Trout watersheds in which correlations have been completed

Method - Protocol to be determined

Phase 1 Within all Native Trout Watersheds, assess the population status of native cutthroat trout populations as to presence/absence, relative abundance, presence of other salmonid species, and

level of hybridization Survey techniques will employ snorkeling and electro-fishing

Phase 2 Where populations of native cutthroat trout exist, measure and record values for all of the six habitat features, including Rosgen stream type

Phase 3 Compare, at the watershed scale, the recorded values for water temperature and width/depth ratio to the "expected values "

Expected Precision and Reliability

- Precision - To be determined
- Reliability - At least 80 percent

Tolerance or Variability Indicating Action

Water temperature 1) meet State water quality standards, and 2) two degrees C above values in the table needed to meet biological requirements for native cutthroat trout

Width/depth ratio a factor of one

Frequency of Monitoring - Survey one time

Lead Responsibility - Forest Fisheries Biologist

Estimated Annual Cost - Monitoring costs could be incurred over a 2-5 year period Total cost is \$71,000 (assuming no cost-share above existing partnerships)

Year 1 \$ 9,000 (lower Henry's Fork drainage)

Year 2 \$26,000 (Teton drainages)

Year 3 \$36,000 (South Fork drainages)

Vegetation

Monitoring Item - Timber Volume Removed from Unsuitable and Suitable-Unscheduled (U/S-U) Lands

Type of Monitoring - Implementation

Priority - Forest Priority Group 1

Where Applies - Applies to harvest on lands not calculated in the Allowable Sale Quantity (ASQ)

Indicator - Million Board Feet (MMBF) for the Revised Plan initial decade

Method - Review project-level NEPA analysis for identification of U/S-U lands proposed for vegetation manipulation by timber harvest District timber sale project personnel include summary of cutting units on U/S-U lands and volume to be harvested with the Gate 3 Appraisal package submitted to the Contracting Officer for contract preparation

Expected Precision and Reliability

- Precision - High

- Reliability - High

Tolerance or Variability Indicating Action - U/S-U harvested volume exceeding 20 MMBF before completion of the Revised Plan initial decade

Frequency of Monitoring - Annually

Lead Responsibility - Forest Timber Contracting Officer and District Timber Sale project personnel

Annual Estimated Cost - \$1,000

Monitoring Item - Pest Increase in Managed Stands

Type of Monitoring - Effectiveness Detects increases in insect and disease attacks in vegetation polygons after management activities

Priority - Forest Priority Group 1 (required by regulation)

Where Applies - Forestwide where management activities have altered vegetation

Indicator - An increase in insect and/or disease activity as plotted on annual aerial survey maps

Method - Forest silviculturist will review the annual aerial survey maps issued by Forest Service Pest Management branch, paying special attention to any increased incidence of pest activity in recent activity areas

Expected Precision and Reliability

- Precision - Moderate to High
- Reliability - Moderate to High

Tolerance or Variability Indicating Action - Significant pest activity noted in or near recent activity areas in any given year, or low-level recurring pest activity noted over several years, will be cause for visiting the sites to determine whether the pest activity is occurring within recently-treated areas Further action will be taken as needed

Frequency of Monitoring - Annually

Lead Responsibility - Forest Silviculturist

Annual Estimated Cost - GS-12 @ \$200/day for three days per year = \$600

Monitoring Item - Ute Ladies'-Tresses Populations

Type of Monitoring - Effectiveness/Validation Designed to assess the effectiveness of standards and guidelines for livestock grazing and other activities for protection of this plant and its habitat

Priority - Forest Priority Group 1

Where Applies - Applies in occupied habitat and habitat suitable for the occurrence of this plant

Indicators -

- 1) Population trend as indicated by population size, condition or structure, in permanently marked or unmarked areas
- 2) Documented habitat changes as indicated by parameters such as hydrology, riparian successional stages, presence or absence of noxious weeds, etc

Method - To measure population trends, the size and condition of populations will be quantitatively monitored in marked and unmarked areas. In marked areas a permanently marked grid system will be used. Unmarked areas will be monitored using methods such as belt transects, quadrats or well-defined unmarked areas.

Habitat changes will be mapped and documented. In known population areas human activities will be recorded which have been or may be defined as threats to the species and its habitat.

Expected Precision and Reliability

- Precision - Generally high
- Reliability - Generally high if methods are applied correctly and data interpreted appropriately

Tolerance or Variability Indicating Action - Ute ladies'-tresses populations fluctuate with respect to the number of individuals flowering from year to year. In general, a sustained downward trend in population numbers would indicate a need for action.

Frequency of Monitoring - At least once a year during flowering and seed-set periods (generally August and September)

Lead Responsibility - Native plant program manager. State fish and game departments and other agencies will be invited to become involved as much as possible.

Annual Estimated Cost - \$1,500

Monitoring Item - Vegetation Structure, Composition, and Distribution of Sagebrush/Grassland Habitats

Type of Monitoring - Implementation

Priority - Forest Priority Group 3

Where Applies - Watersheds and subwatersheds

Indicator - Big sagebrush (*Artemisia tridentata*) canopy cover age distribution across a subwatershed or watershed

Method - Ocular estimate or Line Intercept Method for Crown Canopy Cover, described in the Forest Service Handbook 2209 21, Ch 44 51

Expected Precision and Reliability

- Precision - High
- Reliability - Moderate

Tolerance or Variability Indicating Action - When sagebrush/grassland habitat conditions are not within Forestwide S&Gs (vegetation)

Frequency of Monitoring - As needed

Lead Responsibility - District Rangeland Management Specialist

Estimated Annual Cost

One GS-9 @ \$175 00/day for 35 days = \$6,125/year

Wildlife ✓

Monitoring Item - Cavity Nesters

Thru V-31

Type of Monitoring - Effectiveness and/or Validation Designed to measure population trends of primary cavity nesting species and relationships to habitat changes

Priority - Forest Priority Group 1

Where Applies - Monitoring emphasis will be in the 5 x x series management prescriptions which allow timber harvesting Other management prescriptions will be monitored on an as needed basis depending on human activities and natural events such as fires

Indicator -

Population trend Birds per transect and/or birds per point

Habitat changes Percent biological potential (snags per 100 forested acres) as identified in the Forestwide S&Gs and the 5 x x series management prescriptions

Method -

Population trend Point count surveys following methods which have been used in the Neotropical Migratory Landbird Monitoring Project in the Big Hole Mountains (Kliene 1996) A minimum of 24 transects, with 10 to 15 point count stations per transect, distributed within the 5 x x series management prescriptions Surveys should be done in March and April, prior to the start of incubation Don't use playback calls

Habitat changes Documentation of changes in percent biological potential (snags per 100 forested acres) Several data sources could be used which include the following stand exam surveys, permanent forest inventory plots, and a methodology recently developed at the University of Idaho using variable length and width transects

Expected Precision and Reliability

- Precision - Moderate to High
- Reliability - Moderate to High

Tolerance or Variability Indicating Action -

Population trend Population trends are expected to be variable from year to year and are affected by habitat changes, weather conditions, predation, etc A declining trend for at least four years in a row would be an indication for action

Habitat changes Percent biological potential below that specified for a management prescription

Frequency of Monitoring - Annually

Lead Responsibility - Targhee National Forest State Fish and Game Departments and other agencies will be involved as much as possible

Estimated Annual Cost - \$3,800 (24 days at \$160/day/person)
 3,960 (vehicle expense, equipment, etc)
 800 (record keeping/report writing)
 \$8,600

Monitoring Item - Standing Dead Tree Habitat

Type of Monitoring - Effectiveness/Validation Determines degree to which wildlife requirements are met by standing dead and replacement green trees

Priority - Forest Priority Group 3

Where Applies - Subsection, Watershed, Stand (~25 acres), Site

Indicators -

- A diameter
- B tree species
- C tree height
- D composition (dead tree hardness/class)
- E number and dispersion of dead standing and replacement trees (dispersion refers to the evenness and clumpiness of dead and green replacement trees)

Factors to be considered include but are not limited to

- A Forest inventories for species that use dead standing trees
- B Number of species, species group or life form (e.g. cavity nesters, forest raptors, songbirds, furbearers) with potential to occur according to species distribution and available habitat characteristics (Note Guidelines do not assume that requirements for one species meet the needs for another where overlap in size and placement characteristics exist)
- C Size of female home range and breeding area requirements with representative habitat characteristics for successful breeding and fledging of young according to species of interest or concern
- D Existing landscape, stand, and site conditions and characteristics within analysis and treatment areas as determined by inventories prior to project implementation
- E Distribution/condition/availability
 - 1 stand
 - 2 subwatershed or watershed
 - 3 landscape (incl species type and sere(s))
 - 4 subsection

F Distribution of natural opening sizes, shapes and structural characteristics of forest seres comparing natural disturbance types to human-induced

G Occurrence and distribution of forest types and effective conditions at landscape, stand and site relative to potential for species occurrence, distribution and reproduction

Method - Systematic sampling in project or analysis areas by subsection by watershed/subwatershed, forest type, elevation, and soil productivity class (IRI inventory) Role of partners will be systematic inventories of habitat conditions and species occurrences prior to and after vegetation treatments

Expected Precision and Reliability

- Precision - Variable by species and forest (condition, characteristics) type but generally high
- Reliability - High

Tolerance or Variability Indicating Action - Changes in management will be necessary as

A Baseline studies (inventory) refine or replace dead standing and green replacement trees in varied forest types and conditions for species needs,

B Monitoring of projects and comparison of results among treated areas demonstrate that current guidelines are in need of change

Measures and need for change in both (A) and (B) should be determined through evaluations of site, stand and landscape conditions coupled with baseline forestwide (systematic) species inventories and improved knowledge of regional life history characteristics and requirements for various species of wildlife that use dead standing and green replacement trees

Frequency of Monitoring - Prior to and following project analyses for each subsection Analyses and evaluations should include site, stand and landscape conditions

Lead Responsibility - Forest wildlife biologist

Estimated Annual Cost - Will vary by the number of projects anticipated and planned to affect the distribution and abundance of dead and down material Per analysis and project costs will vary, but will likely range from \$1500 to \$3000 depending on size of analysis area, levels of previous disturbance, and expected disturbance Costs do not include baseline inventories nor NEPA preparation

Monitoring Item - Grizzly Bear Population

Type of Monitoring - Effectiveness and/or Validation Designed to measure grizzly bear population and relationship to habitat changes

Priority - Forest Priority Group 1

Where Applies - Grizzly Bear BMU's and Subunits

Indicator -

Population trend Population trends are developed for the entire Yellowstone recovery area, and are computed from several components of the grizzly bear population which include the following annual unduplicated sightings of females with cubs, distribution of females with cubs, total known mortality, total female mortality

Habitat changes Habitat changes are analyzed with the grizzly bear cumulative effects model (CEM), and include changes in vegetation (fires, timber harvesting, etc), road and trail access (also called linear activities), developed sites such as campgrounds, resorts, etc (also called point activities), and dispersed recreation such as hunting, berry picking, etc (also called dispersed activities)

Method -

Population trend In cooperation with the USFWS and Interagency Study Team, report all verified sightings of grizzly bears (especially sows with cubs) and all verified mortalities

Habitat changes Within the BMU's and Subunits, Ranger Districts will annually update information on vegetation, linear features, point activities, and dispersed activities This information will be maintained in the GIS database in the Supervisor's Office.

Expected Precision and Reliability

- Precision - Moderate for population trends (it is difficult to observe bears and verify all reported sightings) High for habitat changes
- Reliability - Moderate for population trends (it is difficult to observe bears and verify all reported sightings) High for habitat changes

Tolerance or Variability Indicating Action - Failure to meet the recovery targets as outlined in the Grizzly Bear Recovery Plan (this applies to the entire GYA recovery zone) Failure to meet the Forest Plan S&Gs for the BMU/Subunits on the Targhee National Forest

Frequency of Monitoring - Annually

Lead Responsibility - Population trend monitoring has been lead by the Interagency Grizzly Bear Study Team and the USFWS, Ranger Districts and the Supervisor's Office provide verified sighting information to the Study Team and USFWS Habitat monitoring is done by the Ranger Districts and Supervisor's Office

Estimated Annual Cost - \$19,200 (120 days at \$160/day (30 days/RD & SO))
8,550 (vehicle expense, equipment, etc)
800 (record keeping/report writing)
\$28,550

Monitoring Item - Grizzly Bear Habitat Improvement

Type of Monitoring - Implementation, Effectiveness Measures improvement in the quality of grizzly bear habitat on the Forest, and the contribution of the Forest to total grizzly bear habitat quality in the Greater Yellowstone Area

Priority - Forest Priority Group 1

Where Applies - Applies to all prescription areas within designated Bear Management Units (BMU's) on the Forest

Indicator - The primary indicators of trend in grizzly bear habitat are habitat effectiveness, habitat value, and bear displacement These three are described in detail in the documentation for the grizzly bear cumulative effects model (IGBC 1990)

In addition to the above, indicators will be used from the Interagency Grizzly Bear Committee Taskforce Report on Motorized Access Management (IGBC 1994)

Method - Each management unit of the Greater Yellowstone Area, including the Targhee National Forest, will annually submit data on changes in road and trail access, and vegetation, to the USDA-Forest Service Intermountain Regional Office. That office will compile the data, develop a data set fixed in time, and issue this in electronic digital form (CD-ROM). This data will then be forwarded to individual management units for on-site use and runs.

On the Targhee National Forest, individual ranger districts will track changes in road and trail access and vegetation. These will be submitted to the Forest GIS shop for assembly into a Forest data package.

Expected Precision and Reliability

- Precision - Very high
- Reliability - Results will be reproducible with the same data set

Tolerance or Variability Indicating Action - Refer to the item on achievement of road density standards

Frequency of Monitoring - Annually

Lead Responsibility - Forest wildlife biologist

Estimated Annual Cost - On each of the three ranger districts with grizzly bear habitat, one person (GS-9 wildlife biologist) will need two weeks to put together the input data required. On receipt of the CD-ROM data from the Regional Office, the Forest GIS shop will need one person (GS-7 tech) for one day to run the cumulative effects model on each of the seven subunits.

GS-9 biologist 3 districts, two weeks each @ \$150/day	\$4,500
GS-7 GIS technician 7 subunits, one day each @ \$110/day	\$ 770
TOTAL	\$5,270

Monitoring Item - Bald Eagle Nesting Population

Type of Monitoring - Effectiveness and/or Validation Measures the nesting population of bald eagles and its relationship to habitat changes

Priority - Forest Priority Group 1

Where Applies - All bald eagle nesting territories

Indicator -

Population trends Occupancy and productivity of all bald eagle nesting territories

Habitat changes Changes in vegetation within nesting territories, changes in human activities within nesting territories

Method -

Population trends Standard monitoring of occupancy and productivity which has been done for more than a decade

Habitat changes Documentation and mapping of vegetation changes within nesting territories using the forest GIS database Documentation of changes in human activities within nesting territories, which may include recreation use (boating, floating, fishing, etc), motorized access, construction activities, etc

Past monitoring has been a cooperative effort with the Idaho Department of Fish and Game, BLM, U S Fish and Wildlife Service, Forest Service, and some private individuals It is expected that this cooperation will continue in the future

Expected Precision and Reliability

- Precision - High for population trends and vegetation changes Moderate to high for human activities
- Reliability - High for population trends and vegetation changes Moderate to high for human activities

Tolerance or Variability Indicating Action - Failure of an adult pair to occupy a nesting territory more than two years in a row Data on productivity shows that spring weather has a great influence on productivity Therefore, reductions in productivity must indicate factors other than spring weather are responsible for reduced productivity

Frequency of Monitoring - Annually

Lead Responsibility - Coordinated by the Forest wildlife biologist

Estimated Annual Cost - \$16,000

Monitoring Item - Gray Wolf Population

Type of Monitoring - Effectiveness and/or Validation Designed to measure gray wolf population and relationship to habitat changes

Priority - Forest Priority Group 1

Where Applies - Forestwide

Indicator -

Population trend Number of wolf packs, reproduction, movements, and mortality are being monitored

Habitat changes Intrusive human disturbances within one mile around active den sites and rendezvous sites between April 1 and June 30, when there are five or fewer breeding pairs of wolves in each experimental population area Forestwide standards for livestock grazing and gray wolves

Method -

Population trend In cooperation with the USFWS and monitoring teams, report all verified sightings of gray wolves (especially evidence of packs)

Habitat changes Within one mile of active den sites and rendezvous sites, restrict intrusive human disturbances between April 1 and June 30, when there are five or fewer breeding pairs of

wolves in each experimental population area Increase monitoring of livestock allotments where wolf packs have established

Expected Precision and Reliability

- Precision - High
- Reliability - High

Tolerance or Variability Indicating Action - Failure to implement the Revision S&Gs for gray wolves

Frequency of Monitoring - Annually

Lead Responsibility - Habitat monitoring is done by the Ranger Districts and Supervisor's Office, and coordinated by the Forest biologist Population trend monitoring has been lead by the USFWS and wolf monitoring teams Ranger Districts and the Supervisor's Office provide verified sighting information to the USFWS

Estimated Annual Cost - \$8,000 (50 days at \$160/day)
 2,000 (vehicle expense, equipment, etc)
 800 (record keeping/report writing)
 \$10,800

Monitoring Item - Peregrine Falcon Nesting Population

Type of Monitoring - Effectiveness and/or Validation Designed to measure the peregrine falcon nesting population and relationship to habitat changes

Priority - Forest Priority Group 1

Where Applies - All peregrine falcon nest sites and territories

Indicator -

Population trend Occupancy and productivity of all peregrine falcon nest sites and territories

Habitat changes The primary concern is human activity, such as rock climbing, at known nest sites In the past, use of pesticides which caused egg shell thinning was the primary concern Human activities and use of pesticides will be the main habitat changes monitored General habitat conditions and changes within the foraging area will also be monitored

Method -

Population trend Standard monitoring of occupancy and productivity which has been done for more than a decade

Habitat changes Periodic visits to nest sites to document changes in human activities If necessary, cameras could be established to document human activity at nest sites Documentation of the use of pesticides Documentation of general habitat changes through tracking of proposed project activities and GIS databases

Past monitoring has been a cooperative effort with the Idaho Department of Fish and Game, BLM, U S Fish and Wildlife Service, Forest Service, and some private individuals It is expected that this cooperation will continue in the future

Expected Precision and Reliability

- Precision - High for population trends Moderate to high for human activities
- Reliability - High for population trends Moderate to high for human activities

Tolerance or Variability Indicating Action - Peregrine falcon nest sites may not be occupied or produce young every year Nest sites may also change over time A nest site not occupied for more than two consecutive years may indicate the need to assess needed management actions

Frequency of Monitoring - Annually

Lead Responsibility - Forest biologist

Estimated Annual Cost - \$4,800 (30 days at \$160/day)
 1,200 (vehicle expense, equipment, etc)
 800 (record keeping/report writing)
 \$6,800

Monitoring Item - Furbearer Population Trends

Type of Monitoring - Effectiveness and/or Validation Measures the population trends of marten, fisher, wolverine, and relationships to habitat changes

Priority - Forest Priority Group 1

Where Applies - Ecological subsections of the Forest

Indicator -

Population trend travel distance per encounter of tracks or other sign, (example 1 43 marten tracks or sign per mile)

Habitat changes documented changes in important habitat parameters such as forest seral stages, dead and downed woody debris, motorized access, etc

Method -

Population trend Winter track/sign surveys following procedures developed by Dr Steve Minta in the Western Yellowstone Forest Carnivore Project Briefly a minimum of three sampling units of four square miles in each ecological subsection, with 8 to 10 linear miles of snowmachine routes in each sampling unit Each sampling unit should be sampled 3 times during the winter period Specific protocol is documented in Western Yellowstone Forest Carnivore Project Study

Since wolverine and fisher are extremely rare, additional monitoring using the following techniques may be used

A Scent stations with cameras and/or track recording,

B Surveys of natal denning areas in boulder fields (for wolverine),

C All observations from reputable sources will be recorded and maintained in District and Forest databases

Habitat changes Documentation and mapping of changes in forest seral stages (timber harvest, fires, etc) in the Forest GIS database Documentation of changes in motorized access (see road and trail access monitoring items) Loss of dead and downed woody debris due to firewood gathering, timber harvesting, etc

Expected Precision and Reliability

- Precision - Moderate to High
- Reliability - Moderate to High

Tolerance or Variability Indicating Action - Furbearer populations will fluctuate naturally due to a variety of factors such as weather, prey abundance, trapping pressure (martens), etc Populations are expected to change due to programmed management actions like timber harvesting, as predicted in the FEIS Therefore a sustained downward trend for at least four sampling winters which is greater than expected from programmed management actions will trigger management review

Frequency of Monitoring - At least half of the ecological subsections each winter

Lead Responsibility - Forest wildlife biologist State Fish and Game Departments and other agencies will be involved as much as possible

Estimated Annual Cost - \$18,000

Monitoring Item - Goshawk Population Trends

Type of Monitoring - Effectiveness and/or Validation Designed to measure population trends of goshawks and relationships to habitat changes

Priority - Forest Priority Group 1

Where Applies - Forestwide

Indicator -

Population trend adult occupancy of known goshawk nesting territories

Habitat changes documented changes in important habitat parameters identified in the Forestwide S&Gs within known goshawk nesting territories

Method -

Population trend Random sampling of adult occupancy at a minimum of 15 goshawk nesting territories each year Sampling can occur during April (no taped calls), and June 10-30 (using taped calls) More than one trip to each territory may be needed to accurately assess adult occupancy Alternate nest sites must be checked

In addition to random sampling, all verified observations of adult occupancy in territories will be recorded All new verified territories will be added to the forestwide database

Habitat changes Documentation and mapping of changes in habitat conditions identified in the Forestwide S&Gs within active and historic nest territories, using the forest GIS database

Expected Precision and Reliability

- Precision - Moderate to High
- Reliability - Moderate to High

Tolerance or Variability Indicating Action - Habitat changes which exceed the Forestwide goshawk S&Gs Goshawk territories are not always occupied every year. However, overtime, a stable population should revolve around some average occupancy rate. A sustained downward trend of adult occupancy for at least four years may indicate a need for action.

Frequency of Monitoring - Annually

Lead Responsibility - Targhee National Forest, State Fish and Game Departments and other agencies will be involved as much as possible.

Estimated Annual Cost -
\$7,200 (1 person for 45 days at \$160/day)
4,550 (vehicle expense, equipment, etc.)
800 (record keeping/report writing)
\$12,550

Monitoring Item - Forest Owl Population

Type of Monitoring - Effectiveness and/or Validation. Designed to measure population trends of boreal, great gray and flammulated owls, and relationships to habitat changes.

Priority - Forest Priority Group 1

Where Applies - Ecological subsections of the forest

Indicator -

Population trend: Travel distance per encounter of calling adults (example: 0.5 boreal owl or great gray owl encounters per ten miles)

Habitat changes: Documented changes in important habitat parameters such as forest seral stages, dead and downed woody debris, etc., within active and historic nesting territories.

Method -

Population trend: A minimum of ten miles of calling transects within each ecological subsection (70 miles total) conducted each year. Briefly, Boreal owls can be surveyed from about February through April, great gray owls from March through May, and flammulated owls during May. Follow standard survey/calling protocol which has been used on the forest for owl surveys for the past several years. About four miles of transect can be done in one night by one team.

In addition to the survey routes, all verified observations of boreal, great gray, and flammulated owls during the nesting and brooding/rearing seasons will be recorded and maintained in a forest database.

Habitat changes: Documentation and mapping of changes in forest seral stages (due to timber harvest, fires, etc.) within active and historic nest territories, using the forest GIS database. Loss of dead and downed woody debris due to firewood gathering, timber harvesting, etc.

Expected Precision and Reliability

- Precision - Moderate to High
- Reliability - Moderate to High

Tolerance or Variability Indicating Action - Forest owl populations will fluctuate naturally due to a variety of factors such as weather, prey abundance, etc. Forestwide S&Gs were developed to maintain suitable habitat conditions in known territories. Therefore a sustained downward trend for at least four sampling years which can be correlated with changes in habitat conditions due to vegetation management or natural events such as fire will trigger management review.

Frequency of Monitoring - Annually

Lead Responsibility - Forest biologist. State Fish and Game Departments and other agencies will be involved as much as possible.

Estimated Annual Cost - \$5,760 (2 person teams/18 days at \$160/day/person)
 4,520 (vehicle expense, equipment, etc)
 800 (record keeping/report writing)
 \$11,080

Monitoring Item - Trumpeter Swan Nesting Population

Type of Monitoring - Effectiveness and/or Validation. Designed to measure nesting populations and relationship to habitat changes.

Priority - Forest Priority Group 1

Where Applies - Trumpeter swan nesting habitat, highest priority will be the ponds and lakes identified in the Forestwide S&Gs.

Indicator -

Population trend. Occupancy of suitable nesting habitat and productivity of swan pairs using suitable nesting habitat.

Habitat changes. Changes in riparian and aquatic habitat within or adjacent to suitable nesting habitat, changes in human activities within or adjacent to suitable nesting habitat.

Method -

Population trend. Standard monitoring of occupancy and productivity which has been done for more than a decade. Emphasis will be on those sites listed in the trumpeter swan Forestwide S&Gs.

Habitat changes. Documentation and mapping of riparian and aquatic vegetation changes at suitable nesting ponds and lakes. Documentation of changes in water depths. Documentation of changes in human activities at suitable nesting ponds and lakes, which may include recreations use, motorized access, livestock grazing, etc.

Expected Precision and Reliability

- Precision - High for population trends. Moderate to high for habitat changes.

- Reliability - High for population trends Moderate to high for habitat changes

Tolerance or Variability Indicating Action - From 1982 to 1996, the number of sites occupied by pairs has ranged from 7 to 17 Only one site has been occupied by a swan pair all 15 years, and only one site has been occupied by a swan pair 14 out of the 15 years Total young observed has ranged between 3 and 16 for the 15 years of data The recent work to move swans to new areas may have resulted in reduced pairs using suitable habitat on the forest We therefore expect a lot of variability between years However, a downward trend in the number of pairs and/or productivity for more than four years in a row would indicate that some management action may be necessary

Frequency of Monitoring - Annually

Lead Responsibility - Forest biologist Ranger Districts will gather data, in cooperation with the State Fish and Game Departments and the U S Fish and Wildlife Service (Red Rock Lakes National Wildlife Refuge)

Estimated Annual Cost -	\$3,200 (20 days at \$160/day)
	1,000 (vehicle expense, equipment, etc)
	800 (record keeping/report writing)
	\$5,000

Monitoring Item - Spotted Frog Population

Type of Monitoring - Effectiveness and/or Validation Designed to measure populations of frogs and relationship to habitat changes

Priority - Forest Priority Group 1

Where Applies - Spotted frog habitat, which is riparian and wetland areas on the northern portions of the Forest

Indicator -

Population trend Occupancy at documented sites and relative abundance at those sites

Habitat changes Changes in riparian and aquatic habitat conditions within or adjacent to documented sites, changes in human activities within or adjacent to documented sites

Method -

Population trend The Forest and Idaho State University recently completed a survey of spotted frogs on the forest Sites with spotted frogs were documented, and a relative estimate of the frog population observed at each site was made Each year, random sampling of occupancy and relative abundance will be done at a minimum of 15 sites, using the same techniques and procedures as used by Idaho State University In addition to resurveying known sites, new sites with spotted frogs will be added to the data base, and included in the survey program

Habitat changes Spotted frog habitat is to be managed according to Rx 2 8 3 and Forestwide S&Gs for Fisheries, Water and Riparian Resources As spotted frog sites are surveyed each year, documentation will be done on the habitat conditions and adherence to the management direction Conditions will be compared with descriptions from the Idaho State University survey reports

Expected Precision and Reliability

- Precision - Moderate for population trends Moderate to high for habitat changes
- Reliability - Moderate for population trends Moderate to high for habitat changes

Tolerance or Variability Indicating Action - The survey results from Idaho State University indicate that spotted frog distribution and abundance is highly variable between years, and is strongly influenced by moisture and water We expect survey results to be variable A consistent decline in the relative abundance of frogs at a majority of the survey sites, and a downward trend in riparian habitat conditions, would indicate that some management action may be necessary

Frequency of Monitoring - Annually

Lead Responsibility - Forest biologist will coordinate work by district personnel Other agencies and institutions will be involved as much as possible

Estimated Annual Cost - \$4,000 (25 days at \$160/day)
 1,000 (vehicle expense, equipment, etc)
 800 (record keeping/report writing)
 \$5,800

Monitoring Item - Common Loon Population

Type of Monitoring - Effectiveness and/or Validation Designed to measure populations of common loons and relationship to habitat changes

Priority - Forest Priority Group 1

Where Applies - Suitable common loon nesting and brood rearing habitat identified in Process Paper D Additional sites may be added when new information documents that new sites are suitable

Indicator -

Population trend Occupancy at documented sites and productivity of breeding pairs at those sites

Habitat changes Changes in riparian and aquatic habitat conditions within or adjacent to documented sites, changes in human activities within or adjacent to documented sites

Method -

Population trend Annually document the presence of common loons at the sites listed in Process Paper D Several visits should be made to each site during the nesting and brood rearing seasons to document the presence of young

Habitat changes Common loon habitat is to be managed according to prescription 2 8 3 and Forestwide S&Gs for Fisheries, Water and Riparian Resources As common loon sites are surveyed each year, habitat conditions and adherence to the management direction will be documented

Expected Precision and Reliability

- Precision - High for population trends Moderate to high for habitat changes

- Reliability - High for population trends Moderate to high for habitat changes

Tolerance or Variability Indicating Action - Successful reproduction by common loons has been documented at only three sites Our data indicates that occupancy by pairs and successful reproduction does not occur every year at these sites The Forest Plan has two objectives for common loons One objective is to evaluate the potential to provide and maintain suitable breeding habitat The second objective is to develop common loon management plans for suitable sites if the evaluation indicates there is potential to provide and maintain suitable breeding habitat While these objectives are being accomplished, we want to maintain existing habitat conditions and existing levels of common loon pairs

Frequency of Monitoring - Annually

Lead Responsibility - Forest biologist and Ranger Districts Other agencies and institutions will be involved whenever possible

Estimated Annual Cost - \$1,600 (10 days at \$160/day)
 400 (vehicle expense, equipment, etc)
 400 (record keeping/report writing)
 \$2,400

Monitoring Item - Harlequin Duck Population

Type of Monitoring - Effectiveness and/or Validation Designed to measure populations of harlequin ducks and relationship to habitat changes

Priority - Forest Priority Group 1

Where Applies - Suitable harlequin duck nesting and brood rearing habitat identified in Process Paper D Additional sites may be added when new information documents that new sites are suitable

Indicator -

Population trend Occupancy at documented sites and productivity of breeding pairs at those sites

Habitat changes Changes in riparian and aquatic habitat conditions within or adjacent to documented sites, changes in human activities within or adjacent to documented sites

Method -

Population trend Annually document the presence of harlequin ducks at the sites listed in Process Paper D Several visits should be made to each site during the nesting and brood rearing seasons to document the presence of young

Habitat changes Harlequin duck habitat is to be managed according to Rx 2 8 3 and Forestwide S&Gs for Fisheries, Water and Riparian Resources, and Forestwide S&Gs for harlequin ducks As harlequin duck sites are surveyed each year, documentation will be done on the habitat conditions and adherence to the management directions

Expected Precision and Reliability

- Precision - Moderate for population trends Moderate to high for habitat changes
- Reliability - Moderate for population trends Moderate to high for habitat changes

Tolerance or Variability Indicating Action - Successful reproduction by harlequin ducks has been documented at only three sites. Our data indicates that occupancy by pairs and successful reproduction does not occur every year at these sites. If harlequin duck presence is to be maintained on the forest, existing habitat conditions and existing levels of harlequin duck pairs must be maintained. Any decline in existing habitat conditions may indicate the need for action.

Frequency of Monitoring - Annually

Lead Responsibility - Forest biologist will coordinate work by district personnel. Other agencies and institutions will be involved as much as possible.

Estimated Annual Cost - \$3,200 (20 days at \$160/day)
 800 (vehicle expense, equipment, etc)
 800 (record keeping/report writing)
 \$4,800

Monitoring Item - Elk Vulnerability and Elk Habitat Effectiveness

Type of Monitoring - Effectiveness and/or Validation

Priority - Forest Priority Group 1

Where Applies - Forestwide

Indicator -

Population trend: Percent bull elk mortality during the general elk hunting seasons

Habitat changes: Open road and open motorized trail route density (OROMTRD), cross-country OHV use, hiding cover

Method -

Population trend: Percent bull elk mortality is gathered by the State Fish and Game Departments

Habitat changes: OROMTRD is covered in the Road and Trail Access monitoring. Cross-country OHV use will be monitored during the fall general elk seasons with the help of the State Fish and Game Departments. Cover analysis will be updated using the Forest GIS vegetation database to account for natural disturbances (such as fire) and management activities (such as timber harvesting)

Expected Precision and Reliability

- Precision - High
- Reliability - High

Tolerance or Variability Indicating Action - Failure to implement the Revision S&Gs for OROMTRD, cross-country OHV travel, and timber harvesting

Frequency of Monitoring - Annually

Lead Responsibility - Forest biologist compiles data. Percent bull elk mortality is done by the State Fish

and Game Departments Ranger Districts and the Supervisor's Office have the lead on OROMTRD, cross-country OHV travel, and cover analysis

Estimated Annual Cost - \$9,600 (60 days at \$160/day)
 2,400 (vehicle expense, equipment, etc)
 800 (record keeping/report writing)
 \$12,800

Monitoring Item - Red Squirrel Population

Type of Monitoring - Effectiveness and/or Validation Designed to measure population trends of red squirrels and relationship to habitat changes

Priority - Forest Priority Group 1

Where Applies - Grizzly bear BMU's and subunits

Indicator -

Population trend Densities of active squirrel middens

Habitat changes Cone producing conifer stands, with emphasis on cone producing whitebark pine

Method -

Population trend Follow methodology described by David J Mattson and Daniel P Reinhart in "Indicators of Red Squirrel (*Tamiasciurus hudsonicus*) Abundance in the Whitebark Pine Zone," Great Basin Naturalist 56(3) 272-275 (1996)

Habitat changes Documentation and mapping of changes in forest seral stages (due to timber harvest, fires, etc) within grizzly bear BMU's and subunits, using the Forest GIS database

Expected Precision and Reliability

- Precision - Moderate to high
- Reliability - Moderate to high

Tolerance or Variability Indicating Action - Red squirrel populations will fluctuate with natural fluctuations in cone crops due to weather and other variables and disturbances which replace cone bearing age trees such as fire and timber harvesting. The management objective is to maintain red squirrel populations wherever suitable habitat occurs. Therefore, a population decline in suitable habitat that cannot be correlated with natural fluctuations in cone crops may indicate action is needed

Frequency of Monitoring - Annually

Lead Responsibility - Forest biologist

Estimated Annual Cost - \$12,800 (2 person teams/40 days at \$160/day)
 2,000 (vehicle expense, equipment, etc)
 800 (record keeping/report writing)
 \$15,600

FOREST USE AND OCCUPATION

Forest Users

Monitoring Item - User Satisfaction

Type of Monitoring - Implementation, Effectiveness Designed to measure forest customer satisfaction with the direction, progress, and administration of the Revision

Priority - Forest Priority Group 2

Where Applies - Forestwide

Indicator - Comments, both written and oral, approving or disapproving of the direction of Forest management and the rate of progress in implementing it

Method - Forest User mailing lists would be used to periodically build random samples Individuals and groups on this list would then be sampled using methods such as phone surveys or mailings These samples would be conducted by organizations or academic institutions with sampling expertise, under contract to the Forest Informal, optional, person-to-person user surveys would be conducted of trail users, campers, and sport recreationists by field-going Forest personnel Records and notes would be kept of public meetings held by the Forest Forest employees would be encouraged to record and submit informal notes of opinions and suggestions of friends and family for consideration by the Forest

Expected Precision and Reliability

- Precision - Samples designed with statistical principles could be quite accurate Otherwise it would still provide a reasonable indication to managers
- Reliability - The results should be reasonably reproducible

Tolerance or Variability Indicating Action - This would have to determined by Forest line officers based on the issue

Frequency of Monitoring - Annually or as needed

Lead Responsibility - Forest Public Affairs Officer

Estimated Annual Cost - Working with a survey organization would require three weeks per year for the Public Affairs Officer Helping to assess the surveys would require GS-9 employees To conduct field surveys of recreationists would require two weeks for two GS-9 employees

Contract to conduct phone sample	\$3,000
GS12 PAO, three weeks @ \$1,000/wk	\$3,000
GS9 45 hours at \$18/hr	\$ 810
GS9 (field survey), 4 wks @ \$18/hr	\$2,880
TOTAL	\$9,690

Forest Operation

Monitoring Item - Budget

Type of Monitoring - Implementation and Effectiveness

Priority - Forest Priority Group 1 Required by regulation at 36 CFR 219 12(K)(3)

Where Applies - Forestwide

Indicator - Forest budget adjusted for the effects of inflation

Method - Convert annual budget figures to the same basis as the Revision's projected budget Compare the results

Expected Precision and Reliability

- Precision - High
- Reliability - High

Tolerance or Variability Indicating Action - +/- 25 percent of projected budget

Frequency of Monitoring - Every five years

Lead Responsibility - Forest Budget and Finance Officer

Annual Estimated Cost - \$1,000 every five years

Recreation

Monitoring Item - Seasonal Trail Use Impacts to Soil and Vegetation

Type of Monitoring - Implementation and Effectiveness Designed to measure the impacts to on-trail and off-trail soils and vegetation from impacts from hiking, horse use and OHV use, for compliance with the 15 percent soil disturbance policy

Priority - Forest Priority Group 2

Where Applies - System trail and off-trail areas

Indicator - Soil displacement on the trail or within the adjacent meadow or basin area

Method - Visual and photo documentation and trail condition surveys

Expected Precision and Reliability

- Precision - 60-75 percent
- Reliability - 60-75 percent

Tolerance or Variability Indicating Action - When condition surveys show that use is impacting the trail tread or adjacent soils and vegetation such that significant resource damage, health, and safety, or trail maintenance are at risk

Frequency of Monitoring - Annually on approximately 5-10 percent of the system trail areas (60-120 miles) and adjacent off-trail areas (Priority areas initially are the Big Hole Mountains, Madison-Pitchstone Plateaus, Caribou Range Mountains and Lemhi-Medicine Lodge subsections)

Lead Responsibility - Recreation and Engineering Staffs

Estimated Annual Cost - \$25,000-35,000

Monitoring Item - Recreation/Wildlife Conflicts

Type of Monitoring - Implementation and Effectiveness Designed to measure conflicts between all forms of recreation and wildlife

Priority - Forest Priority Group 2

Where Applies - Forestwide

Indicator - Number of violations of closure areas, observed wildlife disturbances, and diminishing wildlife populations or signs of stress

Method - Field and aerial observations, photography This item will depend partially on the results of monitoring of the effectiveness of road closures, which is another Priority Group 2 item

It is expected that partnerships can be developed with state game and fish agencies, State recreation agencies, other agencies and possibly recreation user groups to monitor this item

Expected Precision and Reliability

- Precision - 50-75 percent
- Reliability - 50-75 percent

Tolerance or Variability Indicating Action - When evaluation of wildlife populations indicates they are beginning to falter or seek out other areas for security and solitude, then an evaluation of recreation use levels will take place Evaluation of other uses of the area may also be appropriate

Frequency of Monitoring -

- Winter, in prescription areas emphasizing winter range values weekly in 10 percent of winter range per year for 3-4 months,
- Summer, in prescription areas emphasizing big game security or summer range values weekly for 3 to 4 months, especially in the early summer

Lead Responsibility - District Rangers

Estimated Annual Cost - \$30,000

Monitoring Item - Dispersed Campsite Soil Displacement

Type of Monitoring - Implementation, Effectiveness Designed to measure soil displacement in heavy-use dispersed campsites, for compliance with the 15 percent soil disturbance policy

Priority - Forest Priority Group 3

Where Applies - 4 3 prescription areas

Indicator - Displaced soil

Method - Frissell Condition Class method

Expected Precision and Reliability

- Precision - 75 percent+
- Reliability - Very Good, 75 percent+

Tolerance or Variability Indicating Action - Significant or consistent violation of the 15 percent soil disturbance policy in 4 3 prescription areas will be cause to reexamine campsite use This may also trigger validation monitoring of the propriety of applying the policy in these areas

Frequency of Monitoring - Annually, within approximately 10 percent of the one hundred 4 3 prescription areas (Lemhi-Medicine Lodge and Caribou Range Mountains subsections will receive top priority for this monitoring initially)

Lead Responsibility - Forest Recreation Staff

Estimated Annual Cost - \$40,000

Monitoring Item - Jedediah Smith Wilderness LAC

Type of Monitoring - Implementation and Effectiveness Designed to measure impacts from wilderness use on wilderness quality (from the Limits of Acceptable Change planning process for the Jedediah Smith Wilderness)

Priority - Forest Priority Group 3

Where Applies - Jedediah Smith Wilderness

Indicator - See The Jedediah Smith monitoring plan which follows

Method - See The Jedediah Smith plan which follows

Expected Precision and Reliability

- Precision - 75 percent
- Reliability - 75 percent

Tolerance or Variability Indicating Action - If it is determined that impacts from use of the Wilderness are exceeding those limits shown, then an evaluation will be made of the possible causes and potential remediations identified

Frequency of Monitoring - Annually

Lead Responsibility - Teton Basin Ranger District, and Forest Recreation Staff

Estimated Annual Cost - \$15,000-20,000

Jedediah Smith Wilderness Monitoring Plan - Further Details

INDICATORS AND STANDARDS

Indicators and standards will be monitored yearly and may require adjustment if on site administration indicates resources or social conditions are deteriorating beyond an acceptable level. These measurements relate only within each specific zone of the Wilderness and not all of one type of zone lumped together. In other words, for Class 1, if the standard is exceeded in a particular Class 1 zone, then management action will be taken. Following each indicator is a list of management actions which could be used to bring the indicator back to the identified standard for its class. The order of the actions shown does not indicate priority.

Indicator #1	Standards			
	Class 1	Class 2	Class 3	Issues 1/
Number of occupied campsites users may see from their site	0	2	3	1, 2, 4

Possible Management Actions - If number of visible campsites is approaching or exceeds standards

- 1 Remove campsite(s) and restore the area to as near natural condition as possible
- 2 Relocate campsite(s) to more suitable location and restore to as near natural condition as possible
- 3 Talk with users and suggest other camping possibilities

Indicator #2	Standards			
	Class 1	Class 2	Class 3	Issues 1/
Condition of individual campsites	vegetation flattened, not permanently injured	vegetation worn away at center of activity	vegetation lost around center of activity	1, 2, 5

Possible Management Actions - If condition of campsite is approaching or exceeds standards

- 1 Rehabilitate the site, sign it for restoration, and/or close it
- 2 Talk with users about minimum impact camping techniques
- 3 Relocate site to a more durable location and restore the vacated campsite to as near natural condition as possible
- 4 Visit local schools, organizational groups to discuss wilderness ethics, regulations, minimum impact practices

Indicator #3	Standards			
	Class 1	Class 2	Class 3	Issues 1/
Condition of user-created routes and trail segments	game trail	18" to 42" wide, brush, rock, litter present	42" wide, brushed out along edge	1, 2, 4

Possible Management Actions - If user-created route or trail is approaching or exceeds standard

- 1 Talk with users about trail conditions and experiences
- 2 Ensure trail crews and maintenance volunteers are aware of standards and do not exceed them
- 3 Rehabilitate trail sections that exceed standards
- 4 Relocate trail segments to more suitable locations
- 5 Encourage use on other trails
- 6 Limit number of users on trail
- 7 Visit local schools, organizational groups to discuss wilderness ethics, regulations, minimum impact practices

Indicator #4	Standards			
	Class 1	Class 2	Class 3	Issues 1/
Number of encounters per mile with other parties along a user-created route or trail	0*	3*	5*	1, 2, 3, 4, 5
* Encounters may be higher within first mile of trail from trailhead				

Possible Management Actions - If number of encounters is approaching or exceeds standards

- 1 Encourage users to vary starting times
- 2 Lower party size and stock limits
- 3 Monitor user acceptance of trail use levels
- 4 Encourage users to go to other places

Indicator #5	Standards			
	Class 1	Class 2	Class 3	Issues 1/
Number of substantiated complaints about outfitters and grazing permittees from the public and other permittees	2	5	10	3, 5

Possible Management Actions - If the number of complaints concerning permittees is approaching or exceeds standards

- 1 Increase permit administration on the ground
- 2 Require wilderness ethics education as a condition of permit issuance
- 3 Restrict the number of permits issued
- 4 Bring parties together to discuss issue(s)

Indicator #6	Standards			
	Class 1	Class 2	Class 3	Issues 1/
Number of violations of regulations by type	5	10	15	1, 3, 5
1/ See process paper for Jedediah Smith Wilderness				

Possible Management Actions - If the number of violations is approaching or exceeding standards

- 1 Increase presence of uniformed Forest Service personnel
- 2 Visit local schools, organizational groups to discuss wilderness ethics, regulations, minimum impact camping techniques
- 3 Review regulations for appropriateness
- 4 Increase posting of regulations at trailheads

MONITORING

Air Quality

- 1 Monitor acid deposition in Wilderness lakes Specifically, Two Island Lake is extremely sensitive to acid deposition, and Middle Granite Lake is more typical of Wilderness lakes with some buffering capacity Reference for more information the water quality survey conducted in 1992 by personnel from the Targhee and Bridger-Teton National Forests
- 2 Monitor visual air quality by means such as periodic photography Consider establishing a monitoring station at the Grand Targhee ski area or other location which would permit observation of air quality in both the Wilderness and Grand Teton National Park

Wildlife

- 1 Monitor human/grizzly interactions (confrontations and movements) to determine any change in the known range of the bear, and which management actions are needed if any
- 2 Monitor grizzly bear activity and movement relevant to domestic sheep grazing to determine which management actions are needed if any
- 3 Continue annual population censusing of bighorn sheep including lamb survival and ram harvest (Wyoming Game and Fish Department)

Cultural Resources

Monitor cultural resource sites in high public use areas annually to assess potential and actual effects Formulate mitigations in conjunction with the Wyoming State Historic Preservation Officer when effects are adverse

Roads and Trails Access

Monitoring Item - Authorized Use Level

Type of Monitoring - Implementation Designed to measure the amount of authorized motorized use on closed roads and trails, to determine if a route or area is effectively open

Priority - Forest Priority Group 2

Where Applies - This item is most important in prescriptions which feature the following

- * elk and deer habitat values—5 1 4, 5 4, 2 7,
- * grizzly bear habitat values—5 3 5, 2 6 1, 2 6 2, 2 6 5,

Indicator - The number of motorized trips per week per route

Method - The districts will keep a record of administrative motorized use allowed on each route by date. This record could be maintained by the district ranger, and could be supported by an entry of dates and trips made per road, returned gate permits, or other means. At reporting time this record would be totalled and an evaluation made as to whether or not the number of trips throughout the summer effectively opened the road. Those roads opened would be noted to the GIS shop.

Expected Precision and Reliability

- Precision - Precision could be high depending on the accuracy of the record keeping
- Reliability - The results would be wholly dependent on the records kept

Tolerance or Variability Indicating Action - Reference prescription standards

Frequency of Monitoring - Annually

Lead Responsibility - The district ranger would keep records of allowed entries onto closed routes for administrative purposes, and evaluate the data. The Forest GIS shop would display any resultant roads which are effectively opened.

Estimated Annual Cost

- * Two days per district per GS-9 biologist 5 (\$450)
- * Two days for one GS-5 GIS technician \$240

TOTAL \$2,500

Monitoring Item - Road Closure Effectiveness ✓

Thru V-41

Type of Monitoring - Effectiveness Designed to measure the effectiveness of road and trail closures

Priority - Forest Priority Group 1

Where Applies - This item is most important in prescriptions which feature the following

- * elk and deer habitat values—5 1 4, 5 4, 2 7,
- * grizzly bear habitat values—5 3 5, 2 6 1, 2 6 2, 2 6 5,

- * any 1-series prescriptions where motorized use exceeds prescription limits,
- * those areas where roads and/or trails were closed to stop direct resource damage

Indicator - The units of measure to be used are

- * direct encounter of a prohibited use in a restricted area,
- * evidence of prohibited use such as tire tracks

Method - Several methods would be used, in a rough stratified sampling approach. Visual checks of access points to closed road systems would be performed. Ocular check information from incidental employee observations would also be used. On the basis of evidence such as use encounters or tire tracks, roads would be placed into strata of confirmed-use, suspected-use and no-use. Each of these strata would then be sampled with mounted cameras activated by motion sensors. Although we might not be able to obtain a scientifically- valid number of samples due to cost, the data would help to refine our estimates of use and target areas of greatest concern.

There is an opportunity to develop partnerships with several entities, including state fish and game departments and the U S Fish and Wildlife Service. It is possible that user groups would be interested in assisting with this as well, though this would have to be done as appropriate.

Expected Precision and Reliability

- Precision - We can measure presence or absence of prohibited use with some accuracy. We will not be able to measure the number of offenses accurately.
- Reliability - Evidence of recent use at one point in time should be reliable. This data cannot be used reliably by itself to judge the frequency of prior use or predict future use since this will depend to some extent on the individual violators. The data could be entered into a predictive model if one is available and accepted.

Tolerance or Variability Indicating Action - Reference the standards in the Roads section of the Forest-wide Standards and Guidelines. Briefly, the point at which some action would be required is when use exceeds 1-2 trips per week during the majority of the weeks during the spring/summer/fall period.

Frequency of Monitoring - The visual checks would be performed three times during the spring/summer/fall seasons, to incorporate at least one holiday weekend and the fall hunting season. Due to the limited number of cameras and personnel costs, we may wish to target only one or two districts per year, or only portions of certain districts. Complete Forest coverage would take several years.

Lead Responsibility - Forest law enforcement officer

Estimated Annual Cost - Assume we will monitor one district per year. Assume one GS-5 tech can visually monitor ten roads per day, or thirty roads per sampling round of three days. Assume one GS-9 camera tech can install, monitor and remove six cameras (six roads) per one-week sampling round. Also assume we will purchase two camera units @ \$800 (the Forest wildlife shop already has 4-6 of these, but some need repairs). Then

For visual checks

- * One GS-5 tech twice per summer @ three days \$ 750,
- * Rental vehicle @ \$15/day \$ 90,

For camera confirmations

- * two new camera units amortized over ten years \$ 160/year,
- * install and read cameras-one week per sampling round three times per summer for one GS-9 @ \$700/week \$2,100,

* materials/incidentals-mounting hardware, film, developing of film, incidental repairs \$ 500,
 Analysis/evaluation - one GS11 for one week \$ 800

TOTAL \$4,400/year

Monitoring Item - Achievement of Road Density Standards

Type of Monitoring - Implementation monitoring Designed to measure the achievement of standards in prescription areas for Total Motorized Access Route Density (TMARD), and Open Road and Open Motorized Trail Route Density (OROMTRD)

Priority - Forest Priority Group 1

Where Applies - This item is most important in prescriptions which feature the following

- * elk and deer habitat values-5 1 4, 5 4, 2 7,
- * grizzly bear habitat values-5 3 5, 2 6 1, 2 6 2, 2 6 5,

Indicator - Miles per square mile of open roads and open motorized trails (for OROMTRD), and open and restricted roads and motorized trails (for TMARD)

Method - The method is explained in more detail in the Forestwide standards and guides for access The Forest geographic information system (GIS) and associated database will be used Highlights of the method include

- * annually update the transportation database with road and trail closures and other pertinent data,
- * GIS calculate the contiguous area of each prescription polygon,
- * calculate the miles of routes that are open and seasonally open, and total these,
- * moving-window technology will be used

No partners in this effort were identified

Expected Precision and Reliability

- Precision - High
- Reliability - High

Tolerance or Variability Indicating Action - Progress in achieving the TMARD and OROMTRD standards should follow an established activity schedule based on plan goals and objectives At the end of the specified time period the standards should be met If the standards are not met by the end of the time period a management review should be conducted to determine the cause

Frequency of Monitoring - Annually

Lead Responsibility - The district ranger will annually forward accomplishments toward meeting standards, and other pertinent data, to the Forest engineer The GIS shop will do the calculations and produce the report

Estimated Annual Cost - One GS-7 biologist for two days on each district - 2 (\$180) (5)
 One GS-5 GIS technician for one week per district - 5 (\$600)
 TOTAL \$4,800

PRODUCTION OF COMMODITY RESOURCES

Range

Monitoring Item - Streambank Disturbance/Stubble Height/Channel Stability

Type of Monitoring - Validation

Priority - Forest Priority Group 1

Where Applies - At any one of the 100 established correlation plot sites across the Forest

Indicator - Percent of streambank disturbance in relation to stubble height and how these parameters relate to channel stability

Method - Targhee Monitoring Protocol

Expected Precision and Reliability

- Precision - High
- Reliability - High

Tolerance or Variability Indicating Action - To be determined

Frequency of Monitoring - At various times throughout the field season for a five-year time period

Lead Responsibility - Forest range and watershed staffs, and district rangeland management specialists

Estimated Annual Cost - Each year, 150* percent of the plots will be monitored for trampling and stubble height. Fifty percent will be monitored for stream channel stability

1 day/plot x 150* plots x \$175/day (GS-9) =	\$26,250
55 days (50 field, 5 office) x \$200/day (GS-11) =	\$11,000
Total	\$37,250

* 150 plot readings per year, of the 100 plots, some will be read twice

Monitoring Item - Riparian Forage Utilization Within Key Areas

Type of Monitoring - Implementation

Priority - Forest Priority Group 1

Where Applies - Key areas in grazing allotments

Indicator - Stubble height of key species in the hydric greenline and AIZ, percent utilization of browse in the entire key area, and soil disturbance levels in the AIZ

Method - Targhee Monitoring Protocol

Expected Precision and Reliability

- Precision - Moderate
- Reliability - Moderate

Tolerance or Variability Indicating Action - When the stubble height is more than one inch below allowable use levels or when browse use is more than 10 percent above proper use

Frequency of Monitoring - At least once a year on units within priority allotments and additional readings if time allows

Lead Responsibility - District Rangeland Management Specialist

Estimated Annual Cost - One-third of all allotments on each District will be monitored yearly 1 GS-9 @ \$175 00/day Each priority allotment will require one trip per unit Since the allotments have an average of five units each, it will total five days per priority allotment One-third of 154 allotments = 51

$$\begin{array}{r} (\$175\ 00) (5) = 875 \\ 51 \\ \hline - - - - - \$44,625\ \text{yearly} \end{array}$$

Monitoring Item - Upland Forage Utilization Within Key Areas

Type of Monitoring - Implementation

Priority - Forest Priority Group 3

Where Applies - Key areas within grazing allotments These sites will be used in areas where upland forage is limiting

Indicator - Percent utilization of key species and soil disturbance in key areas

Method - Targhee Monitoring Protocol

Expected Precision and Reliability

- Precision - Moderate
- Reliability - Moderate

Tolerance or Variability Indicating Action - When the utilization is ten percent above proper use

Frequency of Monitoring - Once a year on units within priority allotments and additional readings if time allows

Lead Responsibility - District Rangeland Management Specialist

Estimated Annual Cost - Upland use will be monitored on one-third of the allotments on each district One GS-9 at \$175 00/day Average allotment requires 2 days per year One-third of 154 allotments = 51

$$\begin{array}{r} (\$175\ 00) (2) = 350\ 00 \\ 51 \\ \hline \$17,850\ 00\ \text{yearly Forestwide} \end{array}$$

Monitoring Item - Riparian and Upland Long-Term Trend in Benchmarks

Type of Monitoring - Implementation

Priority - Forest Priority Group 3

Where Applies - There should be at least one benchmark in each dominant ecological type unit within an area of interest

Indicator - Acres of riparian and uplands meeting or moving toward DVC's (range objectives 1 and 2)

Method - Targhee Monitoring Protocol

Expected Precision and Reliability

- Precision - High
- Reliability - High

Tolerance or Variability Indicating Action - When less than ten percent of the acres identified in range objectives 1 and 2 have improved each year

Frequency of Monitoring - Every five years

Lead Responsibility - District Rangeland Management Specialist

Estimated Annual Cost - One GS-9 @ \$175 00/day, 5 days per study (3 field, 2 office days) 35 ecological types x 2 sites/type = 105 Benchmark sites Ten percent of Benchmarks monitored annually = 11 Benchmarks/year

$$\begin{aligned}(11 \text{ sites})(5 \text{ days/site}) &= 55 \text{ days} \\ (\$175/\text{per day})(55\text{days}) &= \$9,625\end{aligned}$$

Timber

Monitoring Item - Changes to Land Suitability

Type of Monitoring - Validation of tentative suitability assessment made in the Revised Plan

Priority - Forest Priority Group 1

Where Applies - Applies primarily to lands in 5-series prescriptions, but could involve the review of projects anywhere on the Forest

Indicator - Change in total acreage in tentatively suited and unsuited lands using the criteria in the regulations and directives system

Method - Review project-level NEPA analyses for site-level confirmations of LMP tentative suitability calls Changes to initial calls on either suited or unsuited lands would be documented on a hardcopy map maintained in the planning shop This map would aggregate changes from various documents Changes to the Forest tentatively suited land base could be entered into the Forest GIS

Expected Precision and Reliability

- Precision - Site-specific analysis should give a precise description of true conditions
- Reliability - Using given parameters such as slope percent and soil stability, results should be reliable and reproducible

Tolerance or Variability Indicating Action - A significant overall change in tentatively suitable acres could trigger a revision of the ASQ

Frequency of Monitoring - Annually

Lead Responsibility - The Forest planning shop would aggregate the findings Project ID teams would do the individual analyses

Estimated Annual Cost - \$1,000

Monitoring Item - Maximum Created Opening Size

Type of Monitoring - Implementation

Priority - Forest Priority Group 3

Where Applies - This item needs to be monitored in the following prescription areas

- Rx 5 2 1 - generally 1 to 5 acres, but less than 40,
- Rx 5 2 2, 2 1 2 - generally less than 5 acres,
- Rx 5 3 5, 2 6 1 (a) - less than 6 5 acres,
- Rx 5 4 (some areas) - 20 acres or less,

Indicator - Size of created openings, in acres

Method - Compliance with the standard would be described in environmental documents

Expected Precision and Reliability

- Precision - High
- Reliability - High

Tolerance or Variability Indicating Action - Proposals to exceed the respective area standard would need to be sound and ecologically-based, and would require a Forest Plan amendment. If a trend is seen in legitimate proposals to exceed the respective standards the standards would need to be reviewed.

Frequency of Monitoring - In each decision document, where vegetation management is selected

Lead Responsibility - IDT leader and line officer

Estimated Annual Cost - \$1000 per year, primarily in incidental GIS and other analysis costs to display compliance with the standard

Monitoring Item - Security Cover Retention

Type of Monitoring - Implementation and effectiveness Designed to measure compliance with the standard governing security cover retained for grizzly bears in vegetation management projects

Priority - Forest Priority Group 3

Where Applies - This item must be monitored in the following prescription areas

5 3 5, 2 6 1 (a) - 70 percent

Indicator - Percent cover in area (see prescriptions for specifics)

Method - Environmental analysis and documentation for specific project proposals will display compliance with the respective standards. See prescriptions

Expected Precision and Reliability

- Precision - High
- Reliability - High

Tolerance or Variability Indicating Action - Proposals to exceed the standard will require a Revision amendment If a trend is seen toward exceeding the standard in soundly-based ecological management proposals the standard will need to be reviewed This may involve reopening formal consultation

Frequency of Monitoring - Every decision document selecting vegetation management in BMU's

Lead Responsibility - IDT leaders, District Biologists, line officers

Estimated Annual Cost - \$2000, primarily in incidental GIS and other analysis costs to display compliance with the standard If the information required to demonstrate security cover is not found in the Forest data base, then field survey may be required

Monitoring Item - Large Forested Block Retention

Type of Monitoring - Implementation Designed to measure retention of 250-acre forested blocks where required

Priority - Forest Priority Group 3

Where Applies - This applies to prescription areas 5 1 4 (c) and 5 4 (a-c)

Indicator - Size of forested blocks within project areas

Method - Timber sale environmental documents will disclose compliance with this measure Additionally, follow-up activity reviews should review effectiveness of treatments

Expected Precision and Reliability

- Precision - High
- Reliability - High

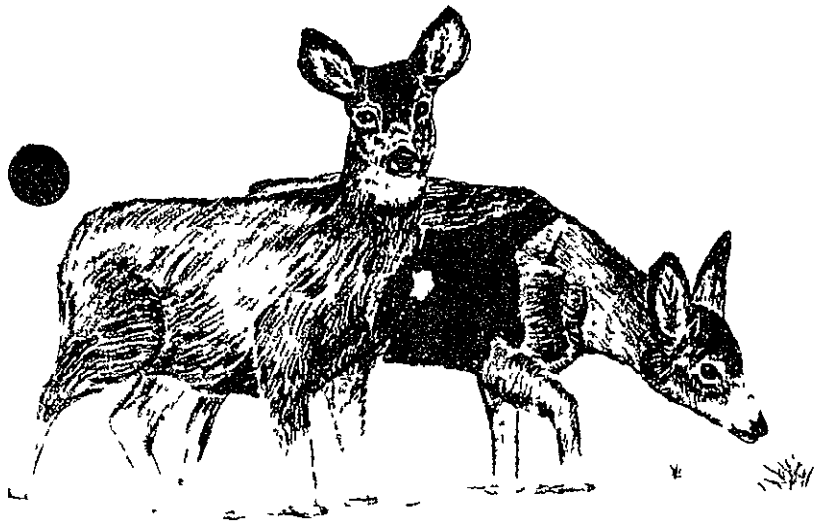
Tolerance or Variability Indicating Action - Any proposal to violate the standard requires a Revision amendment. If a trend develops of proposals citing ecologically-sound reasons to amend the Plan or change the standard, the standard needs to be reviewed

Frequency of Monitoring - With every decision document selecting a vegetation management alternative

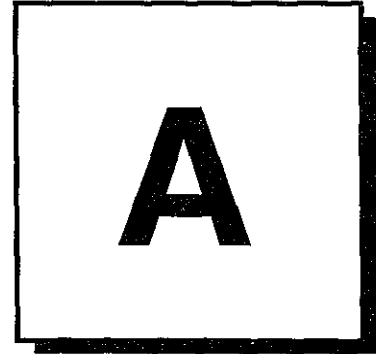
Lead Responsibility - IDT leaders and line officers

Estimated Annual Cost - \$1,000, primarily in incidental costs of GIS or other analysis to demonstrate compliance with the standard

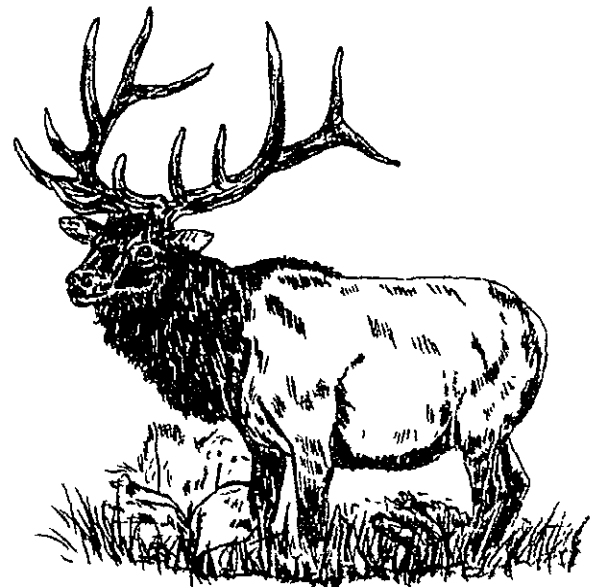




Appendix



National Direction Relevant to Land and Resource Management



APPENDIX A
NATIONAL DIRECTION RELEVANT TO LAND AND RESOURCE MANAGEMENT
(BASED ON FSM OBJECTIVE STATEMENTS)

Agency policy articulated in the Forest Service directives system (Forest Service Manual and Handbook) is hereby incorporated in its entirety as direction in this Revised Forest Plan. Some of the more commonly referenced objectives are found at the following locations:

American Indians * 1563
Noxious Weed Management * 2080
Solid Waste Management * 2130 2
Pesticide Management * 2150 2
Energy Management * 2170 2

Range Management * 2202 1
Grazing and Livestock Use Permit System * 2230 2
Range Improvements * 2240 2
Structural Range Improvement * 2242 02
Maintenance of Improvement * 2244 02
Range Improvement Investment * 2246 02

Recreation * 2302
National Wilderness Preservation System * 2320 2
Recreation in Wilderness * 2323 11
Range in Wilderness * 2323 21
Wildlife and Fish Management in Wilderness * 2323 31
Stocking Methods *2323 34b
Stocking Policy *2323 34c
Soil and Water in Wilderness *2323 41
Forest Cover in Wilderness * 2323 51
Air Resource in Wilderness * 2323 61
Minerals in Wilderness * 2323 72
Insects and Disease in Wilderness * 2324 11
Fire Management in Wilderness * 2324 21
Structures and Improvements in Wilderness * 2324 31
Research in Wilderness * 2324 41
Motorized Equipment in Wilderness * 2326 02

Publicly Managed Recreation Opportunities * 2330 2
Privately Provided Recreation Opportunities * 2340 2
Concession Uses Involving Privately Developed Facilities * 2343 02
Group Use By Institutions or other Entities * 2345 02

Trail, River, and Similar Recreation Opportunities * 2350 2
Forest Development Trails * 2353 02
Scenic and Historic Trails * 2353 41
National Wild and Scenic Rivers System * 2354 02
Off-Road Vehicle Management * 2355 02
Cave Management * 2356 02
Special Interest Areas * 2360 3
Cultural Resources * 2361 02
National Registry of National Landmarks * 2373 02

Visual Quality * 2380 2
Interpretive Services/Visitor Information * 2390 2

Timber Management * 2402
Commercial Timber Sales * 2430 2
Salvage Sales * 2435 02
Reforestation * 2470 02
Silvicultural Practices * 2470 2
Harvest Cutting * 2471 02
Timber Stand Improvement * 2476 02

Watershed Management * 2502
Watershed Protection and Management * 2520 2
Watershed Improvement * 2522 02
Burned Area Emergency Rehabilitation * 2523 02

Riparian Areas * 2526 02
Floodplain Management Wetland Protection * 2527 02
Water Quality Management * 2532 02
Municipal Supply Watersheds * 2542 02
Soil Resource Improvement * 2553 02
Air Quality * 2580 2

Fish and Wildlife * 2602
Animal Damage Management * 2650 2
Threatened and Endangered Species * 2670 21
Sensitive Species * 2670 22

Special Uses * 2702
Special Use Authorization * 2710 2
Special Use Administration * 2716
Special Uses Management * 2730 2

Withdrawals * 2761 02
Federal Power Act Projects * 2770 2
Minerals and Geology * 2802
Minerals Reservations Outstanding Mineral Rights * 2830 2
Reclamation * 2840 2
Mineral Materials * 2850 2

Rural Development * 3602
Rural Development * 3610 2
Resource Conservation and Development Program * 3620 2
Research Natural Areas * 4063 02

Fire Management * 5102
Fire Suppression * 5130 2
Prescribed Fire * 5140 2
Fuel Management * 5150 2

Landownership Adjustment * 5402
Land Purchases and Donations * 5420 2
Land Exchange * 5430 2
Partial Interest Acquisition * 5440 2

National Forest System Modification * 5450 2
Right-of-Way Acquisition * 5460 2
Reservations and Outstanding Rights * 5470 2
Condemnation * 5480 2

Land Surveying * 7151 02
Landline Location Program * 7152 02
Sign and Poster Program * 7160 2
Potable Water Supply * 7420 2
Wastewater Collection Systems and Treatment Works * 7430 2

Transportation System * 7702
Transportation Planning * 7710 2
Development * 7720 2
Operation and Maintenance * 7730
Highway Safety Program * 7733 02
Federal Lands Highway Program * 7740

STATUTES

American Indian Religious Freedom Act
Act of August 11, 1978
Americans with Disabilities Act of 1990
Anderson-Mansfield Reforestation and Revegetation
Act of October 11, 1949
Antiquities Act
Act of June 8, 1906
Archaeological Resources Protection Act of 1979, as amended 1988
Act of October 31, 1979
Architectural Barriers Act of 1968
Bankhead-Jones Farm Tenant Act of 1937
Act of July 22, 1937
Clarke-McNary Act of 1924
Act of June 7, 1924
Clean Air Act Amendments of 1977
Act of August 7, 1977
Clean Water Act of 1977
Clean Water Amendments (*Federal Water Pollutions Control Act Amendments of 1972*)
Act of October 18, 1972
Color of Title
Act of December 22, 1928
Common Varieties of Mineral Materials
Act of July 31, 1947

Comprehensive Environmental Response, Compensation and Liability Act, as amended
Act of December 11, 1980
Cooperative Forestry Assistance Act of 1978
Act of July 1, 1978
Disaster Relief Act of 1974
Act of May 22, 1974
Eastern Wilderness Act
Act of January 3, 1975
Economy Act of 1932
Act of June 30, 1932

Emergency Flood Prevention (Agricultural Credit Act of 1978)
Act of August 4, 1978
Endangered Species Act of 1973
Act of December 28, 1973
Energy Security Act
Act of June 30, 1980
Federal Advisory Committee Act of 1972
Act of October 6, 1972
Federal Cave Resources Protection Act of 1988
Act of November 18, 1988
Federal Coal Leasing Amendments Act of 1975
Act of August 4, 1976
Federal Insecticide, Rodenticide, and Fungicide Act
Act of October 21, 1972
Federal Land Policy and Management Act of 1976
Act of October 21, 1976
Federal Noxious Weed Act of 1974
Act of January 3, 1975
Federal Onshore Oil and Gas Leasing Reform Act of 1987
Act of December 22, 1987
Federal Power Act of 1920
Act of June 10, 1920
Federal-State Cooperation for Soil Conservation
Act of December 22, 1944
Federal Water Pollution Control Act of 1956, as amended (Water Quality Act of 1965, Clean Water
Restoration Act of 1966)
Act of July 9, 1956
Federal Water Project Recreation Act of 1965
Act of July 9, 1965
Fish and Wildlife Conservation
Act of September 15, 1960
Fish and Wildlife Coordination Act
Act of March 10, 1934
Forest Highways
Act of August 27, 1958
Forest and Rangeland Renewable Resources Planning Act of 1974
Act of August 17, 1974
Forest and Rangeland Renewable Resources Research Act of 1978
Act of June 30, 1978
Freedom of Information Act
Act of November 21, 1974
Geothermal Steam Act of 1970
Act of December 24, 1970
Granger-Thye Act
Act of April 24, 1950
Historic Preservation Act
Act of October 15, 1966
Intermodal Surface Transportation Efficiency Act
Act of December 18, 1991
Joint Surveys of Watershed Areas Act of 1962
Act of September 5, 1962
Knutson-Vandenberg Act
Act of June 9, 1930
Land Acquisition
Act of March 3, 1925

Land Acquisition-Declaration of Taking
Act of February 26, 1931
Land Acquisition-Title Adjustment
Act of July 8, 1943
Land and Water Conservation Fund Act of 1965
Act of September 3, 1964
Law Enforcement Authority
Act of March 3, 1905
Leases Around Reservoirs
Act of March 3, 1962
Mineral Leasing Act
Act of February 25, 1920
Mineral Leasing Act for Acquired Lands
Act of August 7, 1947
Mineral Resources on Weeks Law Lands
Act of March 4, 1917

Mineral Springs Leasing
Act of February 28, 1899
Mining Claims Rights Restoration Act of 1955
Act of August 11, 1955
Mining and Minerals Policy Act of 1970
Act of December 31, 1970
Multiple-Use Sustained-Yield Act of 1960
Act of June 12, 1960
National Environmental Policy Act of 1969
Act of January 1, 1970
National Forest Management Act of 1976
Act of October 22, 1976
National Forest Roads and Trails Act
Act of October 13, 1964
National Historic Preservation Act
Act of October 15, 1966
National Historic Preservation Act Amendments of 1980 and 1992
Act of December 12, 1980
National Trails System Act
Act of October 2, 1968
Occupancy Permits
Act of March 4, 1915
Organic Administration Act of 1897
Act of June 4, 1897
Petrified Wood
Act of September 28, 1962
Pipelines
Act of February 25, 1920
Preservation of Historical and Archaeological Data
Act of May 24, 1974
Public Land Surveys
Act of March 3, 1899
Public Rangelands Improvement Act of 1978
Act of October 25, 1978
Rehabilitaion
Act of 1973, as amended
Renewable Resources Extension Act of 1978
Act of June 30, 1978

Research Grants

Act of September 6, 1958
Right of Eminent Domain
Act of August 1, 1888
Rural Development Act of 1972
Act of August 30, 1972
Safe Drinking Water Amendments on 1977
Act of November 16, 1977
Sikes Act
Act of October 18, 1974

Small Tracts Act

Act of January 22, 1983
Smokey Bear Act
Act of May 23, 1952

Soil and Water Resources Conservation Act of 1977

Act of November 18, 1977
Solid Waste Dipsosal (*Resource Conservation and Recovery Act of 1976*)
Act of October 21, 1976
Supplemental National Forest Reforestation Fund
Act of September 18, 1972
Surface Mining Control And Reclamation Act of 1977
Act of August 3, 1977
Sustained Yield Forest Management
Act of March 29, 1944
Timber Export
Act of March 4, 1917
Timber Exportation
Act of April 12, 1926
Title Adjustment
Act of April 28, 1930
Toxic Substances Control Act
Act of October 11, 1976
Transfer Act
Act of February 1, 1905
Twenty-Five Percent Fund
Act of May 23, 1908
Uniform Federal Accessibility Standards (in accordance with the Architectural Act of 1968)
U S Criminal Code (*Title 18, United States Code, Chapter 91 * Public Lands*)
Act of June 25, 1948
U S Mining Laws (Public Domain Lands)
Act of May 10, 1872

Volunteers in the National Forests Act of 1972

Act of May 18, 1972
Water Quality Improvement Act of 1965
Act of April 3, 1965
Water Resources Planning Act
Act of July 22, 1965
Watershed Protection and Flood Prevention Act of 1954
Act of August 4, 1954
Weeks Act Status for Certain Lands
Act of September 2, 1958

Weeks Act of 1911
Act of March 1, 1911
Wild and Scenic Rivers Act
Act of October 2, 1968
Wilderness Act of 1964
Act of September 3, 1964
Wildlife Game Refuges
Act of August 11, 1916
Wood Residue Utilization Act of 1980
Act of December 19, 1980
Woodsy Owl/Smokey Bear Act
Act of June 22, 1974
Youth Conservatin Corps
Act of August 13, 1970

REGULATIONS

36 CFR 60 - National Register of Historic Places
36 CFR 212 - Forest Development Transportation System
36 CFR 213 - Administration Under Bank-Jones Act
36 CFR 219 - Planning
36 CFR 221 - Timber Management Planning
36 CFR 222 - Range Management
36 CFR 223 - Sale and Disposal of NFS Timber
36 CFR 228 - Minerals
36 CFR 241 - Fish and Wildlife
36 CFR 251 - Land Uses
36 CFR 254 - Landownership Adjustments
36 CFR 261 - Prohibitions
36 CFR 291 - Occupancy and Use of Developed Sites and Areas of Concentrated Public Use
36 CFR 292 - National Recreation Areas
36 CFR 293 - Wilderness - Primitive Areas
36 CFR 294 - Special Areas
36 CFR 295 - Use of Motor Vehicles off Forest Development Roads
36 CFR 296 - Protection of Archaeological Resources
36 CFR 297 - Wild and Scenic Rivers
36 CFR 800 - Advisory Council on Historic Preservation
40 CFR 1500-1508 - Council on Environmental Quality
National Electrical Code
National Fire Code
Uniform Building Code
Uniform Mechanical Code
Uniform Plumbing Code

EXECUTIVE ORDERS

E O 11593 - Protection and Enhancement of Cultural Environment
E O 11990 - Protection of Wetlands
E O. 11644/11989 - Use of Off-Road Vehicles
E O 11988 - Floodplain Management
E O 12113 - Independent Water Project Review

Specifics to the Targhee National Forest

Decomposition Classes for Down Logs, USFS 1985
Bald Eagle Zones Publication

The Land Adjustment Plan and the Right-of-way Acquisition Plan are incorporated into this plan by reference. They are located in the Lands section office on the Forest, and are subject to annual update by the Lands section.

BEST MANAGEMENT PRACTICES FOR IDAHO AND WYOMING

Idaho

The Administrative Rules of the Idaho Department of Health and Welfare, Water Quality and Wastewater Treatment (IDAPA 16, Title 01, Chapter 02, February 20, 1996) lists documents that contain approved Best Management Practices. On page 71 (IDAPA 16 01 02,350 03) these documents are listed and include:

Idaho Forest Practices Rules as adopted by Board of Land Commissioners

Idaho Department of Health and Welfare (IDHW) Rules, Title 1, Chapter 6, "Rules Governing Solid Waste Management"

IDHW Rules, Title 1, Chapter 3, "Rules Governing Subsurface and Individual Sewage Disposal Systems"

"Rules and Minimum Standards for Stream-channel Alterations" as adopted by the Board of Water Resources

"Rules Governing Exploration and Surface Mining Operations in Idaho" as adopted by the Board of Land Commissioners

"Rules Governing Placer and Dredge Mining in Idaho" as adopted by the Board of Land Commissioners

Wyoming

Grazing Draft BMPs have been developed (dated February 1996), but the State is currently working on a responsiveness summary, so the BMPs have not been certified yet (personal communication with Beth Pratt, Wyoming DEQ, November 26, 1996)

Hydrologic Modifications These BMPs have been certified by DEQ and the governor of Wyoming

Silviculture These measures include BMPs for roads. They have been certified by DEQ and the governor of Wyoming

Oil and Gas Exploration and Production, Mineral Extraction, Highway Construction, Underground Storage Tanks These activities are covered by site regulatory programs, and so BMPs will not be developed for them

NRCS SNOW MEASURING SITES - AS OF 12/23/96

Site Name	Site Legal Location
Webber Creek	12N 32E sec 23 NE1/4
Irving Creek	13N 33E sec 08 SW1/4
Camp Creek	13N 36E sec 21 SWNE
Crab Creek	13N 38E sec 21 NESW
White Elephant	14N 43E sec 17 SWSW
Lucky Dog	13N 44E sec 02 SESE
Big Springs	13N 44E sec 04 SWNW
Latham Springs	13N 45E sec 09 SESW
Grassy Lake	48N 116W sec 18 SWSW
McRenolds Reservoir	07N 46E sec 05 NWNW
Packsaddle Spring	05N 43E sec 26 SWSW
Darby Canyon	43N 118W sec 28 SENE
State Line	03N 46E sec 32 SENE
Teton Pass W S	41N 118W sec 23
Pine Creek Pass	03N 44E sec 24 NESW
Lava Creek	02S 42E sec 02 SENW
Island Park	13N 43E sec 28 NWSE
Jackpine Creek	46N 118W sec 22 SWNE

Appendix

B

**U. S. Fish and Wildlife Service
Biological Opinion**





United States Department of the Interior

FISH AND WILDLIFE SERVICE

Snake River Basin Office, Columbia River Basin Ecoregion
1387 South Vinnell Way, Room 368
Boise, Idaho 83709

March 31, 1997

Jerry Reese, Forest Supervisor
Targhee National Forest
P O. Box 208
St. Anthony, Idaho 83445

Subject: Biological Opinion for the Targhee National Forest Plan Revision
1-4-97-F-2 File # 116 0020

Dear Mr. Reese:

This letter transmits the U.S. Fish and Wildlife Service final biological opinion (opinion) on the proposed Targhee National Forest Plan Revision (Revision).

This opinion was prepared in response to your November 12, 1996, request to initiate formal consultation under section 7 of the Endangered Species Act of 1973, as amended. Your letter was received by this office on November 13, 1996. The Service reviewed the Revision in accordance with the Section 7 Interagency Cooperation Regulations (50 CFR 402, FR 51(106):19957-19963). This opinion refers only to the potential effects of implementing the Revision on the grizzly bear.

If you have any questions concerning this opinion, please contact Mike Donahoo of the Service Eastern Idaho Field Office at (208)233-8550.

Sincerely,


Supervisor, Snake River Basin Office

Enclosure

cc Forest Service, Region 4, Ogden (Regional Forester)
FWS, Cheyenne
FWS, Helena
FWS, Missoula (Serveen)
FWS-ES, Region 6, Denver
FWS-ES, Region 1, Portland (Salata)
FWS-CRBE, Region 1, Portland (Diggs)
FWS-ES, Pocatello (Donahoo)

Final Biological Opinion for the Targhee National Forest Plan Revision

The U S Fish and Wildlife Service (Service) has reviewed the proposed Targhee National Forest Plan Revision and preferred alternative, Alternative 3-M (Revision), for the Targhee National Forest (Forest) in eastern Idaho and northwestern Wyoming. Your letter dated November 12, 1996, requesting formal consultation was received November 13, 1996. This document represents the Service's biological opinion on the effects of that action on threatened grizzly bear (*Ursus arctos horribilis*), bald eagle (*Haliaeetus leucocephalus*), Ute Ladies'-tresses (*Spiranthes diluvialis*), the endangered peregrine falcon (*Falco peregrinus*), and the experimental, non-essential population of gray wolf (*Canis lupus*) in accordance with section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U S C 1531 et seq.)

This biological opinion addresses only the potential effects of the proposed Revision on the threatened grizzly bear (*Ursus arctos horribilis*) in the Greater Yellowstone Ecosystem (GYE). The Service has reviewed the biological assessments prepared for the proposed Revision and concurs with the Forest determinations that the Revision, as proposed, may affect but is not likely to adversely affect the threatened bald eagle (*Haliaeetus leucocephalus*), Ute Ladies'-tresses (*Spiranthes diluvialis*), and the endangered peregrine falcon (*Falco peregrinus*). The Service concurs that the project will not jeopardize the continued existence of the experimental, non-essential population of gray wolf (*Canis lupus*), the entire Forest is within the boundaries of the Yellowstone and Central Idaho Nonessential Experimental Areas.

This biological opinion is based on information provided in the November 12, 1996, biological assessment and updates as received, the March 19, 1997 letter from the Forest Supervisor, the January 1996 draft Forest Plan Revision and draft Environmental Impact Statement for the Forest Plan Revision, and the January 1994 and April 1995, biological opinions for the "Management Direction for the Grizzly Bear on the Portion of the Plateau Bear Management Unit" (Strategy). It is also based on other actions that have been consulted on since completion of and including the June 1984 biological opinion, consultation on the 1985 Forest Land Management Plan (LMP), current Cumulative Effects Model information, information in office files, discussions with others, including Forest biologists and administrators knowledgeable of the area and species, and from information obtained from field investigations. A complete administrative record of this consultation is on file in the Service's Eastern Idaho Field Office in Pocatello, Idaho.

CONSULTATION HISTORY

The listing of the grizzly bear as threatened in 1975 required Federal agencies under the conditions of sections 7(a)(1) and 7(a)(2) of the Endangered Species Act (Act) to (1) utilize their authorities to carry out conservation programs for listed species, (2) ensure that their activities not jeopardize the continued existence of a listed species, and (3) ensure that their activities or programs not result in the destruction or adverse modification of critical habitat.

Formal consultation between the Forest and the Service concerning the grizzly bear occurred during development of the existing LMP. The Reasonable and Prudent Measures for the 1985 Biological Opinion issued by the Service for the LMP required security areas for grizzly bears.

(USDI 1984) Other informal and formal consultations between the Service and Forest, including biological opinions for the Management Direction for the Grizzly Bear on the Portion of the Plateau Bear Management Unit on February 22, 1994, and April 20, 1995 (USDI 1994, 1995), have developed and incorporated into the existing LMP, management standards and guidelines for listed species within which LMP activities are conducted. These standards and guidelines were developed for the grizzly bear because of evidence that impacts to the bears occurred as a result of logging, roads, recreation, mining, grazing, etc.

In the 1994 biological opinion on the Strategy, core areas were delineated for the Plateau Bear Management Unit (BMU) Subunits 1 and 2 to address the issue of habitat security needs of the grizzly bear. The geographic boundaries included sufficient territory to provide for a female grizzly bear with young, but did not strictly meet the Interagency Grizzly Bear Committee (IGBC) definition for core because of road densities and lack of security cover. Plans were in place to begin developing core and security areas for the Bechler-Teton BMU. The process was changed to focus on the Revision in an effort to address all of the remaining BMU's at one time.

The final report for the Henry's Lake and Plateau BMU habitat evaluation and grizzly bear presence study (IGBC 1994a) noted there was a management strategy that had been developed for the area by the Service and the Forest. The report states, "If this strategy were implemented it would greatly improve habitat effectiveness and security within the subunits (IGBC 1994a)." The management strategy is part of the biological opinion for the "Grizzly Bear Management Strategy for the Portion of the Plateau Bear Management Unit on the Targhee National Forest" also referenced as the "Strategy". This management strategy underwent formal consultation and was being implemented for the Plateau BMU Subunits 1 and 2 when the Forest suspended implementation of road closures to focus on the Revision. A few additional miles of were restricted on an interim basis through formal consultation and the entire road density and closure issue was incorporated into the Revision process (USDI 1995).

The original Grizzly Bear Management Guidelines for the Greater Yellowstone Area (USDA and USDI 1979) referenced in the existing Forest Plan were revised in 1986 by the IGBC (1986). The Service's biological opinion on the revised Guidelines states "It is our biological opinion that implementation of the Guidance for Management Involving Grizzly Bears in the Greater Yellowstone Area will promote the conservation of the grizzly bear" (USDI 1986 in IGBC 1986). The Guidelines include a plan for determining when a grizzly bear is considered a "nuisance" and delineate an action plan in case of human-grizzly conflicts.

The IGBC, of which the Forest and Service are members, appointed an Access Committee for the GYE (Access Committee) and a cumulative effects model (CEM) team to develop standard access definitions and implement a unified CEM across the GYE. Specific objectives for each team are referenced in the list of definitions. Information from the IGBC Access Committee and the CEM outputs are intended to be used together in preparation of Geographic Information System (GIS) based maps for analyzing impacts of human activities in grizzly bear habitat.

The proposed Revision is being prepared to comply with the National Forest Management Act (NFMA) of 1976 which directs the Forest to review and/or update forest plans every ten to fifteen years or more frequently when resource and management conditions change significantly. The existing management plan was finalized in 1985 and this is the first revision of the plan (USDA 1996a). The Revision includes the provisions of the Resources Planning Act as amended by the NFMA, the Endangered Species Act of 1973, as amended, and other guiding documents.

Description of the Proposed Action

The Forest contains approximately 1,810,000 acres of National Forest System land located in southeast Idaho and northwestern Wyoming. Parts of the Forest lie in the Idaho counties of Bonneville, Butte, Clark, Fremont, Jefferson, Lemhi, Madison, Teton, and in the Wyoming counties of Lincoln and Teton. The Forest is bordered on the east by Yellowstone and Grand Teton National Parks and the Bridger-Teton National Forest, on the south by the Caribou National Forest, on the west by the Salmon/Challis National Forest, and on the north by the Beaverhead and Gallatin National Forests (Figure 1).

The Forest will emphasize actions which contribute toward conservation and recovery of the bear within areas identified in the Grizzly Bear Recovery Plan. Objectives are to maintain and enhance habitat and to minimize potential for grizzly-human conflicts. The Forest will manage habitats essential to bear recovery for multiple land use benefits, to the extent these land uses are compatible with the goal of grizzly bear recovery. Land uses which cannot be made compatible with the goal of grizzly recovery, and are under Forest Service control, will be redirected or discontinued (IGBC 1986).

The Forest-wide Standards and Guidelines, Subsection Direction, and Prescriptions for Implementing the Preferred Alternative further define the proposed goals and objectives for grizzly bear habitat in the Revision as follows:

Goals

1. Habitat conditions will be sufficient to sustain a recovered population of grizzly bears.
2. Allow for unhindered movement of bears (continuity with Yellowstone National Park and adjacent bear management units).

Objectives

1. Meet recovery criteria in the Grizzly Bear Recovery Plan.
2. Implement guidelines developed by the IGBC.
3. Provide safe, secure sites for relocation of nuisance bears.

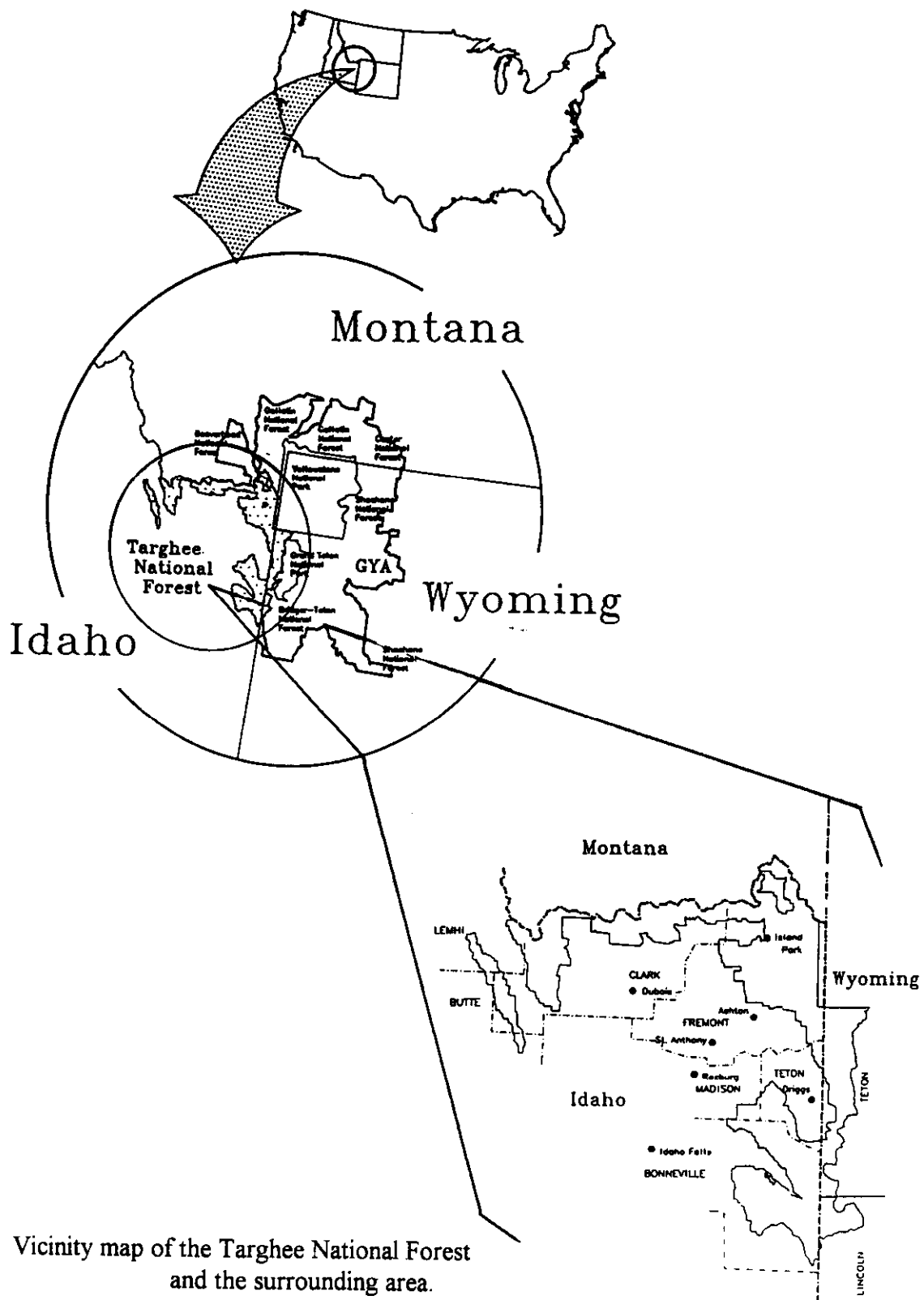


Figure 1. Vicinity map of the Targhee National Forest and the surrounding area.

- 4 Implement the road density standards in the BMU's within 3 years of signing the Record of Decision in coordination with the U S Fish and Wildlife Service and State wildlife agencies

Standard and Guideline

The grizzly bear education program will focus on residents in residential and summer home areas, developed recreation site users, wilderness users, and hunters

The Revision incorporates the following portions of the proposed IGBC Conservation Strategy for grizzly bear and grizzly bear habitat management into the Forest wide Goals, Objectives, and Standards and Guidelines

- 1 All Management Situation (MS) 2 habitat within the BMU subunits will receive the same emphasis for grizzly bear management as the MS-1 habitat, except livestock grazing in existing MS-2 habitat will continue to be managed under MS-2 guidelines Livestock grazing will be managed under MS-2 guidelines to allow for the proposed phase out, on an opportunity basis, of sheep allotments
- 2 Proposed timber harvesting activities will be strictly controlled in the BMU's as described in Management Prescription 5 3 5 Proposed timber harvest levels from the BMU's are a noninterchangeable component (NIC) of the allowable sale quantity (ASQ) and will not include designated core areas
- 3 Two Records of Decisions (ROD) will be signed, one to put into effect the Forest-wide Standards, Guidelines, Goals and Objectives, including the open and total route density standards The second ROD will implement the site specific Travel Plan that shows which areas, roads, and trails will be open to motorized use On-the-ground signing necessary to enforce the Travel Plan will be completed in 1997, the actual on-the-ground restrictions will be completed by the close of 1999 for all of the BMU's (USDA 1997a)
- 4 Total motorized access density (total route density) is reduced from existing levels to meet Forest wide standards of ≤ 1.0 mile per square mile (mi /sq mi)
- 5 Open road and open motorized trail route densities (open route density) are reduced from existing levels to meet Forest-wide standards of ≤ 0.6 mi /sq mi
- 6 Acres in each BMU which are designated core areas are increased from existing levels
- 7 Remaining domestic sheep grazing allotments are to be phased out on an opportunity basis
- 8 Cross-country off-highway vehicle (OHV) travel is eliminated, except in the MS-3

areas, which amounts to about 4 percent of the Forest acres within the BMU's

9 The MS-3 habitat in Henry's Lake Subunit 1 and those areas shown as MS-3 habitat on Map #5 of the 1985 Forest Plan, are managed as an area where grizzly bear presence is discouraged because of high human use and developments

The Revision will guide all natural resource management activities, establish management standards for the Forest, and serve as an "umbrella" for the environmental analysis of proposed projects at the Forest and District levels. Future environmental analysis documented in environmental assessments and environmental impact statements will refer to the Revision. Environmental assessments will be developed for project level activities not specifically described in the Revision and will concentrate on issues specific to the project (USDA 1996)

The Revision replaces previous resource management plans and generally incorporates conditions from previous actions that have undergone section 7 consultation. Upon final approval of the Revision, all Forest activities will conform to it. All permits, contracts, and other uses of Forest lands must also conform to the proposed Revision. The Forest has selected a preferred alternative, Alternative 3-M, for the Revision and prepared a Draft Environmental Impact Statement (DEIS). The Service has reviewed the DEIS and the biological assessments from the Forest that address the effects of the preferred alternative on the grizzly bear.

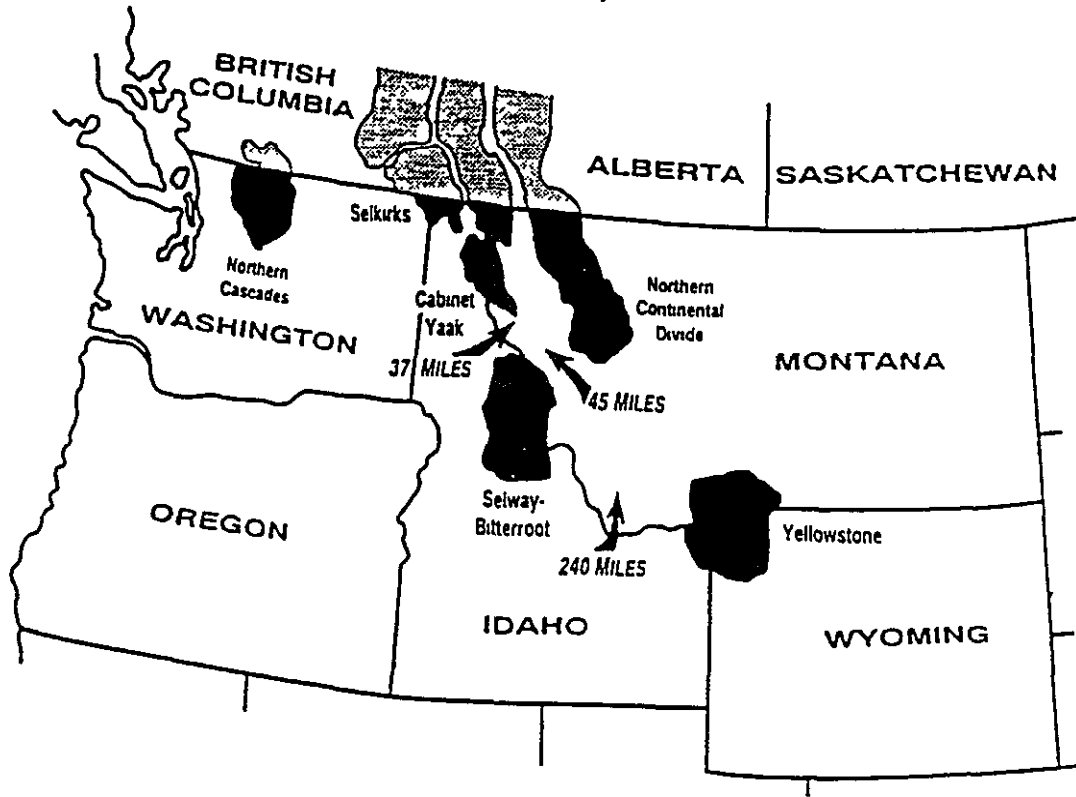
Status of the Species/Environmental Baseline

The grizzly bear (*Ursus arctos horribilis*) was classified as threatened on July 28, 1975. The grizzly bear was originally distributed in various habitats throughout western North America from Central Mexico to the Arctic Ocean. Current distribution is reduced to less than 2 percent of its former range south of Canada. In the conterminous 48 States, only 5 areas in mountainous regions, national parks, and wilderness areas of Washington, Idaho, Montana, and Wyoming (Hoak et al. 1981, Servheen 1985) currently contain either self-perpetuating or remnant populations of grizzly bears (Figure 2).

The GYE grizzly bear recovery zone contains over 9,500 square miles of grizzly bear habitat. Grizzly bear management areas transcend Federal, State, private, and corporate ownership. The GYE includes Yellowstone and Grand Teton National Parks, parts of 5 national forests (the Targhee, Bridger-Teton, Teton, Gallatin, Shoshone, and Custer), Bureau of Land Management lands, and isolated parcels of State and private lands in the areas surrounding the publicly administered lands.

The Grizzly Bear Recovery Plan (Recovery Plan) specifies occupancy targets for female grizzly bears with young (cubs, yearlings, or 2-year olds) as a running six-year average (USDI 1993) in

Figure 2. Present grizzly bear ecosystems in the conterminous 48 States, 1990 (the San Juan Mountains area of Colorado is not shown). (USDI 1993)



each BMU in the GYE. Distribution of reproducing females may provide evidence of adequate habitat management, because it is assumed that successful reproduction is an indicator of habitat sufficiency. Adequate distribution of family groups indicates future occupancy of these areas because grizzly bear offspring, especially female offspring, tend to establish home ranges within or near the home range of their mother after weaning (USDI 1993, 1993a).

Recovery for the GYE population depends upon verifying that the population meets the criteria for a recovered population. It is important to recognize that one of the primary recovery objectives is to identify specific management measures needed to remove population and habitat limiting factors so the populations will increase and sustain themselves at levels identified in the recovery goals. Providing secure habitat for grizzly bears, especially adult females, is a high priority in MS-1 habitat. Monitoring data from 1987 through 1996 indicate the Recovery Plan population recovery parameters for the numbers of females with cubs and numbers of BMU's with family groups are being met. The average annual known human-caused grizzly bear mortalities and female mortality limits are close to being met (IGBC 1996).

The environmental baseline of the Forest has changed considerably since the 1985 Forest Plan was prepared. Extensive management activities including timber harvest and road construction have reduced vegetative cover, lowered food values, and created a vast road network across the Forest. These values are portrayed in CEM outputs for habitat value and effectiveness (HV and HE) as determined by the Forest (USDA 1997). In some portions of the BMU's, the lack of suitable habitat away from human access is continuing to displace grizzly bears from the area and induce various stress-related behavioral adaptations and habitat modifications, including

- 1 avoidance/displacement of grizzly bears away from roads and road activity,
- 2 changes in grizzly bear behavior, especially habituation, as well as breeding, feeding, reproduction, shelter, and travel, due to ongoing contact with roads and human activities conducted along roads,
- 3 habitat loss, modification, and fragmentation due to roads and road construction, including vegetative and topographic disturbances, and
- 4 direct mortality from road kills, legal and illegal harvest, and other factors resulting from increased human-bear encounters (IGBC 1987)

The GYE grizzly bear recovery zone has been subdivided into smaller units to facilitate both the assessment of projects and recovery of the species. Eighteen BMU's have been formally delineated in the GYE (Figure 3)

These BMU's are designed to

- 1 assess the effects of existing and proposed activities on grizzly bear habitat without having the effects diluted by consideration of too large an area,
- 2 address unique habitat characteristics and bear activity/use patterns,
- 3 identify contiguous complexes of habitat which meet yearlong needs of the grizzly bear, and
- 4 establish priorities for areas where land use management needs would require cumulative effects assessment (USDA et al 1990)

BMU's have been further divided into smaller units, termed subunits. The rationale for defining subunits are the same as described above for the BMU. The BMU or subunit provides the basic scale for project impact analysis (USDA et al 1990). The Forest has three BMU's divided into 4 subunits, they are the Henry's Lake BMU with subunits 1 and 2, the Plateau BMU with subunits 1 and 2, and the Bechler-Teton BMU.

Existing Conditions by Bear Management Unit

The Service used the figures for "acres and percent of areas" as presented and updated in Table 4a of the biological assessment for the grizzly bear to evaluate the existing conditions of the BMU's (see Table 1).

The IGBC Access Committee addressed the need for secure habitat for grizzly bears through the definition of a core area in a BMU. The Forest has expanded the definition of core area to include their own terms of "designated and undesignated" core. Core areas provide important habitat needs for grizzly bears and "(r)esearchers and managers throughout the recovery zones agree that core areas, areas free of motorized access during the non-denning period, are an important component of adult females that have successfully reared and weaned offspring" (IGBC 1994).

A study to evaluate habitat and grizzly bear presence in the Henry's Lake BMU and to finalize the requirements for occupancy by female grizzly bears in the Plateau BMU, was begun in March of 1993 and completed in the fall of 1994 (IGBC 1994a). The study concluded the habitat and habitat effectiveness values for the Henry's Lake BMU were of moderate value. It was not expected that a female grizzly bear with young would occupy the area on a yearlong basis, however, because the BMU was too small in size and the 9 sheep allotments in the area pose a significant mortality risk.

The report recommended adding the Madison Subunit 2, some of which is on the Gallatin N F in Montana, to the Henry's Lake BMU. This would increase the size of the BMU and provide a more ecologically based area for a female with young. This recommendation was implemented in 1994 with the acceptance of the report by the IGBC. The entire BMU, according to the latest

Table 1 Existing Habitat Components for the Targhee N F Bear Management Units

Habitat Component	HL #1	HL #2	PBMU #1	PBMU #2	B-T	
N F Acres	93,345	37,350	87,177	76,090	191,346	
Total Acres in BMU	128,515	97,944	183,203	275,708	341,894	
Acres in MS-1 Habitat	0	37,350	0	0	136,392	
Acres in MS-2 Habitat	74,676	0	82,818	76,090	53,041	
Acres in MS-3 Habitat	18,669	0	4,359	0	0	
Designated Core Habitat	17,384	14,027	0	0	65,314	
Undesignated Core Habitat	19,927	0	45,643	28,616	38,215	
Open Road Miles	92.6	36.8	115.2	71.1	187.5	
Yearlong Restricted Miles	48.1	4.8	117.4	135.5	152.0	
Total Road Miles	140.7	41.6	232.6	206.6	339.5	
Open Road Density (mi /mi ²)	0.79	0.63	0.85	0.60	0.63	
Open Motorized Trail Miles	3.9	7.9	8.6	15.6	38.6	
Yearlong Restricted Miles	39.4	17.5	10.5	0	91.8	
Total Trail Miles	43.3	25.4	19.1	15.6	130.4	
Open Motorized Trail Density	0.03	0.14	0.06	0.13	0.13	
Total Motorized Access Miles	184.0	70.0	251.7	222.2	469.9	
Total Motorized Access Density	1.23	0.85	1.77	1.87	1.27	
Snowmachine/OHV Use	MS-1	N/A	Y/N	N/A	N/A	Y/N
	MS-	Y/N	N/A	Y/Y	Y/Y	Y/N
	MS-	Y/Y	N/A	Y/Y	N/A	N/A
Sheep Allotments in Use	9	0	0	0	2	
Cattle Allotments in Use	3	1	0	0	3	
Habitat Value	1.8547	2.3818	0.2935	0.342	0.9861	
Habitat Effectiveness	1.1465	1.5194	0.1376	0.1554	0.6579	
HE/HV Index	0.62	0.64	0.47	0.45	0.67	

figures, encompasses approximately 226,415 acres (128,515 acres in Subunit 1 and 97,900 acres in Subunit 2) of MS-1, 2 and 3 habitat

The study also concluded the existing habitat values for the Plateau BMU were moderate, however, it was not expected that a female grizzly bear with young would occupy the area on a yearlong basis. The reason for this conclusion is that habitat effectiveness is low and there is a 51 percent reduction of the current habitat value. The reduction in habitat value and high mortality risk to grizzly bears is due to the high road densities and human use of the existing road network (IGBC 1994a). Similar results were obtained for the Moose Creek/Pitchstone portion of the Plateau BMU Subunit 2. The study team recommended the Forest improve habitat effectiveness in both areas by implementing access management measures approved by the IGBC in July 1994. The team, in speaking of Subunit 1, further stated, "With improved habitat effectiveness occupancy should be expected. Continued monitoring for evidence of reproducing females is recommended" (IGBC 1994a).

Table 1 shows the acres of MS-1, 2, and 3 habitat, the core areas (designated and undesignated), the open and total route densities, snowmachine and off-highway vehicle (OHV) use, sheep and cattle allotments, and the habitat effectiveness and habitat value ratings for each BMU.

Henry's Lake BMU, Subunits 1 and 2

The Henry's Lake Subunit 1 covers about 128,515 acres [201 square miles (sq mi)], with approximately 93,345 acres (146 sq mi) on the Forest. The Centennial Mountains form part of the Continental Divide and border the BMU on the north. The mountain range contains high mountain meadows scattered through spruce fir and Douglas-fir forests and at lower elevations sagebrush/grasslands transition into Douglas-fir and lodgepole pine forests. Other vegetation communities found in the area include aspen, some whitebark pine, mountain brush, and herbaceous types, both upland and riparian. Less than 2 percent of the riparian vegetation in the BMU is not meeting the desired vegetation condition for lands open to grazing. The MS-3 portion of this subunit (18,669 acres) is dominated by the world famous Henry's Lake (6,672 acres) and the Henry's Lake Flat area. From 1959 to 1986 this subunit has had fewer sightings of grizzly bears than any of the other BMU's (Orme and Williams 1986). Since 1986 there has only been 1 grizzly bear sighted in the area.

Henry's Lake BMU Subunit 2 covers approximately 97,944 acres (153 sq mi) of which 38 percent [37,350 acres (58 sq mi)] are in Idaho on the Forest, the remainder is in Montana, primarily on the Gallatin National Forest. Vegetation habitat types and conditions are similar in Subunits 1 and 2. The entire Subunit 2 on the Forest is classified as MS-1 habitat. This Subunit has the second highest number of grizzly bear sightings from 1959 to 1986 (Orme and Williams 1986) when compared to the other BMU's. Eight grizzly bear sightings have been recorded, in addition to numerous recorded observations of a radio collared bear since 1986.

Plateau BMU, Subunits 1 and 2

The Plateau BMU, Subunit 1, covers about 87,177 acres (136 sq mi) in Idaho, approximately 83,690 acres (131 sq mi) is on the Forest along the southwestern edge of the Yellowstone National Park. The landscape is dominated by lodgepole pine with small pockets of Douglas fir, whitebark pine, spruce fir, aspen, sagebrush/grass, grass meadows, and mountain brush. Approximately 19 percent of the area has high berry-producing shrubs in the understory, an important food source for grizzly bears. Within the Subunit there are 86,124 acres of forested lands on which timber harvest has occurred on 33,502 acres (38.9 percent), the 1988 North Fork Fire burned approximately 17,700 acres (20.6 percent) in the Subunit. The Forest has determined there are no designated core areas in this Subunit, however, they have identified 45,643 acres of undesignated core area. The determination is based on the IGBC definition of core area and because this Subunit is so highly roaded, the Forest indicates the area has no designated core habitat. The 1994 biological assessment and opinion on the Strategy identified core areas for Subunits 1 and 2. These areas are included in the "undesignated" area and are treated as core areas under the existing LMP.

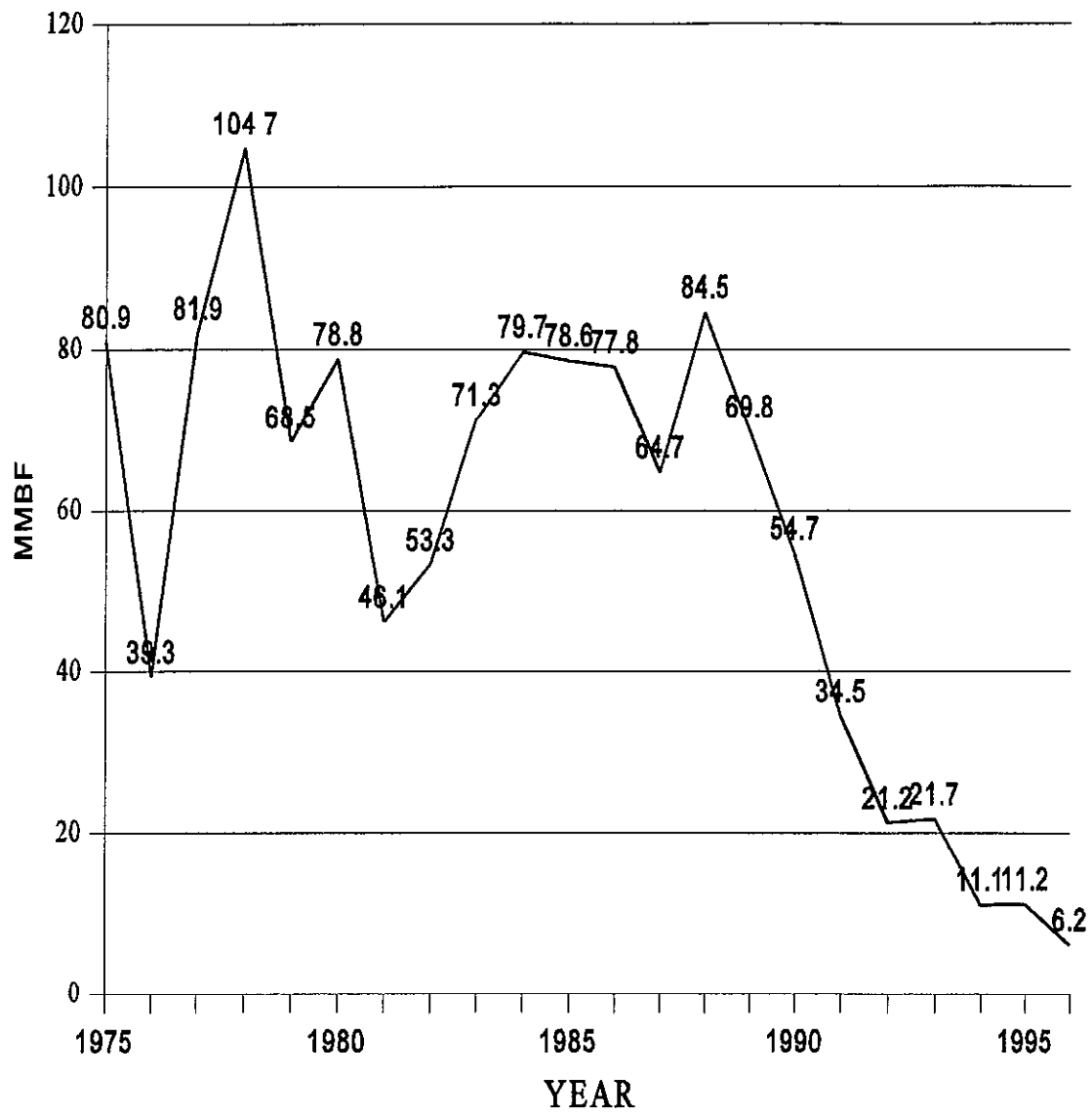
Between 1959 and 1984 several more human caused grizzly bear mortalities occurred than were noted in the biological assessment report (Craighead et al 1988). These occurred in and around Reas Pass where sheep were being grazed, in the Island Park area around cabins, and along the southern boundary of the BMU. The bears may or may not have lived in the BMU but, from the mortality locations, it is apparent they traveled across the area. Displacement of grizzly bears has occurred and continues to occur across the BMU because of the degraded condition of the environmental baseline. Since 1986 there have been 5 sightings in the Subunit and many recorded observations of a radio collared male grizzly bear.

Plateau BMU, Subunit 2 is directly south of Plateau BMU Subunit 1, and the 28 percent of the unit that is on the Forest covers 76,090 acres (119 sq mi). The landscape is dominated by lodgepole pine with pockets of whitebark pine, Douglas fir, aspen, sagebrush/grass, grass meadows, and mountain brush. The entire area is classified as MS-2 habitat. There are no designated core areas, however, undesignated core areas cover 28,616 acres. Recorded grizzly bear observations and mortalities from 1959 to the present indicate bears have used the area. The last recorded sighting of a female grizzly with cubs was in 1994.

Extensive areas in Plateau BMU Subunits 1 and 2 that have flat terrain were recently clear-cut and are close to either open or closed roads. These areas are used by OHVs since there are currently no OHV restrictions in the Plateau BMU, except in the North Fork Fire portion of the Island Park District (USDA Forest Travel Plan Map 1994). Standard OHV closures and the existing road closures with gates are often ineffective at excluding motorized vehicles, especially motorcycles and other OHVs, and will not significantly reduce the mortality risk to the grizzly bear (USDI 1994). Also, due to the terrain in the area, enforcement of road closures in the BMU is difficult without intense monitoring of gate conditions and barrier effectiveness.

From 1975 to 1991, many new roads were constructed, extensive volumes of timber were sold by the Forest (Figure 4), and large areas were clear-cut to remove the "bug" infected trees in this

Figure 4 Timber volumes sold on the Targhee National Forest between 1975 and 1995



subunit This action also removed security cover for the grizzly bear and displaced animals into less desirable habitat and in some cases may have lead to confrontations with humans, resulting in permanent removal of the bear The lack of occupancy of the BMU from 1985 to the present has been caused in part by the displacement of grizzly bears away from areas with high human access via roads

The Bechler-Teton BMU

The Bechler-Teton BMU covers about 191,340 acres (299 sq mi) and 189,433 acres (99 percent/ 296 sq mi) is administered by the Forest Service This BMU joins the extreme southwest corner and southern boundary of Yellowstone National Park and extends along the western edge of the Grand Teton National Park The BMU includes the Winegar Hole and Jedediah Smith Wilderness areas which cover about 34 percent (65,165 acres) of the area The landscape is similar to the other BMU's with large stands of lodgepole pine interspersed with aspen, Douglas fir, sagebrush/grass, grass meadows, riparian habitat, and mountain brush

This BMU has the highest numbers of sightings of grizzly bears of all of the BMU's on the Forest There have been more grizzly bear mortalities in this BMU than the others (Craighead 1988), however, there have been no bear mortalities from 1983 to the present There have been two documented grizzly bear/sheep conflicts in the past During 1996 a female grizzly bear and her cubs were moved to another area off the Forest due to a bear/sheep encounter The incident occurred in MS-2 habitat on a sheep allotment within 2 or 3 miles of MS-1 habitat

EFFECTS OF THE PROPOSED ACTION

General Effects of the Proposed Action

Habitat security conditions cannot be defined entirely by motorized access route density Other factors such as vegetation (food, cover), concentrated human use locations (towns, summer homes, campgrounds), heavily used non-motorized trails, and areas of high levels of dispersed human use will also influence the effectiveness of habitat security in an area Motorized access routes and the human use associated with these routes, however, are one of the most easily defined and measurable factors to evaluate Motorized access is also one of the more influential parameters affecting habitat security Timber harvest, other human activities, and impacts associated with roads and increased road densities have had a major influence on grizzly bear population and habitat use patterns in numerous widespread areas (Tracy 1977, Schallenberger and Jonkel 1980, Jonkel et al 1981, Brannon 1984 Manley and Mace 1992, Mace and Manley 1993)

The concepts of precise open and total motorized access density to assess and manage the effects of roads on grizzly bear habitat has received widespread acceptance by public land and wildlife managers and biologists The IGBC Roads Taskforce (1994) advocated the concepts of open and total motorized access density management and core habitat Using definitions provided by the

IGBC Taskforce, the GYE Access Committee is currently developing the recommended levels at which open and total motorized route density and core area in grizzly bear habitat should be managed. The GYE Access Committee is using the most current computer models to determine access standards, however, the final recommendations are not yet available. In the interim, the Forest Service is using the IGBC Access Committee recommended definitions for open, restricted, and closed roads and trails and methods of identifying existing and potential core habitat to address access management in the Revision. When the final recommendations are presented, the Forest will evaluate the access management conditions via CEM and incorporate changes as needed to comply with the findings.

Mortality - Mortalities are the most serious consequences of roads in grizzly habitat. Research has confirmed that grizzlies experience increased vulnerability to legal harvest and poaching (direct mortality) as a consequence of increased road access by humans (Schallenberger 1980, Zager 1980, McLellan and Mace 1985, Aune and Kasworm 1989). McLellan and Mace (1985) found that a disproportionate number of mortalities occurred near roads. Aune and Kasworm (1989) reported 63 percent of known human-caused grizzly deaths on the east front of the Rocky Mountains occurred within 1 kilometer (km) of roads including 10 of 11 known female grizzly deaths. In the GYE, Mattson and Knight (1991) reported areas impacted by secondary roads and major developments were most lethal to bears. In Montana, Dood et al (1986) reported 48 percent of all known nonhunting mortalities during 1967-1986 occurred within 1 mile of roads.

Increased human access into grizzly bear habitat also increases grizzly habituation to humans, which increases the potential for human-bear conflicts. Habituated bears are those that have lost their natural wariness of humans and generally experience higher mortality rates than bears that are not habituated. Continued exposure to human presence, activity, noise, etc. without negative consequences results in habituation. Habituated bears often end up obtaining human food or garbage and become involved in nuisance bear incidents, become threats to human life or property, and are eventually destroyed or removed from the population through management actions. Habituated bears are also more vulnerable to illegal killing because of their increased exposure to people.

Mortality rates that result from roads are unevenly distributed between different ages and sexes. In the GYE subadult males and adult females with young are more likely to be found near roads during years of low whitebark pine seed availability (Blanchard 1990). Mattson et al (1987) reported that subadults were most often located near roads, perhaps displaced into roaded, marginal habitat by dominant bears. Females with cubs avoid adult males because males have been known to kill cubs (McLellan and Shackleton 1988). Habitat near roads may be selected by females with cubs and yearlings because this habitat is unoccupied by male grizzly bears. In addition, these cohorts have higher energy demands so they may need the additional native or non-native foods that lie near roads despite the risk of encountering humans.

Displacement - In addition to mortality, roads cause displacement of grizzlies from roads and surrounding habitat (Lloyd and Fleck 1977, Schallenberger and Jonkel 1980, Brannon 1984, Aune

and Kasworm 1989, Manley and Mace 1992, Mace and Manley 1993) Aune and Stivers (1985) reported that bears avoided roads and surrounding corridors even when the area contained preferred habitat for breeding, feeding, shelter, and reproduction. Areas in the Northern Continental Divide Ecosystem show radio-instrumented grizzlies may have avoided harvested stands (less than 30 years old) during "all" seasons (USDA 1993)

Mattson et al (1987) found that individual age and sex classes of bears were impacted differently by roads. Zager (1980) stated that the avoidance of roads by females with cubs was a major concern. Some subadult bears, perhaps displaced into roaded, marginal habitat by dominant bears, become habituated, thus becoming more vulnerable to illegal kills and conflict with people, which may result in removal of bears through management action. Mattson et al (1992) reported wary bears consistently avoid areas within 2 km of major roads and 4 km of major developments or townsites. Such animals are unlikely to change this avoidance behavior even after road closures and the lack of negative reinforcement. The general relationship of roads and grizzly bear under-utilization of habitat as described in these studies is applicable to the GYE. The lack of or low level of occupancy in the BMU's on the Forest has been caused, in part, by the displacement of grizzly bears away from areas with high human access via roads, this is especially true in the Plateau BMU.

Based on the available information, the Service believes the use of important low elevation spring habitat, such as riparian areas, is very limited in many areas of the BMU's on the Forest. This is the result of the high road densities, timber harvest, and human encroachment of the low elevation habitat areas. When roads are located in important habitats such as riparian zones, scrub/shrub areas, and timber cover areas, habitat loss through avoidance behavior can be significant because bears cannot use the resources in these areas (USDI 1993), thus, normal behavioral patterns are significantly modified and bears are injured.

Aune and Kasworm (1989) and McLellan (1989) showed that female cubs generally establish their home range within or have a significant overlap with their mother's home range, while males generally disperse from their mother's home range. Long-term displacement of a female from a portion of her home range may result in that area being lost to female bears because her offspring have no chance to learn the foraging opportunities in areas no longer used. Research by Mace and Jonkel (1980) showed monitored grizzlies were displaced from a drainage during the time logging was occurring, and as a result, normal behavior was significantly altered. If timber harvesting occurs in a drainage for extended periods of time, historical bear use of the area may be lost, particularly to female bears.

The end result of displacement is direct or indirect mortality. Based on the preceding discussion, the Service concludes that it is likely some individual bears will not select home ranges which include low elevation habitats that are highly roaded on the Forest, but those that do will suffer higher risks of human-caused mortality.

Habitat Fragmentation - As human populations and roads increase in bear habitat, bear

populations become fragmented. As fragmented populations become smaller and more isolated, they become vulnerable to extinction, especially when human-induced mortality pressures continue. Habitat fragmentation is particularly important to the survival of large carnivores, such as grizzly bears, which have great metabolic demands, require large home ranges, and wide vegetative and topographic habitat diversity (Servheen 1986). Their low densities, low reproductive rate, individualistic behavior, and association with riparian habitat, an area also used extensively by humans, require careful management involving all the principles of island population management and conservation biology (USDI 1993).

Mobility is an important aspect of grizzly bear behavioral patterns (Quimby and Snarski 1974). Movements of grizzly bears may exceed 60 air miles, and their home ranges can encompass 1,000 to 1,500 square miles, thus, space is essential to bears. With a wide-ranging species like the grizzly bear, large expanses of unfragmented areas defined as MS-1 and MS-2 habitat are essential for feeding, breeding, sheltering, traveling, and other essential behavioral patterns (USDI 1993). Grizzly bear habitat on the Forest, particularly on the Plateau BMU, has been fragmented by management activities during the past 20 years. The fragmented habitat has reduced the quantity of available habitat for grizzly bears which has contributed to conditions that could reduce grizzly bear survival and reproduction in the BMU's on the Forest.

Security Habitat - Grizzlies know no competitors that restrict their use of habitat except man, and it appears that they have not evolved behavioral adaptations to contend with the scope of current human influences. Grizzly bear populations require a level of safety from human depredation and competitive use of habitat such as roading, logging, mining, human settlement, grazing, and recreation. Competitive use of habitat encompasses all factors that lead eventually to increased negative impact of human activity on grizzly populations. The density and management of roads is one of the most powerful tools available to balance the needs of people with the needs of bears (USDI 1993).

The Service believes security habitat is important to grizzlies and should be one of the basic considerations in grizzly bear management. However, at this time no absolute criteria are available for identifying grizzly bear security areas. Research has shown, in some cases, grizzly bears and elk react in a similar manner to logging and roads. Most elk studies indicate full utilization of available elk habitat does not occur where security is inadequate. Based on scientific literature, the Service concludes grizzly bear security needs are vital to maintaining healthy, viable populations just as they are for elk. Certain security measures most often used in elk management may also be appropriate for grizzly bear management. Security has been recognized as a requirement for elk during the period of active logging in a timber sale. However, additional research has made it clear security is a continuing requirement in all elk habitats, whether logging is in progress or not. More important, security has been recognized as a requirement which is not necessarily satisfied simply because hiding cover is maintained at a minimum level. In many situations, space may be as important as hiding cover in establishing security values. The quantity of security habitat on the Forest has been reduced during the past 20 years due to road construction associated with resource extraction activities and subsequent human access into

previously inaccessible areas used by grizzly bears

Based on the above information, the Service concludes the environmental baseline for the Forest is resulting in the following effects to grizzly bears

- 1 Increased risk of direct mortality to grizzly bears because of high road densities due to human use of roads and the visual access provided by roadways through the forest environment,
- 2 High risk of increased habituation of grizzly bears to human activities along roads and in association with summer home developments by some bears thereby increasing the mortality risk of these bears,
- 3 Displacement from critical, seasonally important feeding sites (i.e., spring and fall ranges) which actually kills or injures bears by significantly impairing essential behavior patterns such as foraging, breeding, travel and sheltering,
- 4 Habitat fragmentation which actually kills or injures bears by significantly impairing essential behavior patterns by displacing bears from important constituent habitat elements including food, cover, solitude, and space,
- 5 Loss of habitat needed for security which results in actual injury or death of grizzly bears

Specific Effects of the Proposed Action

Habitat effectiveness on the Forest is essential to the recovery of grizzly bears in the GYE. The Forest administers approximately 485,308 acres (758 sq mi) of land covering three BMU's within the GYE Recovery Zone on the Forest. Under the existing Forest Plan the Forest has designated 35.8 percent of the land as MS-1 habitat, 59.2 percent MS-2 habitat, and 5 percent as MS-3 habitat as defined in the IGBC Guidelines (USDA 1985). The Revision proposes to set into action a series of changes in management to recover and protect the habitat in the BMU's, thereby increasing the probability that the area can support a resident family unit of grizzly bears. Existing habitat conditions in portions of some of the BMU's on the Forest, as described in the environmental baseline section, are such that occupancy by a grizzly bear family unit is highly improbable because of past habitat manipulations and high road densities. Without a change in Forest management actions, road densities would remain at high levels and other habitat conditions related to food and cover resources in the BMU's would continue to decline. The Revision seeks to reverse the decline in grizzly bear habitat components and restore grizzly use, while addressing the multiple use obligations mandated by various existing laws, regulations, and directives the Forest must operate under.

The desired future conditions for BMU's on the Forest aim at providing habitat conditions for

resident free-ranging grizzly bears (including family groups or population segments) throughout suitable habitat in each unit. This condition would be achieved by providing seasonal foraging needs, free-ranging movement and dispersal of resident grizzly bears, and minimizing mortality risks due to human-bear conflicts. Available habitat, secure space, and a diversity of habitats, to the extent they naturally occur within each BMU, are key components of the desired future condition. Established core and security areas and the protection they provide are, in the short and long-term, designed to be predictable in space and time and of sufficient size to provide for occupancy by a bear or bears. These areas delineate the highest quality habitat to meet the seasonal needs of grizzly bears, allow for the exchange to and from "source" areas of known, consistent bear use, and provide connectivity to adjacent BMU's in the GYE. In this condition the BMU's administered by the Forest should be capable of fully contributing to grizzly bear conservation and recovery.

The Forest-wide actions and the specific management prescriptions incorporate scientifically based management actions, recovery goals from the Recovery Plan, IGBC guidelines for access management as they currently exist and direction to implement additional guidelines as they are developed, and reasonable and prudent measures and recommended actions from consultations on past project activities in addition to those of this biological opinion for each BMU.

Table 2 shows the desired future condition of the Forest with respect to acres of MS-1, 2, and 3 habitat, core areas (designated and undesignated), open and total route densities, snowmachine and OHV use, sheep and cattle allotments, and habitat effectiveness and habitat value ratings for each BMU. The signing of the Record of Decision (ROD) for the Revision will put into effect the Forest-wide Standards, Guidelines, Goals and Objectives, including the open and total route density standards. A second ROD will be signed at the same time to "implement the site specific Travel Plan that shows which areas, roads and trails will be open to motorized use. The Travel Plan will implement the road density standards on-the-ground" (USDA 1997a). The on-the-ground signing necessary to enforce the Travel Plan will be completed in 1997. By the end of calendar year 1999 the actual on-the-ground restrictions will be in place in all of the BMU's.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, local, or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

Within the GYE, actions on private lands, such as summer and residential homes and recreational development, logging, road building, and livestock grazing will continue to contribute to mortality risk and habitat degradation and loss. Year-long distribution of visitors and types of recreational pursuits in the GYE have changed from seasonal peaks, mainly spring, summer and fall, to year-round activity. All of these activities may affect the ability of grizzly bears to adequately utilize important habitats in the GYE.

Table 2 Habitat Components for the Targhee N F Bear Management Units, Alternative 3-M

Habitat Component	HL #1	HL #2	PBMU #1	PBMU #2	B - T	
N F Acres	93,345	37,350	87,177	76,090	191,346	
Total Acres in BMU	128,515	97,944	183,203	275,708	341,894	
Designated Core Area	28,490	15,491	17,581	16,131	80,238	
Undesignated Core Area	20,961	10,082	35,300	34,512	41,972	
Open Road Miles	64.0	20.7	75.0	64.7	144.1	
Yearlong Restricted Miles	22.3	4.6	55.3	23.3	50.9	
Total Road Miles	86.3	25.3	130.3	88.0	195.0	
Open Road Density (mi/mi ²)	0.55	0.35	0.56	0.54	0.48	
Open Motorized Trail Miles	0	6.5	4.6	0.20	4.10	
Yearlong Restricted Miles	0	0	0	0	0	
Total Trail Miles	0	6.5	4.6	0.20	4.10	
Open Motorized Trail Density	0	0.11	0.03	0.00	0.01	
Total Motorized Access Miles	86.3	31.8	134.9	88.2	199.1	
Total Motorized Access Density	0.74	0.54	1.00	0.74	0.67	
Snowmachine/OHV Use	MS-1	Y/N	Y/N	Y/N	Y/N	Y/Y
	MS-2	N/A	N/A	N/A	N/A	N/A
	MS-3	Y/Y	N/A	N/A	N/A	N/A
Habitat Value	1.8547	2.3818	0.2935	0.342	0.9861	
Habitat Effectiveness	1.2536	1.5961	0.1715	0.1932	0.7065	
HE/HV Index	0.68	0.67	0.58	0.56	0.72	

Cumulative effects from the proposed action on the Forest include the continued use of private lands around and within the BMU's. The associated loss of grizzly bear habitat, as a result of human access, is anticipated to continue. Habitat fragmentation and loss of habitat would be expected to continue as secondary development from increasing recreational use of the BMU's will create a demand for new public services and facilities. Population pressures from private residential development are increasing in eastern Idaho (USDA 1996a) and are expected to continue in the future. Increasing human occupancy in and adjacent to the BMU's emphasizes the importance of managing human access on adjacent public lands. Residential and recreation homesites are increasing in eastern Idaho. Human development in low elevation areas has, and will continue to have, a cumulative impact on grizzly bears through loss of habitat and continued displacement due to human disturbance. The Revision includes standards and guidelines that stipulate Forest activities not increase total or open motorized access densities in the BMU's above 0.6 mi²/sq. mi. open route density, and 1.0 mi²/sq. mi. total route density. Existing core and security areas established from previous consultations will remain in place on the Plateau BMU. Additional delineations for designated and undesignated core areas have been established for the Bechler-Teton BMU. The management prescription for nonmotorized recreation within the Henry's Lake BMU will meet and maintain IGBC Roads Taskforce criteria for grizzly bear core areas. The Service believes adverse cumulative effects to bears will continue as a consequence of non-Federal actions on private lands. However, according to the proposed Revision, Forest actions would not contribute to, and in certain areas may alleviate, the impacts of some of these adverse effects.

The Service did not identify any other future state or private activities in the GYE that are reasonably certain to occur within the action area that would contribute as cumulative effects to the proposed action. State and private activities outside of the Forest will not influence the determination in this biological opinion because implementation of the proposed action would not change the impact these other activities may have on the grizzly bear in the GYE.

CONCLUSION

After reviewing the current status of the grizzly bear (*Ursus arctos horribilis*), the environmental baseline for the Forest, the effects of the Revision preferred alternative, Alternative 3-M, and the cumulative effects, it is the Service's biological opinion that implementation of the Revision, Alternative 3-M, as proposed, is not likely to jeopardize the continued existence of the GYE grizzly bear population. No critical habitat has been designated for this species, therefore, none will be affected.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act, and Federal regulation pursuant to section 4(d) of the Act, prohibit the take of endangered and threatened species, respectively, without a special exemption. Take is defined as harass, harm, pursue, hunt, shoot, wound, kill, capture, or collect or attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or

degradation that results in death or injury to listed species by significantly impairing behavioral patterns, including breeding, feeding or sheltering. Harass is defined by the Service as actions that create the likelihood of injury to a listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, carrying out an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be a prohibited taking under the Act provided that such taking is in compliance with this incidental take statement.

The measures described below are non-discretionary, and must be undertaken by the agency so they become binding conditions of any grant or permit issued to an applicant, as appropriate, in order for the exemption in section 7(o)(2) to apply. The Forest has a continuing duty to regulate the activity covered by this incidental take statement. If the Forest (1) fails to require an applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, and/or (2) fails to retain oversight to ensure compliance with these terms and conditions, the protective coverage of section 7(o)(2) may lapse.

A special regulation for the grizzly bear pursuant to section 4(d) of the Act provides that no person shall take a grizzly bear in the 48 conterminous states, with certain specified exceptions [50 CFR 17.40(b)].

Amount or Extent of Take

The Service anticipates that use of the open and total route system on the Forest will increase as recreation use increases during this cycle of the Revision process. Therefore, based on the most current biological information, the Service believes that until open and total route densities meet IGBC and the Revision standards, and habitat conditions for grizzly bear feeding, breeding, travel and sheltering are increased, take, direct and indirect, will continue at the present level. The Service believes the level of access and lack of cover in the BMU's is an indicator of the level of take, direct and indirect, that may be occurring.

It is the opinion of the Service that the current level of incidental take associated with the existing use is not at a level that is likely to jeopardize the recovery and survival of the grizzly bear population in the GYE. This is based in part, on the fact that measured population parameters have met established recovery plan levels, with the exception of mortality of female grizzly bears across the GYE during the last 2 years. However, the Service anticipates that the direct and indirect effects of implementing the Revision will not reduce the level of take until the access management plan is completed. The level of "take" may be in the form of direct take, as a result of illegal killing or human-grizzly bear conflicts, or in the form of indirect take such as harm resulting from displacement of grizzly bears from important habitats. The best scientific and commercial data available are not sufficient to enable the Service to quantify a specific amount of incidental take for the Revision. The effects of the Revision are largely unquantifiable in the short

term and may be measurable only as long-term effects on the species' habitat and population levels. Without additional information and analysis that are currently unavailable, we must designate the anticipated level of incidental take for the Revision as **unquantifiable**.

However, the Service believes the level of human-grizzly bear conflict is an indicator of the level of take occurring and provides an early warning of changes in the level of take. Therefore, within the BMU's, all human-grizzly bear conflicts will be handled according to the IGBC Nuisance Grizzly Bear Guidelines and the Forest will immediately reinstate consultation on the Revision. Any incidents that occur outside the BMUs should also be handled according to the IGBC Nuisance Grizzly Bear Guidelines. The Forest should immediately contact the Service to discuss the conditions surrounding the incident and the possible need to reinstate consultation on the Revision. Problem bears translocated onto the Forest from other areas of the ecosystem under the direction of the IGBC Nuisance Grizzly Bear Guidelines would not cause reinstatement of consultation. However, the Forest should immediately contact the Service to discuss the conditions surrounding the incident.

Effect of the Take

In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the species. There is no critical habitat designated, therefore, none will be affected.

Reasonable and Prudent Measures

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize take of the grizzly bear on the Forest:

- 1 Effectively implement and complete an open and total motorized route management program for roads and trails on the Forest by the end of calendar year 1999 that will contribute to the conservation, survival and recovery of the grizzly bear in the GYE as described in Section V of the Revision and the March 19, 1997, letter from the Forest.
- 2 The Forest shall implement and comply with monitoring and reporting procedures that allow the Forest and the Service to keep up-to-date on the status of access density and other management activities on the Forest as described in Section V of the Revision and the March 19, 1997, letter from the Forest.
- 3 Where wilderness lands occur, the Forest should, in coordination with the Idaho Department of Fish and Game and the Service, ensure that the "secure habitat" contains seasonal habitat in approximately the same proportion to its availability across the BMU as currently designated through management prescriptions for wilderness and adjacent lands.
- 4 The Forest shall implement an information program that provides the public with

accurate and accessible information regarding the biological basis for and the resulting effects of the Revision to adequately minimize take of grizzly bears

Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the Act, the Forest must comply with the following terms and conditions, which implement the reasonable and prudent measures described above. These terms and conditions are non-discretionary.

1. The Forest will, by the end of calendar year 1999, have in place in each BMU or subunit a precise open motorized route standard not to exceed 0.6 mi/sq mi and a precise total route density standard not to exceed 1.0 mi/sq mi. Forest activities that involve new road or motorized trail construction should be designed to improve, or at a minimum, designed so as not to increase existing open and/or total motorized route densities within a BMU or subunit above these levels.

2. The Forest shall adopt the open and total motorized route density recommendations of the IGBC Access Committee and implement these recommended levels of motorized access on areas of the Forest that are in the GYE Recovery Zone. This includes, but is not confined to, site specific restrictions (such as area closures, timing restrictions, etc.) on recreation and other activities to resolve human-grizzly bear conflicts, revision of access density standards, and use of CEM to refine core and security area percentages. However, the final IGBC access standards are not yet available, therefore, upon their completion, the Forest will contact the Service and jointly develop a time frame for implementation and attainment of the standards.

Until the standards are available, the Forest will ensure the above effective access restrictions are in place in the BMU's by the close of 1999 as described in the Travel Plan, Section V of the Revision and the March 19, 1997, letter from the Forest. At the end of 5 years from the date the ROD is signed, routes to be restricted that are in close proximity to, but outside the BMU's, will be effectively restricted according to the Revision standards and guidelines.

3. The Forest shall submit an annual report to the Service in December of each year. The report shall detail the progress in achieving the open and total route densities and core area criteria in the BMU's and subunits, including but not limited to listing road and trail closures and the number, location, and kinds of incidents and/or activities that occurred on closed roads and trails. The report to the Service should also document the duration, location, and type of activities proposed to take place in each BMU or subunit during the next activity season. The Forest will provide information to the Service on efforts taken to ensure that core areas contain seasonal habitat approximately proportional to its availability in the BMU and BMU Subunits.

The Service will use these reports to ascertain whether sufficient progress is being made toward realizing the Forest's 1999 and overall Revision objectives. Within 90 days after meeting the open and total road motorized access densities and core area requirements in each BMU or subunit, the Forest shall provide the Service with a final report for the BMU or subunit detailing all activities undertaken in association with the terms and conditions of this biological opinion.

4 Within one year of issuance of the Revision, the Forest will develop and implement a public information program on the positive effects of road closures for fish and wildlife, water quality, and other Forest resources. The effort should focus on both information that is available and relevant at a local, district level and on information pertinent to a more broad-based Forest level approach. The public should be provided a thorough and understandable analysis of existing road densities and future road densities resulting from implementation of the Revision. The net reduction in open motorized access density and the remaining opportunities for motorized public access, timber extraction, recreation, and other Forest uses should be emphasized.

5 In conjunction with implementation of the Travel Plan Standards and Guidelines of the Revision, the Forest should include the following:

A As management recommendations are developed by the GYE Access Committee, the CEM moving windows analysis or most current up-to-date scientific methodology should be used to evaluate and monitor the habitat effectiveness and value across each BMU or subunit. The information will be used by the Forest and the Service to evaluate and update management actions and recommendations for the Forest.

B The IGBC Access Committee definitions make allowances for the occurrence of restricted roads within core areas. Although restricted roads in core areas must be effectively blocked in such a way to prevent motorized access, the presence of a roadbed within a core area increases the potential for illegal motorized use. Effective road closures require effective monitoring of the closures. The Service supports the Forest monitoring efforts and encourages the use of records of violations in closure areas to monitor effectiveness of closures and focus remedial efforts on those areas where the highest incidents of trespass occur.

C Road reclamation should be emphasized in core areas. The number of restricted roads which are still available for use in core areas should be minimized.

D Roads constructed or reconstructed for timber sale purposes should be single purpose roads according to the IGBC Guidelines. New roads or road reconstruction should be of minimum design specifications and placed on the landscape to reduce costs and facilitate reclamation of the roads after the timber

sale is completed

CONSERVATION RECOMMENDATIONS

Sections 2(c) and 7(a)(1) of the Act direct Federal agencies to use their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information. The recommendations provided here relate only to the proposed Revision and do not necessarily represent complete fulfillment of the Forest section 7(a)(1) responsibility for the grizzly bear.

1. Motorized access management is only one of several factors influencing grizzly bear habitat and grizzly bear security. The presence of attractants is a major factor leading to food conditioning and habituation and the eventual direct mortality or management removal of grizzly bears. The Service supports the continuing efforts to implement the food storage order for the Forest within the BMU's. To further address security for grizzly bears and safety for recreationists outside of the BMU's, the Service recommends the Forest develop and implement a range of alternative food storage options Forest-wide to accommodate a variety of Forest user groups. The Service encourages the implementation of these orders at the earliest date possible.

2. All travel routes scheduled to be restricted outside the BMU's, but on the remaining areas of the Forest will be effectively restricted 10 years from the date the ROD is signed.

In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

REINITIATION NOTICE

This concludes formal consultation on the actions outlined in your November 1996, request for consultation and subsequent updates. As provided in 50 CFR §402.16, reinitiation of consultation is required when discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if (1) the amount or extent of incidental take is exceeded (as discussed under the "Incidental Take Statement" section of this opinion, the Service believes this limit is exceeded if a human-grizzly bear incident occurs in a BMU), (2) new information reveals effects of the Forest action that may affect listed species or habitat in a manner or to an extent not considered in this opinion, (3) the action is subsequently modified in a manner that causes an effect to the listed species or habitat not considered in this opinion, or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

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DEFINITIONS

Cummulative Effects Model (CEM) for IGBC

CEM is intended to 1) quantify individual and collective effects of land uses and activities in space and through time, and 2) provide an analytic tool for evaluating alternative land use scenarios relative to grizzly bear recovery goals and objectives (USDA et al 1990)

Access Committee for IGBC

The Access Committee is to 1) establish standardized definitions for roads, i.e., open road reclaimed road, etc., 2) standardize methods to measure road densities and define the analysis areas within which density should be measured, and 3) assure that developed definitions and procedures interface with the existing unified cumulative effects model (IGBC 1994)

Grizzly Bear Recovery Plan Objectives

A recovered population is defined as one that

- 1 can sustain the existing level of known and estimated unknown, unreported human-caused mortality that exists in the GYE, and
- 2 is well distributed throughout the recovery zone in the GYE

Recovery parameters for the GYE are as follows

- 1 15 females with cubs over a running 6-year average both inside the recovery zone and within a 10 mile area immediately surrounding the recovery zone,
- 2 16 of 18 BMU's occupied by females with young from a running 6-year sum of observations with no two adjacent BMU's unoccupied,
- 3 known, human-caused mortality not to exceed 4% of the minimum population estimates based on the most recent three-year sum of females with cubs, and
- 4 no more than 30% of known, human-caused mortality shall be females

IGBC Core Area and Forest Designated and Undesignated Core Area

Core area criteria include the following

- 1 No motorized use of roads and trails during the non-denning period Within the core

area, restricted roads require closure devices that are permanent such as tank traps, large boulders, dense vegetation, etc

- 2 No roads or trails that receive non-motorized, high intensity use as defined in established cumulative effects activity definitions
- 3 Minimum of 0.3 miles from any open road or motorized trail This will be accomplished by buffering all open roads and open motorized trails
- 4 Consideration should be given, when information is available, to ensure the core area(s) meet seasonal bear habitat needs by assuring that spring, summer, fall, and denning habitat within the core areas are representative of these seasonal habitats in the entire analysis area
- 5 Once core areas become established and effective, these areas should remain in place for at least 10 years This duration is based upon the generation time for a female grizzly bear or the time it takes a female grizzly bear to replace herself

The Forest Service has expanded the definition of core area to include the terms "designated and undesignated"

Designated core areas are those areas which meet all of the core area criteria and their boundaries are mapped with a management prescription

Undesignated core areas are those areas which meet all of the core area criteria, but their boundaries are not mapped with a management prescription There is concern since undesignated core areas are not mapped, they may not be established and effective for at least 10 years, therefore, criteria number 5 may not be fully guaranteed in all cases However, undesignated core areas have existed in some areas for many decades, and they may exist into the future for a decade or more For however long they exist, they do provide some habitat benefit to the bear

IGBC Management Situation (MS)

MS-1 areas are those which contain grizzly population centers and/or habitat that is needed for the survival and recovery of the species The needs of the grizzly bear will be given priority over other management considerations Land uses which can affect grizzly bears and/or their habitat will be made compatible with grizzly needs or such uses will be disallowed or eliminated

MS-2 areas are those that do not contain grizzly population centers although grizzlies do occur, and highly suitable habitat components do not generally occur The needs of the grizzly bear will be given consideration where feasible Management would accommodate

grizzly populations and/or habitat use if feasible, but not to the extent of exclusion of other land uses. Human-bear conflict minimization will be given high priority.

MS-3 areas contain no suitable habitat for grizzlies and their presence is possible but infrequent. Grizzly use of such areas will be discouraged. Management within these areas will encourage measures that minimize the potential for human-bear conflict. Examples include towns or other residential areas, established campgrounds, or highways.

IGBC Total and Open Road and Motorized Trail Route Density

Total Motorized Access Route Density - includes all open and restricted roads and motorized trails. Density is displayed as a percentage of the analysis area in a defined density category. Example 20% >2.0 miles per square mile.

Open Road and Open Motorized Trail Route Density - includes all open roads and open motorized trails. Density is displayed as a percentage of the analysis area in a defined density category. Density is a single cumulative total of open roads and open motorized trails.

Percentage of Analysis Area in Core Area(s) - percentage of the analysis area that meets core area criteria. Minimum size and connectivity of patches will be established at the recovery zone level. It is recommended that the minimum size for the core area(s) be that area necessary to support a female grizzly bear for 24 hours of foraging.

Habitat Value

Habitat value (HV) is a measure of the amount and quantity of vegetative and non-vegetative habitat currently in the unit. While HV does not explicitly include human activity, the effects of past activity in the landscape, such as roads, implicitly affects both the vegetative (e.g. habitat type, cover type, and successional stage) and non-vegetative (e.g. ungulate range use) components of grizzly bear habitat (IGBC 1994a).

Habitat value is a relative figure representing the inherent quality of an area to support grizzly bears (USDA et al. 1990).

Habitat Effectiveness

Habitat effectiveness (HE) is the habitat value after discounting for current human activity. Each activity has a zone of influence and a set of dates over which it occurs. The impact of an activity depends upon its level of use and the surrounding security cover. An activity may therefore have high impact during one season and no impact during another. Activities located outside the BMU boundary may have zones of influence extending into the boundary area (IGBC 1994a).

Habitat effectiveness is the product of the values from the habitat routine and disturbance routine calculations, and reflects the area's actual ability to support bears given the quality of habitat and the type of human disturbance imposed upon the area (USDA et al 1990)

Management Prescription 5 3 5 Description

This management prescription emphasizes a high degree of security and resource conditions which contribute toward the conservation and recovery of the grizzly bear, and benefits to other wildlife. Habitats will be managed to meet the goals of grizzly bear recovery. Other uses may be allowed when compatible with these goals.

Grizzly habitat maintenance and improvement, and grizzly-human conflict minimization will receive the highest management priority. Management decisions will favor the needs of the grizzly bear when grizzly habitat and other land use values compete. Land uses which can affect grizzlies and/or their habitat will be made compatible with grizzly needs or such uses will be disallowed or eliminated. Grizzly-human conflicts will be resolved in favor of grizzlies unless the bear involved is determined to be a nuisance bear (IGBC 1986)

The abundance and distribution of natural food sources (such as huckleberry habitats, whitebark pine, etc) are maintained or improved by natural events such as fire and insect disturbances, or by designed vegetation management activities. A variety of forested successional stages are present, and are the result of natural disturbances such as fire and insects or by designed vegetation management activities. Habitat conditions which contribute to the movement of bears to adjacent bear management units are maintained. Human activities are managed or restricted so that human conflicts with grizzlies are unlikely, this includes restricting human activities and generally reduced public access.

Objectives

- 1 Any nonfederal lands within this area will be a high priority for acquisition
- 2 Maintain grizzly bear security through a low density of open, motorized roads and trails
- 3 Manage recreation to minimize grizzly conflicts with humans
- 4 Domestic sheep grazing will be phased out over time, on an opportunity basis
- 5 Wildlife habitat improvement projects will maintain or improve grizzly bear habitat. Vegetation manipulation to improve grizzly bear habitat includes treatment to maintain long term ecosystem vegetation patterns

6 Effects analysis will be analyzed at multiple scales. Analysis areas will follow ecological boundaries, watersheds, and topographic breaks. Cumulative effects will be analyzed on no less than a *BMU* subunit scale.

Standards and Guidelines

Forestwide standards and guidelines apply. The Interagency Grizzly Bear Guidelines for Management Situation 1 habitat apply to this management prescription, except that livestock grazing in existing Management Situation 2 habitat will continue to be managed under Management Situation 2 guidelines.

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GLOSSARY

-A-

Abiotic - Nonliving substances or environmental factors.

Accelerated Soil Erosion - Erosion much more rapid than normal, natural, geological erosion; primarily a result of the influence of the activities of man, animals, or catastrophic events.

Acceptable Storage/Acceptably Stored - (a) stored in a bear resistant container or; (b) stored in a closed vehicle constructed of solid, nonpliable material or; (c) suspended at least 10 feet clear of the ground at all points and 4 feet horizontally from any supporting tree or pole.

Acre-foot - A measure of water or sediment volume equal to the amount which would cover an area of one acre to a depth of one foot (325,851 gallons).

Active Nest Site - See Nest Site.

Activity Area - (regarding soil disturbance) A land area impacted by a management activity, excluding specified transportation facilities, dedicated trails, mining excavations, and dumps. Activity areas include harvest units within timber sale areas, prescribed burn areas, and grazing areas within range allotments. Riparian and other environmentally sensitive areas may be monitored and evaluated as individual activity areas.

Activity Area - (regarding wildlife habitat management for grizzly bear and other wildlife species) A geographic area in which activities are conducted. Refers primarily to long-term activities as described in Prescription 5.3.5. A geographic area delineation which reasonable encompasses and supports the primary and immediate effects of the management action which is carried out within it as measured in time and space.

Adaptation - A change in either the genetic makeup or behavior of an organism that enhances its ability to cope with or survive in its environment.

Adaptive Management - A type of natural resource management that implies making decisions as part of an ongoing process. Monitoring the results of

actions will provide a flow of information that may indicate the need to change a course of action. Scientific findings and the needs of society may also indicate the need to adapt resource management to new information.

Adaptive Planning - A strategy whereby planning efforts are directed towards meeting temporary crises which arise in response to changing conditions.

Aerial Logging - Removing logs from a timber harvest area by helicopter. Fewer roads are required, so the impact to an area is minimized.

Affected Environment - The natural environment that exists at the present time in an area being analyzed.

Afforestation - The establishment of a forest cover on areas not previously forested.

Age Class - An age grouping of trees according to an interval of years, usually 20 years. A single age class would have trees that are within 20 years of the same age, such as 1-20 years or 21-40 years and so on.

Air Pollution - The undesirable addition to the atmosphere of substances (gases, liquids, or solid particles) that are either foreign to or are in quantities exceeding their natural concentrations.

Air Quality - The composition of air with respect to quantities of pollution therein; used most frequently in connection with "standards" of maximum acceptable pollutant concentrations.

Air Shed - A collection of geographic areas that because of topography, climate and meteorology share the same air mass.

Allocation - The assignment of management practices to specific land areas to achieve established goals and objectives; for example the allocation of a wilderness management zone to an opportunity class.

Allotment (range allotment) - The area designated for use by a prescribed number of livestock for a prescribed period of time. Though an entire Ranger District may be divided into allotments, all

land may not be grazed, because other uses, such as recreation or tree plantings, may be more important at a given time

Allotment Management Plan (AMP) - A document that specifies the program of action needed to reach a given set of objectives for a livestock allotment. It is prepared in consultation with the permittee(s) involved and prescribes the manner and extent to which the permittee's livestock operations will be conducted in order to meet multiple use, sustained yield, economic, and other needs and objectives as determined for the lands involved. It describes the type, location, ownership, and specifications for the range improvements in place or to be installed and maintained on the lands to meet the livestock grazing and other objectives for the land. It contains such other provisions relating to the permittee's livestock management responsibilities and other objectives as may be prescribed by the Forest Service.

Allowable Sale Quantity (ASQ) - The amount of chargeable timber volume which can be sold from a plan area for a decade. The volume sold from suitable lands cannot exceed the allowable sale quantity standard established for the plan area. Each forest plan which provides for a timber sale program must establish a standard setting the allowable sale quantity. The allowable quantity is a ceiling, it is not a future sale level projection or target and does not reflect all of the factors that may influence future sale levels. This quantity may be expressed on an annual basis as the "average annual allowable sale quantity."

Allowable Use - The degree of utilization considered desirable and attainable on various specific parts of an allotment considering the present nature and condition of the resource, management objectives, and level of management.

All-Aged Stand - A portion of a forest or a stand that contains trees of all, or almost all, age classes.

All Terrain Vehicle (ATV) - A type of off-highway vehicle 50 inches or less in width, having an unladen dry weight of 700 pounds or less, traveling on three or more low pressure tires, having a seat designed to be straddled by the operator and designed for or capable of travel over unimproved terrain.

Alternative - One of several policies, plans or projects proposed for decision making.

AMP - Allotment Management Plan

Analysis - A detailed examination of anything complex in order to understand its nature or determine its essential features.

Analysis Area - A geographic area used for environmental analysis. Analysis areas will vary in size, depending on the type of activity and/or project being analyzed, and the associated issues, concerns and opportunities.

Animal Carcass - The dead body or parts thereof, of any mammal, bird, or fish, including domestic livestock.

Animal Unit (AU) - Considered to be one mature dry cow of approximately 1000 pounds based upon an average daily forage consumption of 26 pounds dry matter per day.

Animal Unit Conversion Factor - A numerical figure expressing the forage requirements of a particular kind or class of animal relative to the requirement for an animal unit. A conversion factor is satisfactory with respect to the amount of forage required to maintain an animal, but may not be applicable in determining stocking rates for range use for particular kinds or classes of animals because of different grazing preferences.

Animal Unit Month (AUM) - The amount of feed or forage required by an animal unit for 1 month. Each wildlife species will utilize some fraction of this as follows: Elk = 7, Deer = 3, and Antelope = 3.

Annual Operating Plan - The yearly annual plan of use for livestock grazing activities on an allotment. The annual operating plan prescribes the annual actions that are necessary to implement and comply with the AMP and/or Forest Land Management Plan goals, objectives, standards and guidelines. It clearly specifies the permittee's obligations as well as those of the Forest Service for the current year. It is the working agreement with the permittee for carrying out the management action prescribed for that year. The term Annual Operating Plan is synonymous with the term Annual Plan of Use.

Annual Plan of Use - See Annual Operating Plan.

Anthropogenic - Involving the impact of humans on natural systems.

Apparent Trend - An estimate of trend drawn from the presence or absence of indicators noted or measured during a onetime observation. Conclusion drawn from such a method can be borne out or refuted only by making additional observations or measurements over time. Apparent trend is described in the same terms as measured trend except that when no trend is apparent it shall be described as "not apparent."

Appeal - A request to a higher ranking Forest Service official for review of and relief from a written decision.

Appropriate Suppression Response - The planned strategy for wildfire suppression action, in terms of kind, amount and timing, which most efficiently meets fire management direction under current and expected burning conditions. The response may range from a strategy of prompt control to one of containment, confinement or surveillance.

Aquatic Connectivity - The level of connection between aquatic habitat patches. Aquatic ecosystems and species coevolved to function within certain limits of connectivity. When aquatic habitat patches are fragmented beyond natural limits, the key ecological linkages between the biological (aquatic biota, soil microbes, riparian plants) and physical (water, parent material, gradient) elements are weakened and result in reduced aquatic ecosystem health.

Aquatic Ecosystem - Any body of water, such as streams, lakes, or springs, and all organisms and nonliving components within it, functioning as a natural system and interacting with associated terrestrial ecosystems.

Aquatic Influence Zone (AIZ) - Used in the context of a land management prescription, the area encompassing aquatic and riparian ecosystems and adjacent lands which directly affect the hydrologic, geomorphic, and ecological processes controlling aquatic and riparian ecosystem health and function.

Aquatic Macroinvertebrates - Invertebrates living within aquatic systems that are large enough to be seen with the naked eye, i.e. most aquatic insects.

Aquifer - A water-bearing geologic formation or structure that transmits water.

Artificial Regeneration - Replacement of forest stands by planting young trees or applying seed (direct seeding).

Aspect - The direction a slope faces. A hillside facing east has an eastern aspect.

ASQ - Allowable Sale Quantity.

Assessment - The Renewable Resource Assessment required by the Forest and Rangeland Renewable Resources Planning Act (RPA).

Associated Species - A species found to be numerically more abundant in a particular forest successional stage as compared to other stages.

Association - Any assemblage of populations living in a prescribed area or physical habitat. A loosely organized unit to the extent that it has characteristics additional to its individual components.

ATV - All Terrain Vehicle.

AUM - Animal Unit Month.

Avoidance Areas - Areas having one or more physical, environmental, institutional or statutory impediments to corridor designation. These are two types of avoidance areas.

Discretionary - areas that may be crossed by corridors only if necessary and reasonable mitigation or avoidance of significant impacts can be obtained.

Nondiscretionary - areas that may not be crossed by corridors unless authorized by the appropriate official (for example, Governor, President, etc.).

-B-

BA - Biological Assessment.

Background - The visible terrain beyond the foreground and middleground where individual trees are not visible but are blended into the total fabric of the stand. (See "Foreground" and "Middleground").

Background Level (Background, Natural Background) - The ever-present environmental conditions or effects above which a phenomenon must manifest itself in order to be detected.

Bald Eagle Occupied Nesting Zone (Zone I) - The area within a 400 m (1312 ft) radius of an occupied nest, or where monitoring data is sufficient, it is the distance at which the presence of humans first causes significant stress or behavior that results in inattentiveness to young or eggs

Bald Eagle Primary Use Area (Zone II) - The area within an 800 m (2625 ft) radius of the active nest and of all known alternative nests, or where monitoring data is sufficient, the area where over 75% of the adults foraging and loafing activity occurs during the nesting season (excluding Zone I) The area could be discontinuous if movement data indicate the need

Bald Eagle Home Range (Zone III) - Includes all potential foraging habitat along rivers and streams within 4 Km (2.5 mi) of Zone I areas, which is not included in Zones I or II The zone will include a 400 m (1312 ft) buffer along the potential foraging habitat

Bark Beetle - An insect that bores through the bark of trees to eat the inner bark and lay its eggs Bark beetles and associated fungi are important killers of forest trees

Basal Area - 1 The area of the cross section of a tree stem, including the bark, generally at breast height (4.5 feet [1.4 m] above the ground) 2 The total area of ground covered by trees measured at breast height 3 The actual surface area of soil covered or occupied by a plant measured close to the ground (basal cover, ground cover)

Base Sale Schedule - A timber sale schedule formulated on the basis that the quantity of timber planned for sale and harvest for any future decade is equal to or greater than the planned sale and harvest for the preceding decade and that this planned sale and harvest for any decade is not greater than the long-term sustained-yield capacity This definition expresses the principle of nondeclining flow

BE - Biological Evaluation

Bear Management Units (BMUs) - Eighteen land units delineated within the Yellowstone Grizzly Bear Recovery Zone These units are approved by the IGBC for grizzly bear population and habitat analysis There are three bear management units which encompass portions of the Targhee National Forest

Bear Management Unit Subunits - Smaller divisions of BMUs approved by the IGBC for additional habitat and population analysis

Bear Resistant Container - A securable container constructed of solid nonpliable material capable of withstanding 200 foot-pounds of energy (using the approved bear-resistant container impact testing machine) When secured and under stress the container will not have any cracks, openings, or hinges that would allow a bear to gain entry by biting or pulling with its claws Wood containers are not considered bear-resistant unless they are reinforced with metal

Benchmark - (1) A permanent reference point (2) In range monitoring, it is used as a point where changes in vegetation through time are measured

Best Management Practices (BMPs) - Practices which have been designed to prevent or reduce the amount of nonpoint pollution, to a level compatible with State water quality standards and quality goals These practices may be determined by the State, the Forest, a designated area wide planning agency, or on a project level basis Also referred to as Soil and Water Conservation Practices (SWCPs)

Big Game - Those species of large mammals normally managed for sport hunting

Biodegradable - Chemicals or substances which can be readily broken down into their component parts by biological action

Biodiversity - See Biological Diversity

Biological - Relating to, or affecting life and living organisms

Biological Assessment (BA) - A document that reviews and evaluates proposed actions of Federal agencies for possible effects on any species listed, or proposed to be listed, as threatened or endangered, and their designated or proposed critical habitat

Biological Control - The use of natural means to control pests Examples include introduced or naturally occurring predators such as wasps, or hormones that inhibit the reproduction of pests Biological controls can sometimes be alternatives to mechanical or chemical means

Biological Diversity - The distribution and abundance of different plant and animal species and communities within an area. Biodiversity can be defined as the number of different items and their relative frequency. Diversity can occur on the genetic, species, ecosystem and landscape levels.

Biological Evaluation (BE) - A document that reviews all Forest Service planned, funded, executed, or permitted programs and activities for possible effects on endangered, threatened, proposed, or sensitive plant and animal species.

Biological Potential - The maximum possible resource output limited only by inherent physical and biological characteristics.

Biomass - The total weight of the living organisms in some biological system.

Biosphere - That part of the earth's crust, waters and surrounding air-layer which is inhabited by living organisms.

Biota - The plants and animals of an area, taken collectively.

Biotic - Pertaining to life or living organisms.

Biotic Climax - A climax caused by a permanent influence or culmination of influences from one or more kinds of organisms, including humans. See Climax.

Biotic Community - See Community.

Biotic Diversity - See Biodiversity.

BMP - Best Management Practices.

Board Foot - The amount of wood equivalent to a piece 1 foot long by 1 foot wide by 1 inch thick. Generally, five board feet log measure is approximately equivalent to 1 cubic foot of round wood.

Bog - An inadequately drained area rich in plant residues, usually acid in reaction, frequently surrounding a body of open water, and having a characteristic flora.

Broadcast Burn - Allowing a prescribed fire to burn over a designated area within well-defined boundaries for reduction of fuel hazard, improve forage for wildlife and livestock, or encourage successful regeneration of trees.

Browse - Twigs, leaves and young shoots of trees and shrubs that animals eat. Browse is often used to refer to the shrubs eaten by big game, such as elk and deer.

Brush - Stands of shrubby, woody plants or low growing trees.

Buffer - A designated land or water area, along the perimeter of some feature (e.g., a stream), whose use is regulated so as to resist, absorb or preclude unwanted effects to the protected feature.

Buffer Strip - A protective area adjacent to an area requiring special attention or protection.

Burning Index (BI) - A number related to the contribution of fire behavior to the effort of containing a fire. BI is represented in NFDRS by a calculation of flame length in feet multiplied by 10.

BURP - Beneficial Use Reconnaissance Project. It includes methods used by Idaho DEQ to measure water quality, beneficial use status and attainability, and general stream health.

-C-

C&H Allotment - A cattle and horse allotment.

Cable Logging - Logging that involves the transport of logs from stump to collection points by means of suspended steel cables. Cable logging reduces the need for the construction of logging roads.

Candidate Species - A species being considered for Federal listing as a threatened or endangered species.

Canopy - The more or less continuous cover of branches and foliage formed collectively by the crown of adjacent trees and other woody growth. It usually refers to the uppermost layer of foliage, but it can be used to describe lower layers in a multi-storied forest.

Canopy Closure - The degree to which the collective forest canopy, as projected onto the surface, occupies or covers that surface, the degree to which the sunlight is blocked or the sky obscured.

Canopy Cover - The percentage of ground covered by a vertical projection of the outermost pe-

rimeter of the natural spread of foliage of plants. Small openings within the canopy are included. The sum of canopy cover of several species may exceed 100 percent. (Syn: crown cover)

Capability - The potential of an area of land to produce resources, supply goods and services, and allow resource uses under an assumed set of management practices and at a given level of management intensity. Capability depends upon current conditions and site conditions such as climate, slope, landform, soils and geology, as well as the application of management practices, such as silviculture or protection from fire, insects and disease.

Capability for Livestock Grazing - Refers to the ability (given physical, biological, and technological feasibility) of land to produce forage resources that can be grazed by domestic or wild ungulates. Areas designated as "open" to domestic livestock grazing have the potential to produce resources, supply goods and services, and allow resource uses under an assumed management intensity. Capability depends upon factors such as soils, slope, landform, etc.

Carnivore - A flesh eating organism.

Carrying Capacity - The number of organisms that the resources of a habitat can support. Usually used with respect to specific species even though the carrying capacity of a habitat depends on the interactions of both its abiotic and biotic components.

Catastrophic Condition - A significant change in forest conditions on the area that affects Forest Plan resource management objectives and their projected and scheduled outputs, uses, costs, and effects on local communities and environmental quality.

Catastrophic Event - A large-scale, high-intensity natural disturbance that occurs infrequently.

Cavity - The hollow excavated in trees by birds or other natural phenomena, used for roosting and reproduction by many birds and mammals.

CEM - Cumulative Effects Model (Bear)

Channel - A natural or artificial conduit which periodically or continuously contains moving water, such as a stream. A channel has defined bed and banks.

Chargeable Volume - All volume included in the growth and yield projections for the selected management prescriptions used to arrive at the allowable sale quantity, based on regional utilization standards.

Chemical Control - The use of chemical pesticides and herbicides to control pests and undesirable plant species.

Class I Areas (Airsheds) - An area designated for the most stringent degree of air quality protection by the Clean Air Act. Included are National parks established before August 1977 and wildernesses designated by the 1964 Wilderness Act. Increases in sulfur dioxide and particulate matter concentrations in ambient air are strictly regulated to protect visibility.

Class II Areas (Airsheds) - The level of air quality protection assigned to areas other than Class I Areas.

Class of Livestock - Age and/or sex group of a kind of livestock. (compare to class of animal)

Classification - The systematic grouping (and naming) of entities based on shared characteristics.

Clean Air Act - Public Law 84-159 as amended. Section 309 of 42 U.S.C. 7609 provides authority for the Environmental Protection Agency to review other agency environmental impact statements.

Clearcutting - A method of regenerating an even-aged stand in which a new age class develops in a fully-exposed microclimate after removal, in a single cutting, of all trees in the previous stand.

Clearcutting with Reserves Regeneration Method - A variant of the Clearcutting Method in which varying numbers of reserve trees are not cut to attain goals other than regeneration. The method normally creates a two-aged stand.

Climate - The average course or condition of the weather at a particular place over a period of many years as exhibited in extremes, means, ranges and seasonal distributions.

Climax - The culminating stage in plant succession for a given site where the vegetation has reached a highly stable condition.

Climax Community - The final stage in plant succession for a site. Its nature is determined largely by the climate and soil of a region. Absent disturbance, the climax community develops and maintains itself in steady state conditions.

Climax Species - Species that are self-perpetuating in the absence of disturbance.

Climax Vegetation - The pattern or complex of climax communities in a landscape corresponding to the pattern of environmental gradients or habitats.

Closed Allotment/Area - An allotment or area where livestock grazing is not permitted.

Coarse-filter Analysis - An analysis of aggregates of elements such as cover type or plant community.

Coarse Filter Management - Land management that addresses the needs of all associated species, communities, environments, and ecological processes in a land area. (See fine filter management.)

Collector Roads - Roads that serve small land areas and are usually connected to a Forest System Road, a county road, or a state highway.

Commercial Forest Land - Forest land that is producing or is capable of producing crops of industrial wood and (a) has not been withdrawn by Congress, the Secretary, or the Chief, (b) existing technology and knowledge is available to ensure timber production without irreversible damage to soils productivity, or watershed conditions, and (c) existing technology and knowledge, as reflected in current research and experience, provides reasonable assurance that adequate restocking can be attained within 5 years after final harvesting.

Commercial Thinning - Selective cutting in immature stands in which all or part of the felled trees are extracted for useful products and designed to improve the quality and growth of the remaining trees.

Commodity - A resource product for which a monetary value has been established.

Common Variety Mineral - (also called salable mineral) In general, common variety mineral ma-

terials occur widely and have a low unit value. These include common varieties of sand, gravel, cinders, stone, pumice, clay and other similar materials. Defined in the Materials Act of 1947 and Public Law 167 of 1955, these minerals are sold rather than located or leased. Their disposal is totally at the discretion of the Forest Service.

Community - All of the organisms inhabiting a common environment and interacting with one another, or an association of interacting populations usually defined by the nature of their interaction in the place in which they live.

Community Cohesion - The degree of unity and cooperation within a community in working toward shared goals and solutions to problems. Used in the context of human relationships.

Community Stability - A community's capacity to handle change without major hardships or disruptions to component groups or institutions. Measurement of community stability requires identification of the type and rate of proposed change and an assessment of the community's capacity to accommodate that level of change.

Community Type - An aggregation of all plant communities distinguished by floristic and structural similarities in both overstory and undergrowth layers. A unit of vegetation within a classification.

Compartment - A unit of forested land, usually between 1,000 and 3,000 acres in size, defined by natural and man-made features and used to facilitate timber planning.

Competition - The general struggle for existence and dominance in which living organisms compete for a limited supply of the necessities of life.

Composition - What an ecosystem is composed of. Composition could include water, minerals, trees, snags, wildlife, soil, microorganisms, and certain plant species that comprise a biotic community or other ecological unit.

Concern - (Also management concern) An issue, problem or condition which constrains the range of management practices identified by the Forest Service in the planning process.

Confine - To limit fire spread within a predetermined area principally by use of natural or precon-

structured barriers or environmental conditions. Suppression action may be minimal and limited to surveillance under appropriate conditions

Conifer - A tree, usually evergreen, that produces cones, such as a pine, spruce, or fir tree

Connected Actions - Closely related actions which automatically trigger other actions, cannot proceed unless other actions are taken previously or simultaneously, or are interdependent parts of a larger action and depend on the larger action for justification

Connectivity (of habitats) - The linkage of similar but separated vegetation stands by patches, corridors or "stepping stones" of like vegetation. This term can also refer to the degree to which similar habitats are linked

Connectivity - The condition in which the spatial arrangement of land or water habitats allows biological and ecological processes to function across the landscape. Connectivity is the opposite of fragmentation

Conservation - The careful protection, utilization and planned management of natural resources to prevent their depletion, exploitation, destruction, waste or neglect

Consistency - The degree to which all resource plans and permits, contracts and other instruments for the use and occupancy of National Forest System land adhere to Forest Plan direction

Constraint - A limitation, action which cannot be taken or must be taken

Consumer Organism - An organism which ingests other organisms or existing organic matter

Consumptive Use - A use of resources that reduces the supply, such as logging and mining (See also nonconsumptive use)

Contain - To surround a fire, and any spot fires therefrom, with control lines as needed, which can reasonably be expected to check the fire's spread under prevailing and predicted conditions

Contingency Plan - A plan for providing timely recognition of approaching critical fire situations, priority setting, and deployment of forces and other action to resolve those situations

Continuous Grazing System - Unrestricted grazing throughout the entire grazing season every year

Contour - A line drawn on a map connecting points of the same elevation

Contrast - The degree to which adjacent landscape elements differ from each other, with respect to species composition and physical attributes

Control - To complete the control line around a fire, any spot fires therefrom, and any interior islands to be saved, burn out any unburned area adjacent to the fire side of the control line, and cool down all hot spots that are immediate threats to the control line, until the line can reasonably be expected to hold under foreseeable conditions

Coordinated Resource Management (CRM) - The process whereby various user groups are involved in discussion of alternative resource uses and collectively diagnose management problems, establish goals and objectives, and evaluate multiple use resource management

Core Area - A term used to describe a component of grizzly bear habitat. Core areas are free of motorized access during the nondenning period. Core areas must meet the following criteria

No motorized use of roads and trails during the nondenning period. Within the core area, restricted roads require closure devices that are permanent such as tank traps, large boulders, dense vegetation, etc

No roads or trails that receive nonmotorized, high intensity use as defined in established cumulative effects activity definitions

Minimum of 3 miles from any open road or motorized trail. This will be accomplished by buffering all open roads and open motorized trails

Consideration should be given to ensure that the core areas meet seasonal bear habitat needs by assuring that spring, summer, fall and denning habitat within the core areas are representative of these seasonal habitats in the entire analysis area

Once core areas become established and effective, these areas should remain in place

for at least 10 years. This duration is based upon the generation time for a female grizzly bear or the time it takes a female grizzly bear to replace herself.

Corridor - A linear strip of land managed for specific vegetational and other (roads) characteristics to allow the movement of species between areas of suitable habitat. The landscape elements that connect similar patches through a dissimilar matrix or an aggregation of dissimilar patches.

Cost-efficiency - The usefulness of specified inputs (costs) to produce specified outputs (benefits). In measuring cost efficiency, some outputs, including environmental, economic, or social impacts, are not assigned monetary values but are achieved at specified levels in the least cost manner. Cost efficiency is usually measured using present net value, although use of benefit-cost ratios and rates-of-return may be appropriate.

Council on Environmental Quality (CEQ) - The Council issues regulations binding on all federal agencies, to implement the procedural provisions of the National Environmental Policy Act. The regulations address the administration of the NEPA process, including preparation of Environmental Impact Statements (EIS) for major federal actions which significantly affect the quality of the human environment.

Cover - Any feature that conceals wildlife or fish. Cover may be dead or live vegetation, boulders, or undercut streambanks. Animals use cover to escape from predators, to rest or to feed.

Cover Class - Represents a percentage range for a fixed area covered by the crowns of plants. It is measured as a vertical projection of the outermost portion of the foliage. Cover Class A = <40% canopy cover, Cover Class B = 40-60% canopy cover, Cover Class C = >60% canopy cover.

Cover-forage Ratio - The ratio of hiding cover to foraging areas for wildlife species.

Cover, Percent - The area covered by the combined aerial parts of plants and vegetative ground cover expressed as a percent of the total area.

Cover Type (forested cover type) - Stands of vegetation that are distinguished by the existing dominant or codominant plant canopies. The as-

pen cover type contains plants distinct from the pinyon-juniper cover type.

Created Opening - An opening in the forest cover (nonstocked and seedling stages) created by the application of even-aged silvicultural practices (clearcuts, seed cuts of a shelterwood, or group selection), and nonstocked and seedling stages following natural or prescribed fire.

Critical Area - A portion of rangeland which has a critical issue related to it, such as a threatened or endangered or sensitive species, a high use recreation area, or a key wildlife habitat. The area serves as a monitoring and evaluation site for the critical issue.

Critical Habitat - Specific area occupied by threatened or endangered species, on which are found those physical and/or biological features that are essential to the conservation of the species.

Crop Tree - A tree that forms, or is selected to form, a component of the final stand, specifically, one selected to be carried through to maturity. Also known as a final crop tree or growing stock tree.

Crown - The upper part of a tree or other woody plant carrying the main branch system and foliage above a more or less clean stem.

Crown Closure - See cover class.

Crown Cover - The amount of canopy provided by branches and foliage of trees, shrubs, and herbs in a plant community. May be specified by species, growth form or collectively.

Crown Fire - A fire that advances from top to top of trees or shrubs more or less independently of the surface fire. Sometimes crown fires are classed as either running or dependent, to distinguish the degree of independence from the surface fire.

Crown Height - The distance from the ground to the base of the crown of a tree.

CU Allotment - An allotment grazed by both sheep and cattle (common use).

Culmination of Mean Annual Increment - For a tree or stand of trees, the age at which the average annual increment is greatest. It coincides precisely with the age at which the current annual increment just equals the mean annual increment of

the stand and thereby define the rotation of a fully stocked stand that yields the maximum volume growth

Cultural Resource - The remains of sites, structures, or objects used by humans in the past - historical or archaeological

Cultural Sensitivity - Refers to the likelihood of encountering significant cultural volumes (quantity and/or quality) that may affect and may be affected by ground-disturbing activities

Cumulative Actions - Actions which when viewed with other proposed actions have cumulatively significant impacts

Cumulative Effects or Impacts - The impact on the environment which results from the incremental impact of an action when added to other past, present and reasonably foreseeable future actions regardless of what agency or person undertakes such other action. Cumulative effects or impacts can result from individually minor but collectively significant actions taking place over a period of time

Cumulative Effects Analysis - An analysis of the cumulative effects

Cutting Cycle - The planned lapse of time between successive cuttings in a stand

Cutting Method - Describes cuttings used either to help reproduce forest stands (reproduction or harvest cuttings) or to maintain their vigor and desired composition and structure in terms of tree species, ages, and size classes (intermediate cuttings)

Cycling - One of the ways functions are described, resources which are transported within the system (such as animal migration, nutrient cycling in a forest stand, snow melt becoming part of the surface or groundwater flow)

-D-

Data - Any measurements, facts, evidence or observations reduced to a recorded and retrievable format

DB - Database

DBH - Diameter at Breast Height

Decomposer - An organism, usually a bacterium or fungus, that breaks down the bodies or parts of dead plants and animals into simpler compounds

Decomposition - The process of separating into constituent parts, elements, or simpler organic and inorganic compounds. In biological systems, a process usually accomplished by fungi and bacteria

Decomposition Class - Any of five stages of decomposition of logs left in the forest, stages range from essentially sound to almost total decomposition (See table at end of glossary for additional information)

Defoliation - The removal of leaves from plants, especially by herbicides or plant eating animals

Density - Numbers of individuals or stems per unit area (Density does not equate to any kind of cover measurement)

Departure - A timber sale schedule that deviates from the principle of nondeclining flow by exhibiting a planned decrease in the sale schedule at any time during the planning horizon. A departure is characterized by a temporary increase, usually in the beginning decade(s) of the planning horizon, over the base sale schedule originally established. This increase does not impair the future attainment of the long-term sustained yield capacity

Dependent Species - A species for which a habitat element (for example, snags) is deemed essential for the species to occur regularly or to reproduce

Desirable Plant Species - Species which contribute to the management objectives

Desired Condition (DC) - A portrayal of land or resource conditions which are expected to result if planning goals and objectives are fully achieved

Desired Future Condition (DFC) - A description of the cumulative results of implementing the goals expressed in the Forest Plan

Desired Future Vegetation - The future state of the plant community on a site or an ecological unit which meets forest plan or other management objectives

Desired Plant Community - A plant community which produces the kind, proportion, and amount of vegetation necessary for meeting or exceeding the Forest Land Management Plan or Allotment Management Plan objectives established for an ecological type(s). The desired plant community must be consistent with the type's capability to produce the desired vegetation through management, land treatment, or a combination of the two. The desired plant community must conserve to the extent practicable the long-term potential of the site to produce vegetation, and produce in the short-term those combinations of desired goods and services.

Desired Soil Protection - Desired soil quality standards which meet forest plan or other management objectives for maintaining soil productivity potential, including thresholds for soil cover, erosion, compaction and soil displacement.

Desired Vegetation Condition (DVC) - For both riparian areas and nonforested uplands is defined as The specific future condition of rangeland vegetation and other resources such as aquatic habitat and water quality that meet management objectives as identified in the Forest Plan, Allotment Management Plans, or other documents. Additional clarification can be found in the nonforested vegetation sections of Chapters 3 and 4 of the EIS.

Detrimental Compaction - See Soil section of glossary.

Detrimental Displacement - See Soil section of glossary.

Detrimental Disturbance - See Soil section of glossary.

Detrimental Puddling - See Soil section of glossary.

Developed Recreation Sites - Relatively small, distinctly defined and developed areas where facilities are provided for concentrated public use, (for example, campgrounds, picnic areas, and swimming areas). These areas have more than \$50,000 of investment and two or more developed facilities are present.

Development Scale - The following scale describes facility development levels for dispersed and developed recreation sites.

1- Minimum site modification. Rustic or rudimentary improvements designed for protection of the site rather than comfort of the users. Use of synthetic materials excluded. Minimum controls are subtle. No obvious regimentation. Spacing informal and extended to minimize contacts between users. Motorized access not provided or permitted.

2- Little site modification. Rustic or rudimentary improvements designed primarily for protection of the site rather than the comfort of the users. Use of synthetic materials avoided. Minimum controls are subtle. Little obvious regimentation. Spacing informal and extended to minimize contacts between users. Motorized access provided or permitted. Primary access over primitive roads. Interpretive services informal, almost subliminal.

3- Site modification moderate. Facilities about equal for protection of site and comfort of users. Contemporary/rustic design of improvements is usually based on use of native materials. Inconspicuous vehicular traffic controls usually provided. Roads may be hard surfaced and trails formalized. Development density about 3 family units per acre. Primary access may be over high standard roads. Interpretive services informal, but generally direct.

4- Site heavily modified. Some facilities designed strictly for comfort and convenience of users. Luxury facilities not provided. Facility design may incorporate synthetic materials. Extensive use of artificial surfacing of roads and trails. Vehicular traffic control usually obvious. Primary access usually over paved roads. Development density 3-5 family units per acre. Plant materials usually native. Interpretive services often formal or structured.

5- High degree of site modification. Facilities mostly designed for comfort and convenience of users and usually include flush toilets, may include showers, bathhouses, laundry facilities, and electrical hookups. Synthetic materials commonly used. Formal walks or surfaced trails. Regimentation of users is obvious. Access usually by high-speed highways. Development density 5 or more family units per acre. Plant materials may be foreign to the environment. Formal interpretive services usually available. Designs formalized and architecture may be contemporary. Mowed lawns and clipped shrubs not unusual.

DFC - Desired Future Condition

Diameter at Breast Height (DBH) - The diameter of a tree measured 4 feet 6 inches (1.4 m) above the ground

Direct Effect - An effect that is caused by an action and occurs in [generally] the same time and place as the action

Discount Rate - An interest rate that represents the cost or time value of money in determining the present value of future costs and benefits. A "real" discount rate is one adjusted to exclude the effects of inflation

Discounting - An adjustment, using a discount rate, for the value of money over time so that costs and benefits occurring in the future are reduced to a common time, usually the present, for comparison

Dispersal - The movement of plants and animals away from their point of origin to another location where they subsequently get established and produce offspring

Dispersed Recreation - Recreational activities that do not require developed facilities. These include hiking, fishing, hunting, biking, camping at undeveloped campsites, etc

Dispersed Recreation Sites - Relatively small, undeveloped areas where public recreation use occurs. These areas have less than \$50,000 of investment in facilities such as toilets, tables, fencing, etc. These sites are generally adjacent to roads or trails and are used for dispersed recreation activities, such as camping, fishing, hunting, hiking, etc

Dispersion - To spread out the impacts of timber harvest by distributing harvest units more or less uniformly throughout a drainage

Distinctive (Class A) landscape - Areas where features of landform, vegetation patterns, water forms, and rock formations are of unusual or outstanding visual quality

Disturbance - Any event such as a forest fire or insect infestation that alters the structure, composition, or function of an ecosystem

Disturbed Soil - see Soil Disturbance

Diversity - The distribution and abundance of different plant and animal communities and species within the area covered by a land and resource management plan. See also Biological Diversity, Edge, and Horizontal Diversity

Dominant - A taxon or group of taxa which by their collective size, mass, or numbers exert the most influence on community composition and form

Drainage - A large area mostly bounded by ridges, encompassing part, most or all of a watershed

Drought Index - A number representing net effect of evaporation, transpiration, and precipitation in producing cumulative moisture depletion in deep duff or upper soil layers

Durability - The ability of resources to tolerate sustained use, without degradation of the resource base (i.e., productivity or quality)

Dwarf Mistletoe (*Arceuthobium spp.*) - Parasitic, seedbearing plants that attack most western conifers. Infected trees can be recognized by presence of witches' brooms, cankers, swellings, and other abnormalities. Economic losses can be heavy, as damage results in smaller trees, lower timber quality, and increased mortality

-E-

EA - Environmental Assessment

Early Forest Succession - The biotic (or life) community that develops immediately following the removal or destruction of vegetation in an area. For instance, grasses may be the first plants to grow in an area that was burned, followed by forbs and shrubs

Ecocentric - A conservation strategy that focuses on providing habitat patterns that are manifestations of ecological processes operating at several scales

Also, a philosophical viewpoint which emphasizes the maintenance of natural systems at the expense of commodity production and other human uses. The goal of this philosophy is to permit natural ecological processes to operate as freely as possible,

because wild land values for society ultimately depend on the retention of naturalness

Ecoclass - Classification system for the biological and earth sciences based on linking together existing disciplinary classifications of the major ecosystem components

Ecological Approach - A natural resource planning and management method that assures consideration of the relationship among all organisms (including humans) and their environment

Ecology - The interrelationships of living things to one another and to their environment, or the study of these interrelationships

ECOMAP - The name given to the Forest Service workgroup that developed the National Hierarchy of Ecological Units for the United States

Economic impacts -

direct economic impact - Effects caused directly by forest product harvest or processing or by forest uses

indirect economic impact - Effects that occur when supporting industries sell goods or services to directly affected industries

induced economic impact - Effects that occur when employees or owners of directly or indirectly affected industries spend their income within the economy

Ecoregion - A continuous geographic area over which the macroclimate is sufficiently uniform to permit development of similar ecosystems on sites with similar properties. Ecoregions contain multiple landscapes with different spatial patterns of ecosystems

Ecosystem - An arrangement of living and nonliving things and the forces that move among them. Living things include plants and animals. Nonliving parts of ecosystems may be rocks and minerals. Weather and wildfire are two of the forces that act within ecosystems

Ecosystem Composition - The constituent elements of an ecosystem

Ecosystem Function - The processes through which the constituent living and nonliving elements

of ecosystems change and interact, including biogeochemical processes and succession

Ecosystem Health - Ecosystems at any temporal or spatial scale are "healthy" when they are dynamic and resilient to perturbations to structures, compositions and processes of their biological or physical components

Ecosystem Management - The use of an ecological approach to blend social, physical, economic and biological needs and values to provide productive, healthy ecosystems

Ecosystem Pattern - The structure that results from the distribution of organisms in, and their interaction with their environment. Includes zonation, stratification, activity or periodicity, food-webs, reproductive, social and stochastic

Ecosystem Resilience - The tendency of an ecosystem to return after a disturbance to its former structure and function

Ecosystem Resistance - The tendency of an ecosystem to remain unchanged in the face of a disturbance

Ecosystem Restoration - Returning an ecosystem from a nonsustainable to a sustainable condition

Ecosystem Stability - The degree to which an ecosystem is resistant and/or resilient to disturbances

Ecosystem Structure - The spatial arrangement of the living and nonliving elements of an ecosystem

Ecosystem Sustainability - The ability to sustain diversity, productivity, resilience to stress, health, renewability, and/or yields of desired values, resource uses, products, or services from an ecosystem while maintaining its integrity over time

Edge - The margin where two or more vegetation patches meet, such as a meadow opening next to a mature forest stand, or a Douglas-fir stand next to an aspen stand

Edge Effect - The increased richness of plants and animals resulting from the mixing of two communities where they join

Effects - The environmental consequences of a proposed action. Included are direct effects, which are caused by the action and occur at the same time and place, and indirect effects, which are caused by the action and are later in time or further removed in distance, but which are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air, water and other natural systems, including ecosystems.

Effects and impacts as used in this statement are synonymous. Effects include ecological (such as the effects on natural resources and on the components, structures and functioning of affected ecosystems), aesthetic quality, historic, cultural, economic, social or health whether direct, indirect or cumulative. Effects may also include those resulting from actions that may have both beneficial and detrimental effects, even if on balance the agency believes that the effects will be beneficial.

EHE - Elk Habitat Effectiveness

EIS - Environmental Impact Statement

Elk Habitat Effectiveness (EHE) - A measure of the quality of an area for elk during the spring/summer/fall seasons. Two habitat parameters are considered to be most important for EHE: 1) motorized road and trail densities (measured in miles/square mile), 2) elk hiding cover (measured as a percentage of an area in cover).

Elk Hiding Cover - Vegetation capable of hiding 90 percent of a standing adult elk from the view of a human at a distance equal to or less than 200 feet.

Elk Vulnerability (EV) - The percent mortality of bull elk during the fall general rifle hunting season. Two parameters are considered to be most important for EV: 1) hunter densities (measured in hunter-days/square mile), 2) motorized road and trail densities (measured in miles/square mile).

Emergent Vegetation - Plants rooted in shallow water and having most of the vegetative growth above water.

Emission - A release of air contaminants into the outdoor atmosphere.

Endangered Species - Any species of animal or plant that is in danger of extinction throughout all or a significant portion of its range. Plant or animal species identified (listed) by the Secretary of the Interior as endangered in accordance with the 1973 Endangered Species Act.

Endangered Species Act - Public Law 93-205 (16 U.S.C. 1531-1536, 1538-1540). Cited as the Endangered Species Act of 1973. The Act requires consultation with U.S. Fish and Wildlife Service if practices on National Forest System lands may impact a threatened or endangered species (plant or animal).

Endemic - Native to, and restricted in distribution to, a defined area. (Not epidemic).

Environment - The complex of climatic, soil and biotic factors that act upon and influence an ecosystem. The complex of these factors which make up the immediate habitat of an organism.

Environmental Analysis - An analysis of alternative actions and their predictable long and short-term environmental effects. Environmental analyses include physical, biological, social and economic factors.

Environmental Assessment (EA) - A document providing evidence and analysis relating to a proposed action by a Federal Agency. It establishes whether an environmental impact statement (EIS) must be written, or a finding of no significant impact (FONSI) will be issued. It includes the proposed action and alternatives, and evaluates their potential environmental impacts.

Environmental Impact Statement (EIS) - A statement of the environmental effects of a proposed action and alternatives to it. It is required for major Federal actions under Section 102 of the National Environmental Policy Act (NEPA) and released to the public and other agencies for comment and review. It is a formal document that must follow the requirements of NEPA, the Council on Environmental Quality (CEQ) guidelines, and directives of the agency responsible for the project proposal.

Ephemeral Streams - Streams that flow only as the direct result of rainfall or snowmelt. They have no permanent flow.

Erosion - The wearing away of the land surface by wind, water, ice or gravity.

ESA - Endangered Species Act

Escaped Fire - A fire which has exceeded, or is anticipated to exceed, initial attack capabilities or the fire management direction or prescription

EV - Elk Vulnerability

Even-aged Forest - A forest stand comprising trees with less than a 20-year difference in age

Even-aged Management - Timber management actions that result in the creation of a stand of trees in which the trees are essentially the same age. Clearcut, shelterwood, or seed tree cutting methods produce even-aged stands

Even-aged Stand - A portion of a forest or a stand composed of trees having no, or relatively small, differences in age, although differences of as much as 30 percent are admissible in rotations greater than 100 years

Even-aged System - A silvicultural system that produces stands in which all trees are about the same age, that is, the difference in age between trees forming the main crown canopy level will usually not exceed 20 percent of the rotation length

EWU - Ecological Water Unit

Exclusion Areas - Areas having a statutory prohibition to rights-of-way for lineal facilities or corridor designation

Extensive Management - The practice of forestry on a basis of low operating and investment costs per acre. Also known as extensive forestry

Extinct - A species is extinct when it no longer exists

Extinction - The process which results in the complete elimination of a species leaving no living descendants. Extinctions may be local or global

Eyrie - A ledge along a cliff used for nesting peregrine falcons

sanitary landfills, dams, bridges and communication systems

Fauna - The animal life of an area

Felling - Cutting down trees

Fen - Low peaty land covered wholly or partly with water

Final Cut - The removal of the last seed bearers or shelter trees after regeneration of new trees has been established in a stand being managed under the shelterwood system of silviculture

Final Removal - Removal of all remaining overstory trees to release an adequately stocked salvageable understory

Final Removal Cut - A type of cut that releases established regeneration from competition with seed trees under the seed tree and shelterwood regeneration methods. Reserve trees may or may not be retained

Fine Fuels - Fast drying fuels such as grass, leaves, draped pine needles, and small twigs that when dry ignite readily. Fine fuels are considered 1 hour timelag fuels (see timelag definition)

Fine Organic Matter - Organic material on top of mineral soil consisting of fallen vegetative matter in various stages of decomposition. Specifically referred to as horizons in soil descriptions. Fine organic matter includes woody material up to 3 inches in diameter

Fines - Waterborn particles the size of silt and clay

Fire - The rapid, persistent chemical reaction of a fuel and oxygen that releases heat, light and unburned particulate (smoke)

Fire Ecology - Area of study addressing the relationships among fire, the environment, and living organisms

Fire Frequency - The number of wildland fires started in a given area over a given time

Fire Group - A collection of similar habitat types and their associated fire ecology

Fire Hazard - A fuel complex, defined by volume, type condition, arrangement, and location, that

-F-

Facilities - Physical infrastructure such as administrative buildings, water and sanitation systems,

determines the degree of ease of ignition and of resistance to control

Fire Management - All activities required for the protection from fire of burnable wildland values and the use of fire to meet land management goals and objectives

Fire Management Area - One or more parcels of land having a common set of fire management objectives

Fire Occurrence - Number of fires per unit time in a specified area

Fire Regime - The characteristic frequency, extent, intensity, severity and seasonality of fires in an ecosystem

Fire Risk - The chance of fire starting, as affected by the nature and incidence of causative agents, an element of the fire danger in any area

Fire Suppression - All work and activities associated with fire extinguishing operations beginning with discovery and continuing until the fire is completely extinguished

Fireline Intensity - The amount of heat released in BTUs per foot of fire front per second Related to the difficulty of containment of a fire

Fish - Any of numerous cold-blooded aquatic vertebrates having fins, gills and a streamlined body

Fish-bearing Stream Reaches - Those portions of streams and rivers that support fish of any species during all, or a portion of, their life cycle

Fisheries Habitat Streams, lakes, and reservoirs that support fish, or have the potential to support fish

Floodplain - The lowland and relatively flat area adjoining waters including, at a minimum, the area subject to a one percent or greater chance of flooding in any given year (100-year recurrence)

Flora - The plant life of an area

Fluvial - Of or relating to rivers and streams

FOIA - Freedom of Information Act

Food Chain - A series of spatially associated species, each of which lives as a predator, parasite or absorber of the next lower species down in the series

FOR - FORPLAN or FORPLAN Alternative

Forage - All browse and herbaceous foods that are available to grazing animals It may be grazed or harvested for feeding

Forb - A broadleaf plant that has little or no woody material in it

Foreground - The part of a scene or landscape that is nearest to the viewer

Forest - An ecosystem characterized by a more or less dense and extensive tree cover Usually supporting or capable of supporting forests at a density of 10 percent crown closure or more

Forest and Rangeland Renewable Resources Planning Act (RPA) (1974) - Public Law 93-378 (16 U S C 1600-1614) This act requires the development of long term strategies for the management and inventory of the renewable forest and range resources of National Forest System lands

Forest Health - A measure of the robustness of forest ecosystems Aspects of forest health include biological diversity, soil, air, and water productivity, natural disturbances, and the capacity of the forest to provide a sustained flow of goods and services for people

Forest Land - See "Timber Classification "

Forest Plan - Source of management direction for an individual National Forest unit Specifies allowable activities, minimum requirements, expected outputs and land use allocations for a 10 to 15-year period

Forest Roads and Trails - A legal term for Forest roads or trails that are under the jurisdiction of the Forest Service

Forest Structure - Often divided into four conceptual aspects age, species composition, horizontal or mosaic pattern, and vertical

Forest Supervisor - The official responsible for administering National Forest System lands on an

administrative unit, usually one or more National Forests The Forest Supervisor reports to the Regional Forester

Forest Trees - Woody plants having a well-developed stem and usually more than 12 feet in height at maturity

Forest Type - A descriptive concept used to differentiate groups of stands of similar character of development and species composition from other groups of stands

FORPLAN - A linear programming-based forest planning model This model allows the user to find the combination of activities and outputs that will maximize or minimize the desired objective, subject to constraints (Schuster and others, 1993)

Fragile - Those land or water areas containing ecosystems, possibly but not necessarily rare, that are sensitive to external stimuli which may disturb their balance, especially in an irreversible direction

Fragmentation - The splitting or isolating of patches of similar habitat, typically forest cover, but including other types of habitat Habitat can be fragmented naturally or from forest management activities, such as clearcut logging

Freedom of Information Act (FOIA) (1966) - Public Law 93-502 (5 U S C 552) The act provides public access to records of the agencies and departments of the Executive Branch of the U S government

Frequency - A quantitative expression of the presence or absence of individuals of a species in a population

FRES - Forest Range Environmental Study (See Process Paper K)

Frissell Condition Classes - A classification system which rates the degree of person-caused change that a wilderness, dispersed campsite or concentrated-use area has undergone There are five classes as follows

Frissell Condition Class 1 - Visible Indicators Ground vegetation flattened, but not permanently injured Minimal physical change except for possibly a simple rock fireplace

Frissell Condition Class 2 - Visible Indicators Ground vegetation worn away around fireplace or center of activity

Frissell Condition Class 3 - Visible Indicators Ground vegetation lost on most of the site, but humus and litter still present in all but a few areas

Frissell Condition Class 4 - Visible Indicators Bare mineral soil widespread Tree roots exposed on the surface

Frissell Condition Class 5 - Visible Indicators Soil erosion obvious Trees reduced in vigor or dead

FSRAMIS - Forest Service Range Management Information System

Fuel Loading - The dry weight of fuels in a given area, usually expressed in tons per acre Fuel loading may be referenced to fuel size and may include total biomass

Fuel Management - The treatment of fuels that would otherwise interfere with effective fire management or control For instance, prescribed fire can reduce the amount of fuels that accumulate on the forest floor before the fuels become so heavy that a natural wildfire in the area would be explosive and impossible to control

Fuel Model - Simulated fuel complex for which all fuel descriptors required for the solution of a mathematical rate of spread model have been specified

Fuel Moisture Content - The quantity of moisture in fuel expressed as a percentage of the weight when thoroughly dried at 212 degrees F

Fuels - Plants and woody vegetation, both living and dead, that are capable of burning

Fuelwood - Wood that is round, split, or sawn and/or otherwise generally refuse material cut into short lengths or chipped for burning

Function - All the processes within an ecosystem through which the elements interact, such as succession, the food chain, fire, weather, and the hydrologic cycle

Functional Planning - Planning which focuses on a single aspect or resource of a total complex

Grazing Season - The season of use specified on the grazing permit for a specific allotment

-G-

Game Species - Any species of wildlife or fish that is harvested according to prescribed limits and seasons

Grazing System - A specialization of grazing management which defines systematically recurring periods of grazing and deferment for two or more pastures or management units. Includes deferred, intermittent, deferred-rotation, and short-duration grazing systems

Geographic Information System (GIS) - A set of procedures and computer hardware and software for organizing, storing, retrieving, analyzing, and displaying data that includes a geographic position component

Greater Yellowstone Area - A term for the 117-million-acre area made up of parts of six National Forests and two National Parks in northwest Wyoming, eastern Idaho, and southwest Montana

Ghost Road - See Nonsystem Road

GIS - Geographic Information Systems

Greenline - The first perennial vegetation from the waters edge. Riparian areas that are in late seral status with stable stream banks will exhibit a continuous line of vegetation at the bankfull discharge level. Rocky stream types may have a significant amount of rock causing breaks in the vegetation. This rock is considered part of the green line. Other breaks may occur in the first perennial band of vegetation (watercourses or bare ground). The amounts of these (perennial vegetation, rock, and bare ground) should be recorded

Goal - A concise statement that describes a desired condition to be achieved sometime in the future. It is normally expressed in broad, general terms and may not have a specific date for accomplishment

Goods and Services - The various outputs, including on-site users, produced from forest and rangeland resources

Grizzly Bear Security Cover - Forested areas (all tree species) which have not been managed or burned in the last 20 years, and forested areas managed or burned within the last 20 years which meet the following criteria

Grassland - Plant communities whose potential natural and dominant vegetation is comprised of grasses and grasslike plants

The overstory and understory categories are to be considered separately. A stand having either 130 sq ft of basal area per acre or 250 understory trees per acre over 7 ft tall would meet the requirements for full security cover. Both live and dead tree basal areas were used for overstory calculations

Grasslike Plant - A plant of the Cyperaceae or Juncaceae families which vegetatively resembles a true grass of the Gramineae family

Grazing - Consumption of forage by animals

Grazing Formula - The specific order of grazing or sequence within a grazing system

Ground Cover - Material covering the land surface. It may include live vegetation, standing dead vegetation, litter, cobble, gravel, stones and bedrock. Ground cover plus bare ground would total 100 percent of the area evaluated

Grazing Period - The period of time livestock use a specific pasture or unit within a grazing allotment, as identified in the yearly Annual Operating Plan or Allotment Management Plan. The end of the grazing period will not coincide with the end of the grazing season, unless that pasture or unit is grazed last. There is usually more than one grazing unit or pasture in an allotment. The grazing period for a pasture or unit usually changes from year to year as a result of rotation grazing systems

Ground Fire - A fire that burns along the forest floor and does not burn in the crowns of mature trees

Ground Water - The supply of fresh water under the earth's surface in an aquifer or in the soil

Group Selection - A method of tree harvest in which trees are removed periodically in small groups. This silvicultural treatment results in small openings that form mosaics of age class groups in the forest.

Group Selection Regeneration Method - A method of regenerating uneven-aged stands in which trees are cut, and new age classes are established, in small groups.

Growing Stock Trees - Live trees, meeting specified standards of quality or vigor, included in growth and yield projections to arrive at the allowable sale quantity.

Guideline - In Forest Plans, guidelines represent a preferred or advisable course of action that is generally expected to be carried out. Deviation from compliance with a guideline does not require a Forest Plan amendment, but the rationale for such a deviation shall be documented in the project decision document.

Guilds - A group of organisms that share a common food resource.

-H-

Habitat - The area where a plant or animal lives and grows under natural conditions.

Habitat Capability - The ability of a land area or plant community to support a given species of wildlife.

Habitat Diversity - The number of different types of habitat within a given area.

Habitat Type - An aggregation of all land areas capable of supporting similar plant communities at climax (Pflister and other, 1977).

Hard Snag - See Snag-hard.

Harvest Activity - In timber management, a reference to a specific type of cut applied under a regeneration or intermediate treatment method. Refer to FSH 2409 14, Chapter 78 for valid values.

Harvest Cutting - The felling of the final crop of trees either in a single cutting or in a series of regeneration cuttings. Generally, the removal of fi-

nancially or physically mature trees, in contrast to cuttings that remove immature trees. Also referred to as main felling and major harvest.

Harvesting - A loose term for the removal of natural resource for human use or consumption.

Hawksworth Classes - A six-class dwarf mistletoe rating system useful to (1) quantify the degree of infection so that stand management priorities can be established, (2) aid quantification and estimation of growth loss and mortality, (3) help define which trees are suitable for seed trees, and (4) help quantify the mistletoe-infection hazard of overstory trees or stands to understory stands.

For this system the live crown is divided into thirds, and each third is rated as 0, no mistletoe, 1, light mistletoe (less than half of the branches infected), and 2, heavy mistletoe (more than half of the branches infected). The ratings of each third are added to obtain a total for the tree. For example, a tree heavily infected in the lower third of the crown, lightly infected in the middle third, and not infected in the upper third, would be a Class 3. A tree heavily infected in each third would be a Class 6. The system is simple to use, and different observers tend to rate an infected tree similarly.

Healthy Ecosystem - An ecosystem in which structure and functions allow the maintenance of the desired condition of biological diversity, biotic integrity, and ecological processes over time.

Herb - Any flowering plant except those developing persistent woody stems above ground.

Herbivore - Any animal (mammal, bird, insect, etc.) that consumes living plants or their parts.

HGL - Hydric Greenline.

Hiding Cover - Vegetation or other surface characteristics (rocks, downed logs, etc.) that will hide 90% of an animal from the view of a human at some distance that varies by species. For deer and elk that distance is 200 feet.

Hierarchical - A type of classification technique whose successively lower level units must fit entirely within the separate units delineated by the next higher level in that system.

Hierarchical Approach - An analysis approach

accounting for differences in space and time (USDA Forest Service 1994)

Historic Nest Site - See Nest Site

Historical Variation - See Variability, Range of

Home Range - The area in which an animal conducts its activities during a defined period of time

Horizontal Diversity - The distribution and abundance of plant and animal communities or different stages of plant succession across an area of land. The greater the numbers of communities in a given area, the higher the degree of horizontal diversity

Human Dimension - An integral component of ecosystem management that recognizes people are part of ecosystems, that people's pursuits of past, present, and future desires, needs, and values (including perceptions, beliefs, attitudes, and behaviors) have and will continue to influence ecosystems, and that ecosystem management must include consideration of the physical, emotional, mental, spiritual, social, cultural, and economic well-being of people and communities

Human Impact or Influence - A disturbance or change in ecosystem composition, structure, or function caused by humans

Hydric Greenline - A belt of perennial riparian vegetation found closest to the water's edge. It is the area where recovery of riparian and aquatic ecosystems is first expressed and, therefore, can be monitored to test the impacts of livestock grazing. It is also the area which approximates the geographic elevation of the active floodplain, a feature otherwise difficult to locate

Hydric Soil - A soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation

Hydrologic Cycle - Also called the water cycle, this is the process of water evaporating, condensing, falling to the ground as precipitation, and returning to the ocean as runoff

Hydrologically Disturbed Condition - Changes in natural canopy cover (vegetation removal) or a change in surface soil characteristics (such as compaction) that may alter natural streamflow quanti-

ties and character. Acres of vegetation within a watershed that are in a non-stocked, seedling, sapling, or first entry category, acres in roads, acres from other types of mechanical treatments (e.g., roto-beat acres within the sagebrush ecosystem), and burned acres are included in the calculation of hydrologically disturbed area

Hydrologically Recovered Condition - Vegetative life form where natural canopy coverage is achieved and subsequent streamflow quantities and character (timing and amount) reflect more natural conditions. Within the forested ecosystem this equates roughly with the sapling/early pole life form. This life form is achieved at approximately 20 to 30 years of age, depending upon cover type and inherent site productivity potentials

Hydrology - The science dealing with the study of water on the surface of the land, in the soil and underlying rocks and in the atmosphere

-I-

Idaho and Wyoming Species of Concern - Plant or animal species which are officially listed by state agencies due to concerns for habitats and/or populations

Igneous Rock - Rocks formed when high temperature, molten mineral matter cooled and solidified

Implementation Schedules - The schedules of projects and specific actions to implement a Land and Resource Management Plan. Implementation schedules are normally revised annually. They include site-specific actions, responsibilities and target dates

Improvement Cutting - The elimination or suppression of less valuable trees in favor of more valuable trees, typically in a mixed, uneven-aged forest

Increaser - Plant species of the original vegetation that increase in relative amount, at least for a time, under overuse

Index - A number derived from a formula to characterize a complex set of information

Indicator - An organism or an ecologic community that is so strictly associated with particular environmental conditions, that its presence (or ab-

sence) is a fairly certain sign or symptom of the existence of these conditions

Indicator Species - A plant or animal species adapted to a particular kind of environment. Its presence is sufficient indication that specific habitat conditions are also present

Indigenous Species - Any species of flora or fauna that naturally occurs in an area and that was not introduced by man

Indirect Effect - Those effects occurring at a later time or distance from the triggering action

Individual (Single) Tree Selection - The removal of individual trees from certain size and age classes over an entire stand area. Regeneration is mainly natural, and an uneven-aged stand is maintained

Individual Tree Selection Cutting - An uneven-aged cutting method in which selected trees from specified size or age classes are removed over the entire stand area to meet a predetermined goal of size or age distribution and species composition in the remaining stand

Infrastructure - The foundation (transportation, communications, utilities, schools, etc.) underlying an area's economy

Input - Broadly referring to anything that is taken in by or enters into the workings of a system

Insect Pests - Any of a variety of insects that can impact forest health by damaging or killing trees. Insect population levels may also affect other forest resources and activities like wildlife habitat, visual quality and fire management. Some of the important insects in the Intermountain Region include Douglas-fir beetle (*Dendroctonus pseudotsugae*), Douglas-fir tussock moth (*Orgyia pseudotsugata*), Fir engraver (*Scolytus ventralis*), Mountain pine beetle (*Dendroctonus ponderosae*), Spruce beetle (*Dendroctonus rufipennis*), Western balsam bark beetle (*Dryocoetes confusus*) and Western spruce budworm (*Choristoneura occidentalis*)

Instream Flows - The minimum water volume (cubic feet per second) in each stream necessary to meet seasonal streamflow requirements for maintaining aquatic ecosystems, visual quality, recreational opportunities, and other uses

Integrated Pest Management (IPM) - A process for selecting strategies to regulate forest pests in which all aspects of a pest-host system are considered, including the impact of the unregulated pest population to resources, alternative regulation strategies, and benefit/cost estimates of these alternative strategies

Integrated Resource Management - A management strategy which emphasizes no resource element to the exclusion or violation of the minimum legal standards of others

Interdisciplinary Team (IDT) - A team of individuals with skills from different disciplines that focuses on the same task or project

Intermediate Cut - The removal of trees from a stand sometime between the beginning or formation of the stand and the regeneration cut. Types of intermediate cuts include thinning, release, and improvement cuttings

Intermittent Stream - A stream that flows only at certain times of the year when it receives water, usually from a surface source such as melting snow. These streams have a defined bed and banks

Intermountain Region - The fourth of nine geographical regions of the United States designated by the Forest Service for administrative purposes. Headquartered in Ogden, Utah, the Intermountain Region oversees administration of National Forests in Utah, Nevada, Southern Idaho and Southwestern Wyoming

Invader - Plant species that were absent in the original vegetation and will invade under disturbance or continued overuse

Inventoried Roadless Area - (West of the 100th meridian) An area which meets the statutory definition of wilderness, does not contain improved roads maintained for travel by standard passenger-type vehicles, and meets one or more of the following criteria

- Contains 5,000 acres or more
- Contains less than 5,000 acres, but

- Due to physiography or vegetation, is manageable in a natural condition
- Is a self-contained ecosystem such as an island

- Is contiguous to existing wilderness, primitive area, Administration-endorsed wilderness, or roadless area in other Federal ownership, regardless of size

Inventoried Roadless Area - (East of the 100th meridian) An area which contains no more than a half mile of improved road for each 1,000 acres, in which the road is under Forest Service jurisdiction and

- The land is regaining a natural, untrammelled appearance
- Improvements existing in the area are being affected by the forces of nature rather than humans and are disappearing or muted
- The area has existing or attainable National Forest System ownership patterns, both surface and subsurface, that could ensure perpetuation of identified wilderness values
- The location of the area is conducive to the perpetuation of wilderness values, considering the relationship of the area to sources of noise, air and water pollution and other unsightly conditions that would have an effect on the wilderness experience

Inventory - The gathering of data for future use Also, a collection of such data

Inversion - A condition in which air temperatures increase rather than decrease with increasing elevation in the atmosphere A rising air mass in the atmosphere is inhibited by this stratification, allowing for pollutants to be trapped near the surface

Irretrievable - Applies to losses of production, harvest or commitment of renewable natural resources For example, some or all of the timber production from an area is irretrievably lost during the time an area is used as a winter sports site If the use is changed, timber production can be resumed The production lost is irretrievable, but the action is not irreversible

Irreversible - Applies primarily to the loss or commitment of nonrenewable resources, such as minerals or cultural resources, or to those that are renewable only over long time spans, such as soil productivity Irreversible also includes loss of future options

Issue - A point, matter or question of public discussion or interest to be addressed or decided through the planning process

Preliminary issue is an issue identified early in the scoping phase and is sometimes referred to as a tentative issue

Significant issue is an issue within the scope of the proposed action which is used to formulate alternatives in an Environmental Analysis (EA) or Environmental Impact Statement (EIS)

-K-

Key Area - A relatively small portion of rangeland which because of its location, grazing or browsing value, and/or use, serves as a monitoring and evaluation site (A key area guides the general management of the entire area of which it is a part, and will reflect the overall acceptability of current grazing management over the range)

Key Species - (1) Forage species whose use serves as an indicator to the degree of use of associated species (2) Those species which must, because of their importance, be considered in the management program

Key Summer Range - The portion of a wildlife species' summer range that is essential for the animal's pre, post, and reproduction cycles Deer require "fawning areas" where does give birth and hide their fawns for an essential period of time in the spring

Key Winter Range - That portion of range where big game animals find food and cover during severe winter weather

Kind of Livestock - Species of animal

-L-

LAC - Limits of Acceptable Change

Ladder Fuels - Vegetation located below the crown level of forest trees which can carry fire from the forest floor to tree crowns Ladder fuels may be low-growing tree branches, shrubs, or smaller trees

Land - A term denoting the entire complex of surface and near-surface attributes of the solid portion of the surface of the earth which are significant to mankind

Land Class - The topographic relief of a unit of land Land classes are separated by slope This

coincides with the timber inventory process. The three land classes used in the Forest Plan are defined by the following slope ranges: 0 to 40%, 41-60%, and greater than 60%.

Landform - Any physical, recognizable form or feature of the earth's surface having a characteristic shape and produced by natural causes.

Landscape - A large land area composed of interacting ecosystems that are repeated due to factors such as geology, soils, climate, and human impacts. Landscapes are often used for coarse grain analysis.

Landscape Ecology - The body of knowledge pertaining to the ecological effects of spatial patterns in ecosystems.

Landtype - A group of defined and named taxonomic soil units occurring together in an individual and characteristic pattern over a geographic region.

Land Unit - One of the hierarchy levels used for project planning, encompassing one to tens of acres.

Land Use Allocation - In land management planning, the committing of a given area of land or resources to one or more specific uses such as to campgrounds, wilderness, etc.

Large Woody Debris - Organic materials such as plant stems and branches with a diameter greater than 3 inches. Included are both natural materials and management induced post-harvest slash. Large trees, or parts of them, that accumulate in streams or other water bodies. This material is important for aquatic habitat and stream channel stability, and in maintenance of on-site productivity.

Late-Successional Forests - Forest seral stages that include mature and old-growth age classes.

Leasable Mineral - Leasable minerals are hard-rock and liquid minerals that are subject to exploration and development under leases, permits, and licenses under the Mineral Leasing Act of 1920 and several other subsequent Acts. Oil, gas, coal and phosphates have been the most sought-after leasable minerals on the Forest, along with the geothermal resource. The Forest Service decides which lands are available for leasing and under what

conditions these lands are leased. The BLM decides whether or not to offer for lease the lands authorized by the Forest Service.

Legal Notice - A notice of a decision which can be appealed that is published in the Federal Register or in the legal notice section of a newspaper of general circulation.

Lentic - Relating to, or living in, still waters (as lakes, ponds and swamps).

Limiting Factor - Any environmental factor whose presence, absence or abundance is the main factor restricting the distribution numbers or condition of an organism.

Limits of Acceptable Change (LAC) - A planning framework that establishes explicit measures of the acceptable and appropriate resource and social conditions in wilderness settings as well as the appropriate management strategies for maintaining or achieving those desired conditions.

Line Officer - The official (District Ranger, Forest Supervisor, Regional Forester, etc.) having authority for a specific district, forest, region, etc.

Litter (forest litter) - The freshly fallen or only slightly decomposed plant material on the forest floor. This layer includes foliage, bark fragments, twigs, flowers and fruit.

Locatable Mineral - In general, locatable minerals are hardrock minerals which are mined and processed for the recovery of metals, or mineral which are "valuable" in the economic sense. Examples which occur on the Forest include gold, silver, lead, copper and opal. Citizens rights to exploration and access are granted under the General Mining Law of 1872. By agreement with the BLM the Forest Service administers locatable mining activities on Forest lands.

Logging Residues - The residue left on the ground after timber cutting. It includes unused logs, uprooted stumps, broken branches, bark, and leaves. Certain amounts of "slash" provide important ecosystem roles, such as soil protection, nutrient cycling, and wildlife habitat.

Long-term Sustained Yield Capacity (LTSYC) - The highest uniform wood yield from lands being managed for timber production that may be sus-

tained, under a specified management intensity, consistent with multiple-use objectives

LTSL - Less-Than-Standard Service Level

LTSYC - Long-term Sustained Yield Capacity

-M-

M - Thousand Five thousand board feet of timber can be expressed as 5M board feet

MAI - Mean Annual Increment

Maintenance Class - In facilities management a method of classifying existing facility needs for budget purposes and others

Maintenance Class 1, Satisfactory Facility is safe and sanitary Annual maintenance will not exceed 10 percent of replacement cost

Maintenance Class 2, Substandard Facility is safe and sanitary, although substandard as to type, construction standard, or not in keeping with planned experience-level for the site Annual maintenance will not exceed 10 percent of current replacement cost of standard type facility May be scheduled for eventual elimination or replacement but will serve intended purpose for next 3-5 years

Maintenance Class 3, Heavy Maintenance Facility unsafe or otherwise unsatisfactory May be put back in good condition at a cost not to exceed 50 percent of current replacement of like kind facility

Maintenance Class 4, Replacement Facility unsafe or otherwise unsatisfactory To put back in good condition would cost more than 50 percent of the replacement cost Replace with like kind and standard of facility Cost includes both removal of old facility and replacement

Manage - To treat with care, handle or direct with skill

Management Action - Any activity undertaken as part of the administration of the National Forest

Management Area - Units of land small enough for Districts and the public to characterize and develop issues for, but large enough to provide for

management flexibility A desired future condition developed for the management area describes and will assist in achieving the shared land expectations

Management Concern - An issue, problem or a condition which constrains the range of management practices identified by the Forest Service in the planning process

Management Direction - A statement of multiple-use and other goals and objectives, the associated management prescriptions, and standards and guidelines for attaining them

Management Ignition - A fire started by a scheduled, deliberate management action

Management Indicator Species - A wildlife species whose population and trend in a certain habitat type indicates the population and trend of other species that are dependent upon the same habitat

Management Intensity - A management practice or combination of management practices and associated costs designed to obtain different levels of goods and services

Management Practice - A specific activity, measure, course of action or treatment

Management Prescription - Management practices and intensity selected and scheduled for application on a specific area to attain multiple-use and other goals and objectives

Management Situation 1 - Population and habitat conditions The area contains grizzly population centers (areas key to the survival of grizzly where seasonal or yearlong grizzly activity, under natural, free-ranging conditions is common) and habitat components needed for the survival and recovery of the species or a segment of its population The probability is very great that major Federal activities or programs may affect (have direct or indirect relationships to the conservation and recovery of) the grizzly (IGBC, 1986)

Management Situation 2 - Population and habitat conditions Current information indicates that the area lacks distinct population centers, highly suitable habitat does not generally occur, although some grizzly habitat components exist and grizzlies may be present occasionally Habitat re-

sources in Management Situation 2 either are unnecessary for survival and recovery of the species, or the need has not yet been determined but habitat resources may be necessary. Certain management actions are necessary. The status of such areas is subject to review and change according to demonstrated grizzly population and habitat needs. Major Federal activities may affect the conservation of the grizzly bear primarily in that they may contribute toward (a) human-caused bear mortalities or (b) long-term displacement where the zone of influence could affect habitat use in Management Situation 1 (IGBC, 1986)

Management Situation 3 - Population and habitat conditions. Grizzly presence is possible but infrequent. Developments, such as campgrounds, resorts, or other high human use associated facilities, and human presence result in conditions which make grizzly presence untenable for humans and/or grizzlies. There is a high probability that major Federal activities or programs may affect the species' conservation and recovery (IGBC, 1986)

Market-Value Outputs - Goods and services valued in terms of what people are willing to pay for them rather than go without, as evidenced by market transactions

Mass Movement/Wasting - The downslope movement of large masses of earth material by the force of gravity. Also called a landslide or earthflow

Mature Forest - Trees that have attained full development, especially height, and are in full seed production

Mature Timber - Generally used in an economic sense to indicate that a forest has attained harvest age

Maximum Modification - See "Visual Quality Objectives"

MBF - Thousand board feet (See board feet)

Mean Annual Increment - The average yearly growth of trees in a stand over a period of years, usually expressed in annual cubic feet of growth per acre

Mean Annual Increment of Growth - The total increase in size or volume of individual trees. Or, it can refer to the increase in size and volume of a

stand of trees at a particular age, divided by that age in years

Mean Fire Interval - Arithmetic average of all fire intervals determined in years, in a designated area during a specified time period. The size of the area and the time period must be specified

Microclimate - The climate of a small site. It may differ from the climate of the larger area due to aspect, tree cover (or the absence of tree cover), or exposure to winds

Microhabitat - A restricted set of distinctive environmental conditions for a small habitat, such as the area under a log

Microsite - A localized area in which environmental conditions differ in a significant or important way from those of the region outside the area

Middleground - A term used in the management of visual resources, or scenery. It refers to the visible terrain beyond the foreground where individual trees are still visible but do not stand out distinctly from the stand

Mineral Soil - Soil that consists mainly of inorganic material, such as weathered rock, rather than organic matter. Any soil composed chiefly of mineral matter (sand, silt, clay, rocks, etc.)

Minimum Impact Suppression Tactics (MIST) - In wildland firefighting, a concept employing the minimum amount of forces needed to effectively achieve fire management protection objectives consistent with land and resource management objectives. Derives from a sensitivity to the impacts of suppression tactics and their long-term effects in areas such as wilderness with special values. Can feature a range of suppression and support actions to minimize impacts to these values, and special rehabilitation measures

Minimum Streamflow - A specified minimum level of flow through a channel that must be maintained by the users of the stream for biological, physical, or other purposes

MIS - Management Indicator Species

MIST - Minimum Impact Suppression Tactics

Mitigate/mitigation - To lessen the severity. Actions taken to avoid, minimize or rectify the impact of a land management practice

Mixed Stand - A stand of trees in which less than 80 percent of the trees in the main crown canopy are of a single species

MM - Million

MMBF - Million board feet (See board feet)

Modification - A visual quality objective, management activities may visually dominate the original characteristic landscape, but they must borrow from naturally established form, line, color or texture so that the activity blends with the surrounding area

Monitoring - The determination of how well project or plan objectives have been met and how closely management practices should be adjusted (See adaptive management)

Mortality - The volume in trees that were merchantable and have died within a specified period of time. The term mortality can also refer to the rate of death of a species in a given population or community

Mountain Pine Beetle - A tiny black beetle, *Dendroctonus ponderosae*, ranging from 1/8 to 1/4-inch in size, that bores through a pine tree's bark to feed in the phloem layer in the inner bark. Such feeding by large numbers of beetles girdles and kills the tree. The beetle also carries the blue stain fungus that clogs the trees water transport system

Multiple-Use - The management of all the various renewable surface resources of National Forest System lands for a variety of purposes such as recreation, range, timber, wildlife and fish habitat, and watershed

Municipal Supply Watershed - A watershed that serves a public water system as defined in Public Law 93-523 (Safe Drinking Water Act), or as defined in State safe drinking water regulations. The definition does not include communities served by a well or confined ground water unaffected by Forest Service activities

National Environmental Policy Act (NEPA) (1970) - Public Law 91-190 (42 U S C 4321-4347, parts) The basic national charter for the protection of the environment. It establishes policy, sets goals and provides means for carrying out the policy. The NEPA process helps public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment

National Forest Management Act (NFMA) (1976) - Public Law 94-588 (16 U S C 1600-1614 and others) This act amended the Forest and Rangeland Renewable Resources Planning Act of 1974, and lays out the process for developing, adopting and revising land and resource management plans for National Forest System lands

National Forest System (NFS) Lands - Federal lands that have been designated by Executive Order or statute as National Forests, National Grasslands, Purchase Units, and other lands under the administration of the Forest Service, including Experimental Areas and Bankhead-Jones Title III lands

Native - Species indigenous to an area of consideration

Native Organisms - Animals or plants which originated in the area in which they are found, i.e., were not introduced and naturally occur in the area

Native Species - Any species of flora or fauna that naturally occurs in the United States and that was not introduced by humans

Native Trout Watersheds - Those primary watersheds identified as containing contiguous well connected subwatersheds with high aquatic integrity and population strongholds of native cutthroat trout or have the capability to achieve this condition through recovery efforts. They have been determined to be necessary for species recovery. Of the 39 primary watersheds on the Forest, 17 have been designated: Elk Creek (003), Palisades Creek (004), Rainey Creek (005), Pine Creek (006), Heise (007), Henry's Fork Headwaters (008), Robinson Creek (013), Trail Creek (017), Mahogany Creek (022), Moody Creek (024), Bitch Creek (032), Burns-Pat Canyon (035), McCoy-Jensen Creeks (036), Elk-Bear Creeks (037), Fall Creek (038), Pritchard Creek (039), and Brockman Creek (040)

Additional fish population and habitat inventory and analysis will be conducted in the future and will provide the basis for determining the capability of these Native Trout Watersheds in meeting recovery goals. Based on this information, specific subwatersheds will be designated for maintenance or recovery efforts and others may be designated as not vital to recovery goals. Additional Native Trout Watersheds may be designated, or existing Native Trout Watersheds may be deleted.

Natural - Existing in, or formed by, nature, not artificial.

Natural Barrier - A natural feature, such as a dense stand of trees or downfall, that will restrict animal travel.

Natural Catastrophic Condition - A significant change in forest conditions in the planning area that affects Forest Plan resource management objectives and their projected and scheduled outputs, uses, costs, and impacts on local communities and environmental quality.

Natural Ignition - A fire started at random by natural causes.

Natural Range of Variability - See Variability, Range of.

Natural Regeneration - Renewal of a tree crop by self-sown seed or from sprouts.

Natural Resource - A feature of the natural environment that is of value in serving human needs.

Naturalized Species - Introduced or alien (not native) species that are now permanently established and reproducing spontaneously (without human fostering).

Nest Site - The location of nest structures used by birds for incubating and hatching eggs.

a) Active Nest Site - The location of nest structures which have been used within a current year or one year previous.

b) Historic Nest Site - The location of nest structures which are known to have been used, but not within 2 years. Historic nest sites must be documented in Forest or District databases to be subject to standards and guidelines.

Nest Survey - A way to estimate the size of a bird population by counting the number of nests in a given area.

Net Public Benefits - An expression used to signify the overall long-term value to the Nation of all outputs and positive effects (benefits) less all associated inputs and negative effects (costs) whether they can be quantitatively valued or not. Net public benefits are measured by both quantitative and qualitative criteria rather than a single measure or index. The maximization of net public benefits to be derived from management of units of the National Forest System is consistent with the principle of multiple-use and sustained-yield.

NFRS - National Forest recreation sites that have been inventoried.

No Action Alternative - The most likely condition expected to exist in the future if management practices continue unchanged.

Nonchargeable Volume - All volume not included in the growth and yield projections for the selected management prescriptions used to arrive at the allowable sale quantity.

Noncommercial Vegetation Treatment - The removal of trees for reasons other than timber production.

Nonconsumptive Use - The use of a resource that does not reduce its supply, for example, nonconsumptive uses of water include hydroelectric power generation, boating, swimming and fishing.

Noncontinuous Grazing System - Rotational and repeated seasonal grazing systems.

Nondeclining Flow - See base sale schedule.

Nondegradation - A policy of not allowing resources to deteriorate any further than what exists at a chosen point in time. The objective is to either maintain the status quo, or to improve resource conditions.

Nonforest Land - See "Timber Classification."

Nongame - Species of animals not managed for sport hunting.

Noninterchangeable Component (NIC) - A portion of the allowable sale quantity (ASQ) which cannot be substituted for from other areas or species types. Volume programmed from a NIC will not be replaced by volume from other NICs. The volume in the NICs are mutually exclusive.

Nonmarket-Valued Outputs - Goods and services not generally traded in the marketplace, but valued in terms of what reasonable people would be willing to pay for them rather than to do without them. Those obtaining the actual outputs do not necessarily pay what they would be willing to pay for them.

Nonnative Species - A species introduced into an ecosystem through human activities.

Nonpoint Source Pollution - Pollution whose source is not specific in location. The sources of discharge are dispersed, not well-defined, or constant. Examples include sediments from logging activities, and runoff from agricultural chemicals.

Nonrenewable Resource - A resource whose total quantity does not increase measurably over time, so that each use of the resource diminishes the supply.

Notice of Intent - A notice printed in the Federal Register announcing that an Environmental Impact Statement (EIS) will be prepared.

Noxious Plant - A plant recognized by law as being especially undesirable, troublesome, and difficult to control.

Noxious Weed - See Noxious plant.

NTU - Nephelometric Turbidity Units.

Nutrient Cycle - The circulation of chemical elements and compounds, such as carbon and nitrogen, in specific pathways from the nonliving parts of ecosystems into the organic substances of the living parts of ecosystems, and then back again to the nonliving parts of the ecosystem. For example, nitrogen in wood is returned to the soil as the dead tree decays, the nitrogen again becomes available to living organisms in the soil, and upon their death, the nitrogen is available to plants growing in that soil.

Nutrient Cycling - The assimilation of an element by organisms and its release in a reusable inorganic form.

Objective - A clear and quantifiable statement of planned results to be achieved within a stated time period. Something aimed at or striven for within a predetermined time period. An objective must be achievable, be measurable, have a stated time period for completion, be quantifiable, be clear, and its results must be described.

Off-Highway Vehicle (OHV) - Any of a class of vehicles, regardless of width, weight or number of wheels, designed for or capable of travel over unimproved terrain. Snowmobiles, all terrain vehicles, high clearance four-wheel-drive pickups, and trail bikes and motorcycles are all off-highway vehicles.

OHV - Off-Highway Vehicle.

Old Growth - Terrestrial ecosystems characterized by vegetation of, and associated animals requiring, the most mature seral stages. Old growth forests contain trees normally beyond the age of optimum maturity for economic harvest. The precise definition of old growth varies with the tree species comprising the stand.

Opportunities - Ways to address or resolve public issues or management concerns in the land and resource management planning process.

Opportunity Class - In the Limits of Acceptable Change wilderness planning method, opportunity classes represent the desired conditions management would attempt to achieve and maintain over the planning period.

Optimum - A level of production that is consistent with other resource requirements as constrained by environmental, social, and economically sound conditions.

Organism - A plant or animal.

OROMTRD (Open Road and Open Motorized Trail Route Density) - See definition under Roads.

Output - One of the ways functions are described, resources which leave a system, such as, animals migrating out of an area, mass erosion, removal of commercial timber from an area, etc.

Overmature Timber - Trees that have obtained full development, particularly in height, and are declining in vigor, health, and soundness.

Overstory - The upper canopy or canopies of plants Usually refers to trees, tall shrubs, and vines

Overstory Removal - The final harvest cut of the shelterwood method in which overstory trees are removed releasing the established regeneration

-P-

Packing - A temporary influx of organisms of various sex and age classes into remaining suitable habitat as previously available habitat is changed to unsuitable conditions

PAOT - Persons-At-One-Time

Parasites - Organisms that absorb nutrients from the body fluids of living hosts Parasites may be fungal, bacterial, plant or animal, (examples include the braconid wasp that parasitizes the fir engraver beetle, or dwarf mistletoe)

Parent Material - The unconsolidated and more or less chemically weathered, mineral or organic matter from which soils developed by soil-forming processes

Partial Retention - A visual quality objective which, in general, means human activities may be evident, but must remain subordinate to the characteristic landscape

Particulates - Small particles suspended in the air and generally considered pollutants

Partnership - A cooperative, working relationship between the Forest Service and individuals, corporations, organizations or public agencies to pool financial and human resources to complete projects on National Forest System lands

Patch - A small (20-60 acres) part of the forest An area of vegetation that is internally homogeneous, differing from what surrounds it (matrix)

Patch Cut - A clearcut that creates small openings in a stand of trees, usually between 1 and 20 acres in size

Payment in Lieu of Taxes (PILT) - Payments to local or State governments based on ownership of Federal land and not directly dependent on production of outputs or receipt sharing Specifically, includes payments made under the payments in

Lieu of Taxes Act of 1976 by U S Department of the Interior

Payments to Local Government - The portion of receipts derived from Forest Service resource management that is distributed to State and county governments such as the Forest Service 25 percent fund payments

Percent Use - The percentage of current year's forage production that is consumed or destroyed by grazing animals May refer to a single species or to the vegetation as a whole

Percolation - Downward flow or infiltration of water through the pores or spaces of rock or soil

Perennial Streams - Streams that flow continuously throughout most years These streams have defined bed and banks

Permitted Grazing - Grazing on a National Forest range allotment under the terms of a grazing permit

Personal Use - Normally used to describe the type of permit issued for removal of wood products (firewood, posts, poles, and Christmas trees) from National Forest System land when the product is for home use and not to be resold for profit

Persons-At-One-Time (PAOT) - A recreation capacity measurement term indicating the number of people who can use a facility or area at one time

Planning - The act of deciding in advance, what to do A dynamic problem solving effort used to guide future actions and decisions

Planning Area - The area covered by a Regional Guide or Forest Plan

Planning Period - One decade The time interval within the planning horizon that is used to show incremental changes in yields, costs, effects, and benefits

Planning Regulations - The regulations at 36 CFR 219 implementing NFMA which guide land and resource management planning on the National Forests

Plant Association - A potential natural plant community of definite floristic composition and uniform appearance See Association

Plantation - Clearcut harvested area that has regenerated with natural and/or planted seedlings

Plant Community - An aggregation of plants that are similar in species composition and structure, and occupy similar habitats over the landscape
See Community

Plant Vigor - Plant health

PM-10 - Smoke and debris particles with an aerodynamic diameter smaller than or equal to a nominal ten micrometers

PNV - Present Net Value or Potential Natural Vegetation

Pole Timber - Trees of at least 3.0 inches DBH, but smaller than 8.0 inches DBH, (except lodgepole pine and aspen which includes trees less than 7.0 inches DBH)

Policy - A guiding principle which is based on a specific decision or set of decisions

Pollution - The presence of matter or energy whose nature, location or quantity produces undesired environmental effects

Porosity - Pertaining to landscapes, the density of a particular type of patch within a matrix. Porous landscapes have many small patches of similar type contained within the matrix

Potential Natural Community (PNC) - (nonforested vegetation) - The biotic community that would become established on an ecological type if all successional sequences were completed without interference by man under the present environmental conditions. Natural disturbances, such as drought, floods, wildfire, grazing by native fauna, insects, and disease, are inherent in its development. The Potential Natural Community (PNC) may include acclimatized or naturalized nonnative species

The similarity between the present plant community and the PNC is the seral stage, and can be expressed as a percentage. PNC is the ecological status of vegetation that ranges from 86% - 100% of the Potential Natural Community

Potential Vegetation - Vegetation that would develop if all successional sequences were completed under present site conditions

Practicable - When funding is obtained or a project is initiated

Practice (Also Management Practice) - A specific activity, measure, course of action, or treatment

Precommercial Thinning - Removal of trees from a young stand to promote increased growth on the remaining stems and maintain a specific stocking or stand density range, controlling species composition and stand quality through selection of trees that are to remain in the stand

Predator - An animal (rarely a plant) that kills and eats animals. Sometimes used in the sense of an insect consuming a seed

Preparatory Cut - The removal of trees near the end of a rotation, which opens the canopy and enables the crowns of residual trees to enlarge, to improve conditions for seed production and natural regeneration. Typically done in the shelterwood system

Prescribed Fire - Controlled application of fire to wildland fuels in either their natural or modified state, under specified environmental conditions which allow fire to be confined to a predetermined area and at the same time to produce the intensity of heat and rate of spread required to attain planned resource management objectives

Prescribed Fire or Burn - A wildland fire ignited by humans under pre-planned, specified conditions, to accomplish specific, planned resource management objectives. This practice is common in California and is also known as "controlled burning"

Prescribed Natural Fire - A wildland fire ignited by natural sources such as lightning or volcanism. These fires are allowed to burn in designated areas under carefully established conditions to provide for safety and fire control. If these conditions are exceeded, or predicted to worsen, a fire is reclassified as a wildfire and suppressed

Prescription - A set of management practices selected to accomplish specific land and resource management objectives

Present Net Value - The difference between the discounted value (benefits) of all outputs to which monetary values or established market prices are

assigned and the total discounted costs of managing the planning area

Preservation - See "Visual Quality Objectives "

Presuppression - Activities organized in advance of fire occurrence to assure effective suppression action

Prey - Animals eaten by predators

Primary Succession - The concept in which there is a sequence of vegetation development initiated on newly formed soils or upon surfaces exposed for the first time (as by landslides) which have never previously supported vegetation

Primitive ROS (Recreation Opportunity Spectrum) - A classification of wilderness and recreation opportunity It is characterized by an essentially unmodified environment, where trails may be present but structures are rare, and, where it is highly probable to be isolated from the sights and sounds of people (See ROS)

Principal Watersheds - The National Forest System watersheds used for purposes of project and Forest planning

Probability of Ignition - A rating of the probability that a firebrand (glowing or flaming) will cause a fire, provided it lands on receptive fuels It is calculated from air temperature, fuel shading, and fuel moisture

Production - The generation or "manufacturing" of resources within a system (such as, plant growth, animal reproduction, snags falling and becoming down woody material)

Productive - The ability of an area to provide goods and services and to sustain ecological values

Productivity - The amount of material (wood, forage, meat, etc) yielded by an ecosystem, or its inherent potential to yield such material

Program - When capitalized, the Renewable Resource Program required by the RPA Generally, sets of activities or projects with specific objectives, defined in terms of specific results and responsibility for accomplishment

Project - A single activity or an integrated group of activities designed to accomplish a specific on-the-

ground purpose or result

Properly Functioning Condition - Ecosystems at any temporal or spatial scale that are dynamic and resilient to disturbance to structure, composition, and processes of their biological and physical components

Proposal - A proposal exists at the stage in the development of an action when an agency is actively preparing to make a decision on one or more alternative means of accomplishing a goal and the effects can be meaningfully evaluated

Proposed Action - A proposal by the Forest Service to authorize, recommend or implement an action

Province - The third-highest level in the National Hierarchical Framework of Ecological Units developed by ECOMAP See also Chapter III, Part 2

Public Issue - A subject or question of widespread public interest relating to management of the National Forest System or one of its units

Public Land - Land for which title and control rests with a government - federal, state, regional, county or municipal

Public Participation - Generally, collaboration by the public at large in Forest Service planning and decision making Can be facilitated by meetings, conferences, seminars, workshops or tours, and can take the form of written or oral comments or responses or other such contributions

Purpose and Need - The underlying reason(s) to which the agency is responding in generating a proposed action

-R-

Range (of a species) - The area or region over which an organism occurs

Range - Land on which the principal natural plant cover is native grasses, forbs, and shrubs available as forage for big game and livestock

Range Allotment - An area designated for the use of a prescribed number and kind of livestock under one management plan

Range Analysis - Systematic acquisition and evaluation of rangeland resources data for allotment management and overall land management planning

Range Inspection - A field inspection of rangeland to determine if the forest plan standards and guides, the allotment management plan goals and objectives, and the grazing permit requirements are being met and followed

Range of Natural Variability - See Variability, Range of

Rangeland - All land producing or capable of producing native vegetation, and lands that have been revegetated naturally or artificially. Includes all grasslands, shrublands, and those forest lands which will continually or periodically, naturally or through management, support an understory of herbaceous or shrubby vegetation

Rangeland Condition - The state of vegetation, soil cover, and soils in relation to a standard or ideal for a particular ecological type. (See satisfactory rangeland and unsatisfactory rangeland condition)

Range Management - The art and science of planning and directing range use intended to yield the sustained maximum animal production and perpetuation of the natural resources

Range of Variability (Natural Variability, Historical Variability) - See Variability, Range of

Ranger District - The administrative subunit of a National Forest that is supervised by a District Ranger who reports directly to the Forest Supervisor

Raptor - A bird of prey, primarily meat eating birds with strong hooked bills and sharp talons. Includes but is not limited to members of the Strigidae (Owls), Cathartidae (New World Vultures), Accipitridae (Hawks and Eagles), Falconidae (Falcons), and Laniidae (Shrikes)

RARE II - Roadless Area Review and Evaluation. The national inventory of roadless and undeveloped areas within the National Forests and Grasslands

Reach - A continuous unbroken stretch of a stream, with homogeneous characteristics

Real Dollar Value - A monetary value that compensates for the effects of inflation

Recharge - The addition of water to ground water by natural or artificial processes

Record of Decision - An official document in which a deciding official states the alternative that will be implemented from a prepared EIS

Recovery - The achievement of viable populations of threatened or endangered plant or animal species

Recreation Capacity - The number of people that can take advantage of any supply of recreation opportunity at any one time without substantially diminishing the quality of the experience sought after

Recreation Opportunity Class or Spectrum (ROS) - A system categorizing land areas by settings and probable or desired recreation experiences. Six categories have been defined as follows

Primitive (P or Class I) Very high probability of experiencing solitude, freedom, closeness to nature, tranquility, self-reliance, challenge and risk. Unmodified natural or natural appearing environment. Very low interaction between users. Minimal evidence of other users. Restrictions and controls not evident after entry. Access and travel is nonmotorized on trails or cross country. No vegetation alterations. Access for people with disabilities can be most difficult and very challenging. No site modifications for facilities. Interpretation through self-discovery. No on-site facilities. No facilities for user comfort. Rustic and rudimentary ones for site protection only. Use undimensioned native materials. (USDA Forest Service 1994)

Semi-Primitive Nonmotorized (SPNM or Class II) High probability of experiencing solitude, closeness to nature, tranquility, self-reliance, challenge and risk. Natural appearing environment. Low interaction between users. Some evidence of other users. Minimum of subtle on-site controls. Access and travel is nonmotorized on trails, some primitive roads or cross country. Vegetation alterations sanitation salvage to very small units in size and number, widely dispersed and not evident. Access for

people with disabilities is difficult and challenging. Rustic and rudimentary facilities primarily for site protection. No evidence of synthetic materials. Use undimensioned native materials. Interpretation through self-discovery. Some use of maps, brochures, and guidebooks. No on-site facilities.

Semi-primitive Motorized (SPM or Class III)

Moderate probability of experiencing solitude, closeness to nature, tranquility. High degree of self-reliance, challenge and risk in using motorized equipment. Predominantly natural appearing environment. Low concentration of users but often evidence of others on trails. Minimum on-site controls and restrictions present but subtle. Vegetation alterations very small in size and number, widely dispersed and visually subordinate. Access for people with disabilities is difficult and challenging. Rustic and rudimentary facilities primarily for site protection. No evidence of synthetic materials. Use undimensioned native materials. Interpretation through very limited on-site facilities. Use of maps, brochures and guidebooks.

Roaded Natural (RN or Class IV) Opportunity to affiliate with other users in developed sites but with some chance of privacy. Self-reliance on outdoor skill of only moderate importance. Little challenge and risk. Mostly natural appearing environment as viewed from sensitive roads and trails. Interaction between users at camp sites is of moderate importance. Some obvious on-site controls of users. Access and travel is conventional motorized including sedan, trailers, RV's and some motor homes. Vegetation alterations done to maintain desired visual and recreational characteristics. Access for people with disabilities is of only moderate challenge. Rustic facilities providing some comfort for the user as well as site protection. Use native materials but with more refinement in design. Synthetic materials should not be evident. Moderate site modification for facilities. Interpretation through simple wayside exhibits. Use native-like materials with some refinement in design. Some casual interpretation by forest staff.

Rural (R or Class V) Opportunity to observe and affiliate with other users is important as is convenience of facilities. Self-reliance on

outdoor skills of little importance. Little challenge and risk except for activities such as downhill skiing. Natural environment is culturally modified yet attractive. Backdrop may range from alterations not obvious to dominant. Interactions between users may be high as is evidence of other users. Obvious and prevalent on-site controls. Access and travel facilities are for individual intensified motorized use. Access for people with disabilities is easy and meets ADAAG standards. Some facilities designed primarily for user comfort and convenience. Some synthetic but harmonious materials may be incorporated. Design may be more complex and refined. Moderate to heavy site modification. Interpretation through more complex wayside exhibits including small lighted structures. Interpretive facilities such as kiosks and portals may be staffed part-time.

Urban (U or Class VI) Opportunity to observe and affiliate with other users is very important as is convenience of facilities and recreation opportunities. Outdoor skills, risk, and challenge are unimportant except for competitive sports. Urbanized environment with dominant structures, traffic lights and paved streets. May have natural appearing backdrop. Recreation places may be city parks and large resorts. Interaction between large numbers of users is high. Intensive on-site controls are numerous. Access and travel facilities are highly intense, motorized and often with mass transit supplements. Vegetation is planted and maintained. Access for people with disabilities is easy and meets ADAAG standards. Facilities mostly designed for user comfort and convenience. Synthetic materials are commonly used. Facility design may be highly complex and refined but in harmony or complimentary to the site. Heavy site modifications for facilities. Interpretation through very sophisticated exhibits in staffed visitor centers, wayside exhibits, etc.

Recreation Visitor Day (RVD) - Twelve visitor hours, which may be aggregated continuously, intermittently, or simultaneously by one or more persons.

Recruitment - The addition to a population from all causes, including reproduction, immigration and stocking.

Reforestation - The natural or artificial restocking of an area with forest trees

Regeneration - The renewal of a tree crop, whether by natural or artificial means. Also, the young crop itself, which commonly is referred to as reproduction

Regeneration Method - A harvest method by which a new age class is created. The major methods are clearcutting, seed-tree, shelterwood, selection, and coppice regeneration methods and their variants

Regional Forester - The official of the USDA Forest Service responsible for administering an entire region of the Forest Service

Regulations - A set of directions drafted to implement a law or laws. Generally refers to the Code of Federal Regulations, Title 36, Chapter II, which covers management of the Forest Service

Rehabilitation - A short-term management activity used to return visual impacts in the natural setting to a desired visual quality

Release - Freeing trees from competition for light, water, and nutrients by removing or reducing the vegetation growth that is overtopping or closely surrounding them

Release Cutting - Removal of competing vegetation to allow desired tree species to grow

Release Treatment - A treatment designed to free young trees from undesirable, usually overtopping, competing vegetation. Treatments include liberation, cleaning, and weeding

Removal Cut - The removal of the last seed bearers or shelter trees after regeneration is established

Renewable Resource - Resources whose total physical quantity is replenished over time and thus can sustain some rate of consumption

Repeated Seasonal Grazing - A situation in which a pasture is grazed at the same time each year

Research Natural Area (RNA) - Lands that are protected for the purpose of maintaining biological diversity, conducting nonmanipulative research and monitoring, and promoting education

Reserve Trees - Trees deliberately retained in a stand for a specific resource use

Resident Fish - Fish that are not migratory and complete their entire life cycle in fresh water

Resource - A broad term denoting anything that is useful for something

Resource Value - The value of an ecosystem for a particular use or benefit on an ecological type. This value may be expressed as the value amount or as a relative rating, when compared to the maximum value for an ecological type

Responsible Official - The Forest Service employee who has been delegated the authority to carry out a specific planned action

Restoration - Actions taken to modify an ecosystem in whole or in part to achieve a desired condition

Restoration Ecology - The study of recreating entire communities of organisms closely modeled after communities that occur naturally

Retention - A visual quality objective whose guidelines stipulate that management activities are not visually evident, and activities repeat form, line, color, and texture characteristics found in the landscape

Revalidation - Pertaining to prescribed natural fire, the daily certification by the approving line officer that the fire is within prescription and will remain in prescription through the ensuing 24-hour period, given reasonably foreseeable weather conditions and fire behavior

Revegetation - The reestablishment and development of a plant cover by either natural or artificial means, such as reseeding

Right-of-Way - An accurately located strip of land with defined width, point of beginning, and point of ending. Within this area the user has authority to conduct operations approved or granted by the landowner in an authorizing document, such as a permit, easement, lease, license, or Memorandum of Understanding (MOU)

Riparian - Of, on, or relating to the bank of a natural course of water

Riparian Area - Areas adjacent to water and composed of vegetation communities dependent on water near the ground surface. Associated with lakes, reservoirs, potholes, springs, bogs, wet meadows, and ephemeral, intermittent, or perennial streams.

Risk - Refers to situations in which the outcome is not certain, but the chance of system degradation beyond the point of resiliency and sustainability can be estimated.

RNA - Research Natural Area

Road - A created or evolved travel route greater than 500 feet long (minimum inventory standard for the Forest Service Route Management System), which is reasonably and prudently drivable with a conventional passenger car or pickup (vehicles greater than 50 inches wide and having a dry weight of 600 pounds or more).

System Road/Managed Road A road which is part of the official Forest Transportation Management System, these roads usually have a number and a name and are usually on the Forest travel plan maps.

Nonsystem Road (Unmanaged Road or Ghost Road) A road which is not part of the official Forest Transportation Management System, these roads usually do not have a number or a name and they are not on the Forest travel plan maps.

Open Road/Motorized Road Any road without restriction on motorized vehicle use.

Restricted Road Any road on which motorized vehicle use is restricted seasonally or yearlong by physical obstruction (generally gated), and on which motorized vehicle use is legally restricted. Motorized administrative use by personnel of resource management agencies is acceptable at low intensity levels as defined in existing cumulative effects analysis models. This includes contractors and permittees in addition to agency employees.

Reclaimed/Obliterated Road Any road which has been treated in such a manner so as to no longer function as a road or trail. This can be accomplished through one or a combination of several means including recontouring to original slope, placement of logging, road, or forest

debris, planting of shrubs or trees, etc.

TMARD (Total Motorized Access Route Density) Includes all open and restricted roads and open and restricted motorized trails. Density may be displayed as follows: 1) Density (miles/square mile) for an analysis area (such as a watershed or a management prescription area); 2) Density as a percentage of the analysis area in a defined density category (example: 20% > 2.0 miles per square mile).

Calculating TMARD for Grizzly Bear Management Units. Follow the procedures outlined in the Interagency Grizzly Bear Committee Taskforce Report - Grizzly Bear/Motorized Access Management, Final, approved by the IGBC, July 21, 1994.

OROMTRD (Open Road and Open Motorized Trail Route Density): Includes all open roads and open motorized trails. Density may be displayed as follows: 1) Density (miles/square mile) for an analysis area (such as a watershed or a management prescription area); 2) Density as a percentage of the analysis area in a defined density category (example: 20% > 2.0 miles per square mile).

A. Calculating OROMTRD for elk habitat effectiveness (the spring/summer/fall period, but not including the general big game rifle seasons).

1. OROMTRD will be calculated on the basis of principal watersheds. The area in square miles of each principal watershed will be calculated, and the miles of open roads and open trails within that principal watershed will also be calculated to determine the OROMTRD (expressed as miles/square mile). The acreage and road and trail mileage included in the calculation will include all acres (NF and private) within the principal watershed.

a. Open roads include (a) all system (managed) roads which are open for motorized use on the Forest Plan Travel Maps, plus (b) all system (managed) and nonsystem (unmanaged) roads which have more than 1 to 2 motorized vehicle trips per week for the majority of the weeks.

during the spring/summer/fall period, even if they are designated closed on the Forest Plan Travel Maps, plus (c) all highways and county roads and private roads which are open for motorized use

b Open motorized trails include (a) all system (managed) trails which are open for motorized use on the Forest Plan Travel Maps, plus (b) all system (managed) and nonsystem (unmanaged) trails which have more than 1 or 2 motorized vehicle trips per week for the majority of the weeks during the spring/summer/fall period, even if they are designated closed on the Forest Plan Travel Maps

c Open roads and open motorized trails which are on the boundary of principal watersheds will be calculated as having one-half the total mileage of that road or trail in each of the watersheds it separates. Open roads and open motorized trails which form the Forest boundary will likewise have one-half of that boundary mileage counted as occurring within the Forest

B Calculating OROMTRD for elk vulnerability (the general big game rifle seasons)

1 OROMTRD will be calculated on the basis of principal watersheds. The area in square miles of each principal watershed will be calculated. The miles of open roads and open motorized trails within the principal watershed will also be calculated. In addition, "infinitely open areas" will be determined and included in the calculation using a factor of 6 miles of open road per square mile of infinitely open area. Open road and open motorized trail density will be expressed as miles/square mile. The acreage and road and trail mileage included in the calculation will include all acres (NF and private) within a principal watershed

a Open roads include (a) all system (managed) roads which are open for

motorized use on the Forest Plan Travel Maps during the general big game rifle seasons, plus (b) all system (managed) and nonsystem (unmanaged) roads which have motorized vehicle use during the general big game rifle seasons, even if they are designated closed on the Forest Plan Travel Maps, plus (c) all highways and county roads and private roads which are open for motorized use during the general big game rifle seasons

b Open motorized trails includes (a) all system (managed) trails which are open for motorized use on the Forest Plan Travel Maps during the general big game rifle seasons, plus (b) all system (managed) and nonsystem (unmanaged) trails which have motorized vehicle use during the general big game rifle seasons, even if they are designated closed on the Forest Plan Travel Maps

c Infinitely open areas include areas which have terrain and vegetation which allow OHV use and they are not closed to OHV use on the Forest Plan Travel Maps during the general big game hunting seasons. Calculate the total square miles for these areas, and use a factor of 6 miles of open road for each square mile of area

d Open roads and open motorized trails which are on the boundary of principal watersheds will be calculated as having one-half the total mileage of that road or trail in each of the watersheds it separates. Open roads and open motorized trails which form the Forest boundary will likewise have one-half of that boundary mileage counted as occurring within the Forest

C Calculating OROMTRD for Management Prescription Areas. Follow the same procedure as for elk habitat effectiveness, except the boundaries will be contiguous management prescription areas (and in some cases adjacent management

prescription areas as directed in the management prescriptions)

D Calculating OROMTRD for Grizzly Bear Management Units Follow the procedures outlined in the Interagency Grizzly Bear Committee Taskforce Report - Grizzly Bear/ Motorized Access Management, Final, approved by the IGBC, July 21, 1994

Roadless Areas - Areas of National Forest land which qualify for placement on the inventory of potential wilderness if, in addition to meeting the statutory definition of wilderness, they meet one or more of the following criteria

- 1 They contain 5,000 acres or more
- 2 They contain less than 5,000 acres but
 - a Due to physiography of vegetation, they are manageable in their natural condition
 - b They are self-contained ecosystems such as an island
 - c They are contiguous to existing wilderness, primitive areas, Administration- endorsed wilderness, or roadless areas in other Federal ownership, regardless of their size
- 3 They do not contain improved roads maintained for travel by standard passenger-type vehicles, except as permitted in areas east of the 100th meridian

ROD - Record of Decision

ROS - Recreation Opportunity Spectrum

Rosgen Channel Types - A classification system developed by Dave Rosgen which places stream reaches into categories based on physical characteristics This system is useful in comparing the existing classification (condition) of a stream to its natural potential

Rotation - The number of years required to establish (including the regeneration period) and grow timber crops to a specific condition or maturity for regeneration harvest Selected management prescriptions in the forest plan provide the basis for the rotation age

Rotational Grazing System - A livestock grazing system under which animals are moved from pasture to pasture on a scheduled basis

RPA - The Forest and Rangeland Renewable Resources Planning Act of 1974 Also refers to the National Assessment and Recommended Program developed to fulfill the requirements of this Act

RPA Assessment - An analysis of present and anticipated uses, demand for, and supply of renewable resources The Assessment is prepared every 10 years in response to the Forest and Rangeland Renewable Resources Planning Act

Runoff - The portion of precipitation that flows over the land surface or in open channels

RVD - Recreation Visitor Day

RVR - Resource Value Rating

-S-

S&G Allotment - A sheep and goat allotment

Salable Mineral - See Common Variety Mineral

Sale Schedule - The quantity of timber planned for sale by time period from the area of suitable land covered by a forest plan The first period, usually a decade, of the selected sale schedule provides the allowable sale quantity Future periods are shown to establish that long-term sustained yield will be achieved and maintained

Salvage Cutting - See Salvage Harvest

Salvage Harvest - Harvest of trees that are dead, dying, or deteriorating because they are overmature or have been materially damaged by fire, wind, insects, fungi, or other injurious agents before the wood becomes unmerchantable

Sanitation Cutting - See Sanitation Harvest

Sanitation Harvest - The harvest of dead, damaged or susceptible trees done primarily to prevent the spread of pests or disease and to promote forest health

Sapling - A young tree larger than a seedling but smaller than a pole Size is within the range of 1 0 to 2 9 inches DBH

Satisfactory Condition - (nonforested vegetation) - Vegetation that is meeting Desired Vegetation Conditions (DVC)

Sawtimber - Trees of a given diameter at breast height or larger that can be made into lumber For lodgepole, this minimum diameter is 7 0 inches, for Douglas-fir, it is 8 0 inches

Scoping - The ongoing process to determine public opinion, receive comments and suggestions, and determine issues during the environmental analysis process It may involve public meetings, telephone conversations or letters

SDI - Stand Density Index

Second Growth - Forest growth that was established after some kind of interference with the previous forest crop, such as cutting, fire, or insect attack

Security Cover - See Grizzly Bear Security Cover

Sediment - Solid material, both mineral and organic, transported from its site of origin by air, water, gravity or ice

Sedimentation - The action or process of forming or depositing excessive amounts of sediment

Seed Cut - Timber harvest designed to prepare the seed bed and create a new age class in an even-aged or two-aged stand under the Seed-Tree or Shelterwood Regeneration Method Reserve trees may or may not be retained

Seedling - A young tree less than 1 0 inches DBH

Seed Tree Cutting - An even-aged cutting method in which most of the mature timber from an area is removed in one cut except for a small number of desirable trees retained to provide seed or shelter for regeneration

Seed Tree Harvest - Removal of the mature timber crop from an area in one cut, except for a small number of seed bearers

Seed Tree Regeneration Method - A method of regenerating a stand in which a new age class develops from seeds that germinate in a fully-exposed microenvironment after removal of the previous stand, except for a small number of trees left to

provide seed This method creates an even-aged stand

Selection - See "Group Selection" and "Individual (Single) Tree Selection"

Selection Cutting - The annual or periodic removal of trees (particularly mature trees), individually or in small groups, from an uneven-aged forest, to realize the yield and to maintain age stratification

Selection System - An uneven-aged silvicultural system in which trees are removed individually or in groups, from a large area on a set temporal cycle

Sensitive Species - Those species that are recognized by the U S Forest Service as needing special management considerations

Sensitivity Level - A particular degree of measure of viewer interest in scenic qualities of the landscape Three sensitivity levels are employed, each identifying a different level of user concern for the visual environment

Level 1 - Highest Sensitivity

Level 2 - Average Sensitivity

Level 3 - Lowest Sensitivity

Seral - A plant or animal community that is transitional If left alone, the seral stage will give way to another plant or animal community that represents a further stage of succession

Seral Stage - Any of a series of relatively transitional planned communities that develop during ecological succession from bare ground to the climax stage. There are five stages

Early seral stage - (forested vegetation) - The period from disturbance to crown closure of conifer stands managed under the current forest management regime Grass, herbs, or brush are plentiful

(nonforested vegetation) - The developmental stage of an existing plant community in progression toward a Potential Natural Community (PNC) Early seral stage is the ecological status of vegetation that ranges from 0-39% of the Potential Natural Community

Mid seral stage - (forested vegetation) - The period in the life of a forest stand from crown closure to first merchantability usually ages 15-

40 Due to stand density, brush, grass, or herbs rapidly decrease in the stand. Hiding cover may be present

(nonforested vegetation) - The developmental stage of an existing plant community in progression toward a Potential Natural Community (PNC). Mid seral stage is the ecological status of vegetation that ranges from 40% - 59% of the Potential Natural Community

Late seral stage - (forested vegetation) - The period in the life of a forest stand from first merchantability to culmination of mean annual increment. This is under a regime including commercial thinning, or to 100 years of age, depending on wildlife habitat needs. During this period, stand diversity is minimal, except that conifer mortality rates will be fairly rapid. Hiding and thermal cover may be present. Forage is minimal

(nonforested vegetation) - The developmental stage of an existing plant community in progression toward a Potential Natural Community (PNC). Late seral stage is the ecological status of vegetation that ranges from 60% - 85% of the Potential Natural Community

Mature seral stage - The period in the life of a forest stand from culmination of mean annual increment to an old-growth stage or to 200 years. This is a time of gradually increasing stand diversity. Hiding cover, thermal cover, and some forage may be present

Old-growth seral stage - This stage constitutes the potential plant community capable of existing on a site given the frequency of natural disturbance events. For forest communities this stage exists from approximately age 200 until when stand replacement occurs and secondary succession begins again. Depending on fire frequency and intensity, old growth forests may have different structures, species composition, and age distributions. In forests with longer periods between natural disturbance, the forest structure will be more even-aged at late mature or early old-growth stages

Sere - See Seral Stage

Series - An aggregation of taxonomically related plant associations which take the name of (climatic) climax species that dominate, or have the potential to dominate, the principal vegetative layer in a

time frame appropriate to the vegetative or taxonomic group under consideration

Severely Burned - Soil organic matter and nutrient loss as a result of having been burned over. Severely burned is detrimental if it adversely affects site productivity or hydrologic function

Shade-Tolerant Plants - Plants that grow well in shade

Shelterwood Regeneration Method - A method of regenerating a stand in which a new age class develops beneath the partially-shaded microenvironment provided by the residual trees. The method creates an even-aged stand

Shelterwood Removal Cut - A type of cut that releases established regeneration from competition with seed trees while retaining some trees needed for shelter under the Shelterwood Regeneration Method. Reserve trees may or may not be retained

Shrub - A plant that has persistent, woody stems and a relatively low growth habit, and that generally produces several basal shoots instead of a single bole. It differs from a tree by its low stature and nonarborescent form

Sight Distance - The distance at which 90 percent or more of a deer or elk is hidden from an observer. Hiding cover exists when 90 percent or more of a standing deer or elk is hidden at a distance of 200 feet or less

Significance - As used in NEPA, requires consideration of both context and intensity. (See regulations at 40 CFR 1508.27)

Silvicultural System - The planned process whereby a stand is tended, harvested, and re-established. The system name is based on the number of age classes, and/or the regeneration method used

Silviculture - The art and science that promotes the growth of single trees and the forest as a biological unit to meet management objectives

Single-Tree Selection - See "Individual (Single) Tree Selection"

Site - A small area or parcel of land considered in terms of its environment

Site Development Scale - See Development Scale

Site Preparation - The general term for removing unwanted vegetation, slash, roots, and stones from a site before reforestation. Naturally occurring wild-fire, as well as prescribed fire can prepare a site for natural regeneration

Site Productivity - Production capability of specific areas of land

Size Class - One of the intervals of tree stem diameters used to classify timber in the Forest Plan data base. See Seedling, Sapling, Pole Timber, and Sawtimber

Skidding - Hauling logs by sliding, not on wheels, from stump to a collection point

Skid Trail - Narrow path on which logging equipment travels when moving logs from the forest to a designated landing location

SL - Standard Service Level

Slash - The residue left on the ground after timber cutting and/or as a result of storm, fire, or other damage. Includes unused logs, uprooted stumps, broken or uprooted stems, branches, twigs, leaves, bark and chips

Slope Distance - The physical measured distance on the slope (not horizontal distance)

Small Game - Birds and small mammals typically hunted or trapped

Snag - A standing dead tree greater than 20 feet tall from which the leaves and most of the limbs have fallen (USDA Forest Service 1979). Or, for wildlife habitat, a standing dead or partly dead tree at least 6 inches dbh and at least 5 feet tall (this definition is based on minimum dbh and height of trees used by primary cavity nesting species)

Snag-hard - Composed of sound wood, especially on the outside

Snag-soft - In advanced stages of decay and deterioration both inside and outside

Snowmachine - Any motorized vehicle which is used for over snow travel

Soil - The unconsolidated mineral material on the immediate surface of the earth that serves as a natural medium for the growth of land plants

Soil and Water Conservation Practices (SWCPs) - See Best Management Practice

Soil Cover - Ground cover consisting of vegetation, litter, and rock fragments larger than three-fourths inch in diameter in contact with the soil. Also, perennial canopy cover that is within 3 to 30 feet of the ground

Soil Disturbance - The effect upon soil of having been displaced, compacted, puddled, or severely burned. Any of these disturbances which adversely affect hydrologic function or site productivity are termed detrimental

Detrimental Displacement - The loss of either two inches or one-half of the humus-enriched top soil (A-horizon), or both, from an area of one square meter or larger

Detrimental Compaction/Puddling: Decreases in soil porosity by 10 percent or more from undisturbed values, or doubling of the soil strength, in any two-inch increment in the top foot of soil

Soil Hydrologic Function - The inherent capacity of a soil to take up, retain and transmit water

Soil Organic Matter - The organic fraction of soil. Includes plant, animal and microbial residues, fresh and at all stages of decomposition, and the relatively resistant soil humus

Soil Productivity - The capacity of a soil to produce a specific crop. Productivity depends on adequate moisture and soil nutrients, as well as favorable climate

Soil Puddling - Puddling is generally evaluated at the mineral soil surface. Infiltration and permeability are affected by detrimental soil puddling. Visual indicators of detrimental puddling include clearly identifiable ruts with berms or hoof prints in mineral soil, or in an Oa horizon of an organic soil

Soil Quality - Long term soil productivity and soil hydrologic function

Soil Survey - The systematic examination of soils in the field and laboratory, including description,

classification, interpretation of productivity and mapping

Soil Wood - Woody debris, larger than 3 inches in diameter, that is incorporated into the soil surface layers

Spatial Scale - The level of resolution in space perceived or considered

Special Forest Products - Nontimber renewable plant products (such as mushrooms, berries, flowers, etc)

Special Use Permit - A permit issued to an individual or group by the USDA Forest Service for use of National Forest System land for a special purpose. Examples of permitted activities could include a Boy Scout Jamboree or a mountain bike race

Species - A fundamental category of plant or animal classification

Species Composition - The proportions of various plant or animal species in relation to the total on a given area. Plant species may be expressed in terms of cover, density, weight, and so on

Stand - A community of trees or other vegetation sufficiently uniform in composition, constitution, age, spatial arrangement or condition to be distinguishable from adjacent communities and so form a silvicultural or management entity

Stand Exam - The activity of looking at a stand in the field to obtain measure of stand conditions, physical site factors, and other environmental data to help determine future management of the stand

Stand Replacement Fire - Fire which kills all or most living overstory trees in a forest and initiates regrowth at an earlier seral stage

Standard - A measurable constraint on management activities or practices often expressed as a maximum or minimum. Deviation from compliance with a standard requires a Forest Plan amendment

Standard Service Level (SL) - Management level designed to enhance the recreation experience, ensure public safety, correct resource damage, and maximize the longevity and serviceability of recreation facilities

Standards and Guidelines - Requirements found in a Forest Plan which impose limits on natural resource management activities, generally for environmental protection. See Chapter III

State Air Quality Regulations - The legal base for control of air pollution sources in a State. Prescribed burning is generally covered under these regulations

State Implementation Plan - A State plan that covers implementation, maintenance, and enforcement of primary and secondary standards in each air quality control Region, pursuant to section 110 of the Clean Air Act

Stocked Stand - A stand is certified as stocked when there are 140-300 established trees per acre, depending on species, over 70% of the stand five years after a regeneration cut. See FWSG for timber

Stocking - A measure of the proportion of the area in a stand actually occupied by trees, expressed in terms of stocked quadrats or percent of canopy closure (as distinct from stand density)

Stocking Level - (Timber management) The number of trees in an area as compared to the number of trees desired. (Livestock grazing) The area of land allotted to each animal unit for the entire grazing period. Usually expressed as a ratio

Storage - A description of resources which are conserved within a system such as, sediments and water retained in wetlands, or carbon and other nutrient storage in down woody material

Stream Reach - A segment of stream with similar characteristics

Structure - How the parts of ecosystems are arranged, both horizontally and vertically. Vegetation patches, edge, canopy layers, snags, down wood, steep canyons, rocks in streams, and roads may be arranged in some pattern or mosaic, or the structure may be totally random

Subregion - One of the hierarchy levels used for RPA assessments and statewide planning encompassing hundreds to thousands of square miles

Subsection - An ecological unit of land that has uniform climatic and geologic characteristics

Seven subsections have been delineated within the Targhee National Forest

Subwatershed - A drainage delineated for one of the streams within a National Forest System (NFS) watershed, often to analyze the effects of a proposed action. The subwatershed chosen for analysis may depend on the size and anticipated effects of a proposal

Succession - The natural replacement, in time, of one plant community by another. Conditions of the prior plant community (or successional or seral stage) create conditions that are favorable for the establishment of the next stage

Succession, Plant - The process of vegetation development whereby an area is successively occupied by different plant communities of higher ecological order

Successional Stage - See Seral Stage

Suitability - The appropriateness of applying certain management practices to a particular area of land, as determined by an analysis of the economic and environmental consequences and the opportunity cost of uses foregone

Suitability for Livestock Grazing - The appropriateness of applying livestock grazing practices to a particular area of land (grazing allotment), as determined by an analysis of the economic and environmental consequences and the alternative uses foregone. A unit of land may be suitable for a variety of individual or combined management practices

Suitability for Timber Production - The appropriateness of commercial timber management on a given land area. Timber harvest, other than salvage sales or sales to protect other multiple-use values, cannot occur on lands not suited for timber production

Suitable Forest Land - See Timber Classification

Suitable Habitat - The biological and physical components necessary to meet some or all of the life needs of a species

Suitable Range - Rangeland that is accessible and used by grazing animals, that produces forage or has inherent forage producing capabilities, and that

can be grazed on a sustained yield basis under reasonable management goals

Suppression - The action of extinguishing or confining a fire

Surface Resources - Renewable resources that are on the surface of the earth, such as timber and forage, in contrast to ground water and minerals which are located beneath the surface

Sustainability - The ability of an ecosystem to maintain ecological processes and functions, biological diversity, and productivity over time

Sustainable - For a renewable resource, the capacity to produce continuously at a given intensity of management

Sustainable Development - The use of land and water to sustain production indefinitely without environmental deterioration, ideally without loss of native biodiversity

Sustainable Ecosystem Management - Management directed towards developing or maintaining a synergistic complex of plants and animals which can be perpetuated indefinitely

Sustained-Yield - The yield of a renewable resource which can be produced continuously at a given intensity of management

Swing Allotment - A vacant allotment open to grazing that can be temporarily grazed by an existing forest livestock grazing permittee whose existing authorized allotment is not available in whole or part. Nonforest permittees are not allowed to use swing allotments. Cattle are not allowed to use swing sheep allotments and sheep are not allowed to use swing cattle allotments

Systems at Risk - Ecosystems which demonstrate a potential for loss of resilience or sustainability if disturbed

-T-

Target - A National Forest's annual goal for accomplishment for natural resource programs. Targets represent the commitment of the Forest Service to Congress to accomplish the work Congress has funded, and are often used as a measure of the agency's performance

Temporary Roads - Roads other than specified which are constructed by the purchaser for the purpose of harvesting included timber. A timber sale road is a temporary road when it is the purchaser's road. It is not needed by anyone else for any reason. The purchaser develops it, maintains it, and eliminates its function as a road when it has served its purpose. If the Forest Service access needs are only short-term, such as for post-sale work or fuelwood access, the road will be specified in the timber sale contract. The Forest Service will then be responsible for eliminating its function as a road when it has served its purpose.

Tentatively Suitable Forest Land - See Timber Classification

Thermal Cover - Cover used by animals to moderate the effects of weather and provide protection from heat or cold. Thermal cover requirements vary with species and the prevailing climate.

Thinning - An intermediate cutting made in an immature stand primarily to maintain or accelerate diameter increment, enhance forest health or recover mortality, and also to improve the average form of the remaining trees without permanently breaking the canopy.

Threatened Species - Any species listed in the Federal Register under terms of the Endangered Species Act which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Timber Base - The lands within the Forest which are capable, available and suited for timber production.

Timber Classification - In forest planning, the disaggregation of forested lands into strata to aid in the development of management alternatives. The strata are based on the ability of the land to produce commercial timber, and are as follows:

Forest Land - Land at least 10 percent occupied by forest trees of any size or formerly having had such tree cover and not currently developed for nonforest use. Lands developed for nonforest use include areas for crops, improved pasture, residential, or administrative areas, improved roads of any width and adjoining road clearing and powerline clearing of any width. The term occupancy when used to define forest

land will be measured by canopy cover of live forest trees at maturity. The minimum area for classification of forest land is 1 acre. Unimproved roads, trails, streams and clearings in forest areas are classified as forest if they are less than 120 feet in width.

Nonforest Land - Lands never having or incapable of having greater than 10 percent of the area occupied by forest trees and lands formerly forested and currently developed for nonforest use.

Suitable (Suited) Forest Land - Tentatively suitable forest lands selected for management for timber production on a regulated basis in a Forest Plan.

Tentatively Suitable (Commercial) Forest Land - Forest Land which is producing or is capable of producing crops of industrial wood and for which (1) a withdrawal has not been entered by Congress, the Secretary of Agriculture or the Chief of the Forest Service (for example, as designated wilderness), (2) technology and knowledge exists to ensure timber production without irreversible damage to soil productivity or watershed condition, (3) technology and knowledge exists, and is reflected in current research and experience, to reasonably assure that the lands can be adequately restocked (regenerated) within five years after final harvest, and (4) adequate information is available to project responses to timber management activities.

Unsuitable (Unsuited) Forest Land - Land not scheduled (designated) for timber management in the Forest Plan. May be tentatively suitable land on which timber management is inconsistent with or not cost-efficient in meeting Forest Plan multiple-use objectives or management requirements, or land not found tentatively suitable for timber production.

Timber Harvest Schedule - See "Sale Schedule"

Timber Production - The purposeful growing, tending, harvesting, and regeneration of regulated crops of trees for cutting into logs, bolts, or other round sections for industrial or consumer use. For purposes of forest planning, timber production does not include fuelwood or harvests from unsuitable lands.

Timber Sale Program Quantity (TSPQ) - The volume of timber planned for sale during the first decade of the planning horizon. It includes the allowable sale quantity (chargeable volume) and any additional material (nonchargeable volume) planned for sale. The timber sale program quantity usually is expressed as an annual average for the first decade.

Timber Stand Improvement (TSI) - Measures such as thinning, pruning, release cutting, prescribed fire, girdling, weeding, or poisoning of unwanted trees aimed at improving growing conditions of the remaining trees.

Timelag - In fire planning an indication of the rate at which dead fuel gains or loses moisture due to changes in its environment. The time necessary for a fuel particle to gain or lose approximately 63 percent of the difference between its initial moisture content and its equilibrium moisture content. Fuels are usually grouped into the following groups:

Classification	Diameter (Inches)
1 hour	0-1/4
10 hour	1/4-1
100 hour	1-3
1,000 hour	3-8

TMARD (Total Motorized Access Route Density) - See definition under Roads.

TMDL - From the Clean Water Act, Total Maximum Daily Load. TMDLs for given pollutants may be assigned to Water Quality Limited streams.

Tractor Logging - A logging method that uses tractors to carry or drag logs from the stump to a collection point.

Trail - Any created or evolved travel (access) route that does not qualify as a road. Used for both motorized and nonmotorized modes of travel. For motorized travel, trails are generally routes for vehicles less than 50 inches wide and which have a dry weight of 600 pounds or less. Trails are not reasonably and prudently drivable with a conventional passenger car or pickup.

System Trail/Managed Trail - A trail which is part of the official Forest Transportation Management System. These trails usually have a number and a name, they are usually on the Forest travel plan maps.

Nonsystem Trail/Unmanaged Trail/Ghost Trail - A trail which is not part of the official Forest Transportation Management System. These trails usually do not have a number or a name, they are not on the Forest travel plan maps.

Open Motorized Trail - A trail without restriction on motorized use and used by motorized vehicles. Trails used by 3-wheelers, 4-wheelers, and motorized trail bikes are examples of this type of access route.

Restricted Motorized Trail - A trail on which motorized use is legally restricted seasonally or yearlong. Motorized administrative use by personnel of resource management agencies is acceptable at low intensity levels as defined in existing cumulative effects analysis models. This includes contractors and permittees in addition to agency employees.

Trail Maintenance - There are five levels of trail maintenance which are defined as follows:

Level I - Trails maintained for primitive experience level. Custodial care only. No tread maintenance. Drainage functional and not likely to fail. Trail sides not brushed but tread is kept passable. Small slides may remain except for those with erosion potential. Structures maintained as needed. Signing may be deferred.

Level II - Trails maintained for near-primitive experience level. Tread maintained for public safety. Logs or similar rustic structures may be provided at stream crossing. Drainage same as Level I. Signing at a minimum level commensurate with level of trail use.

Level III - Trails maintained for intermediate experience level. Tread maintained for public safety and user convenience. Drainage same as Level I. Trail sides brushed out at policy standards. Signing same as Level II.

Level IV - Trails maintained at relatively high standards to provide for public safety and convenience. Tread relatively smooth, firm and may require stabilization. Signing at high level, all other elements same as Level III. These trails are generally maintained for family or senior citizen use.

Level V Trails maintained for high use and experience levels, including special purposes such as VIS trails, bicycle trails, trails to major vista points, trails for persons with disabilities, etc. Basic care same as Level IV but patching of paved tread may be needed annually. Trail sides maintained to meet high visual quality standards by brushing and cleanup of debris beyond the trail limits. Vistas are maintained.

Transportation Analysis - A systematic analysis conducted to determine the transportation facilities and management needed to meet land and resource management objectives.

Transportation System or Network - All existing and proposed roads, trails, airfields, and other transportation facilities wholly or partly within or adjacent to and serving the National Forests and other areas administered by the Forest Service or intermingled private lands.

Treatment Area - The specific site location of a resource improvement activity.

Tree Opening - An opening in the forest cover created by even-aged silvicultural practices.

TSI - Timber Stand Improvement

TTS - Tentative Timber Suitability

-U-

Underburn - A surface fire that can consume ground vegetation and "ladder" fuels.

Understory - The trees and woody shrubs growing beneath the overstory in a stand of trees.

Uneven-aged - The condition of a forest, crop, or stand composed of intermingling trees that differ markedly in age. In practice a minimum age difference of 25 percent of the length of the rotation usually is used.

Uneven-aged Management - Actions that maintain a forest or stand of trees composed of intermingled trees that differ markedly in age. Cutting methods that develop and maintain uneven-aged stands are single-tree selection and group selection.

Uneven-aged Stand - A stand of trees of three or more distinct age classes, either intimately mixed or in small groups.

Uneven-aged System - A planned sequence of treatments designed to maintain and regenerate a stand with three or more age classes (see Individual Tree Selection, and Group Selection Regeneration Methods).

Unregulated Harvest - Timber harvest that is not part of the allowable sale quantity (ASQ). Can include the removal of cull or dead material or non-commercial species. Also includes volume removed from unsuitable areas for research, to meet objectives other than timber production (such as wildlife habitat improvement), or to improve administrative sites such as campgrounds.

Unsatisfactory Condition - (nonforested vegetation) - Vegetation that is not meeting Desired Vegetation Conditions (DVC).

Unsuitable Forest Land (Not Suited) - See Timber Classification.

Unsuitable Range - Rangeland that should not be grazed by livestock because of physical or biological limitations.

Use, allowable - An estimate of proper range use by grazing animals. Also, the amount of forage planned to be used to accelerate range rehabilitation.

Utility and Transportation Corridors - A strip of land, up to approximately 600 feet in width, designated for the transportation of energy, commodities, and communications by railroad, State highway, electrical power transmission (66 KV and above), oil and gas and coal slurry pipelines 10 inches in diameter or larger, and telecommunication cable and electronic sites for interstate use. Routes conducting minor amounts of power for short distances, such as short feeder lines from small power projects including geothermal or wind, or to serve customer subservice substations along the line, are not designated corridors.

-V-

Vacant Allotment - An allotment for which a livestock grazing permit has not been issued. The allotment may or may not be available for grazing.

Variability, Range of (Natural, Historic) - The spectrum of conditions possible in ecosystem composition, structure and function considering both temporal and spatial factors. The natural range of the spatial, structural, compositional and temporal characteristics of ecosystem elements specified to represent "natural" conditions. The flux in composition, structure, and function of an ecosystem over the long term in a landscape.

Vegetation - Collectively, the plants growing in a given area.

Vegetation Management - Activities designed primarily to promote the health of forest vegetation for multiple-use purposes.

Vegetation Type - A plant community with distinguishable characteristics. See Cover Type.

Vegetative Structural Stage - A method of describing the growth stages of a stand of living trees. It is based on tree size (DBH = diameter at breast height) and total canopy cover. The stages are Grass/forb/shrub (VSS 1) = 0-1 inch DBH, Seedling/sapling (VSS 2) = 1-5 inches DBH, Young Forest (VSS 3) = 5-12 inches DBH, Mid-aged Forest (VSS 4) = 12-18 inches DBH, Mature Forest (VSS 5) = 18-24 inches DBH; Old Forest (VSS 6) = 24+ inches DBH.

Viable Population - A number of individuals of a species sufficient to ensure the long-term existence of the species in natural, self-sustaining populations adequately distributed throughout their region.

Viewshed - An expansive landscape or panoramic vista seen from a specific viewpoint, such as a road.

Vigor - The relative robustness of a plant in comparison to other individuals of the same species. It is reflected primarily by the size of the plant and its parts in relation to its age and the environment in which it is growing.

Visual Quality Objectives (VQO's) - In forest planning, a set of measurable goals for the management of visual resources. Used to measure the amount of visual contrast with the natural landscape caused by human activities. The following are VQOs.

Preservation - Ecological change only here.

Retention - Human activities should not be evident to the casual Forest visitor.

Partial Retention - Human activity may be evident but must remain subordinate to the characteristic landscape.

Modification - Human activity may dominate the characteristic landscape but must, at the same time, follow naturally established form, line, color, and texture. The activity should appear as a natural occurrence when viewed in foreground or middleground.

Maximum Modification - Human activity may dominate the characteristic landscape but should appear as a natural occurrence when viewed as background.

Visual Resource - A part of the landscape important for its scenic quality. It may include a composite of terrain, geologic features, or vegetation.

-W-

Watershed - The area of land above a given point on a stream that contributes water to the streamflow at that point. Also the land that contributes water to a lake or reservoir.

Watershed Improvement Needs (WIN) Inventory - A broad reconnaissance inventory oriented primarily to problem identification rather than specific project design. Forms the basis for identifying potential soil and water resource restoration project areas and assigning priority for detailed planning and treatment.

Watershed Information System (WIS) - Inventory of Forest Service water rights and uses. The inventory includes such information as location of water right or use, the amounts of water involved, status of the use or right, purpose, etc.

Water Table - The upper surface of groundwater. Below it, the soil is saturated with water.

Water Yield - The runoff from a watershed, including groundwater outflow.

Weeding - In timber management, a release treatment in stands of sapling stage or younger that

eliminates or suppresses undesirable vegetation regardless of crown position

Wet Areas - These sites, often occurring at the heads of drainages, may be wet sedge meadows, bogs, or seeps. Often referred to as "moist sites," they are very important components of elk summer range

Wetlands - Areas that are inundated by surface or ground water with a frequency sufficient, under normal circumstances, to support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands include wet meadows, springs, seeps, bogs, etc

Wild and Scenic Rivers - Rivers and their immediate environs that are managed to be unpolluted and free of impoundments and diversions. Designated by Congress pursuant to the Wild and Scenic Rivers Act

Wilderness - Areas designated by congressional action pursuant to the Wilderness Act that are managed for primeval characteristics, solitude or unconfined primitive recreation, natural conditions and where the imprint of man is substantially unnoticeable

Wilderness Act (1964) - Public Law 88-577 (16 U.S.C. 1131-1136). The Wilderness Act allows preservation of designated areas of federal land under the National Wilderness Preservation System for the benefit of present and future generations. The land must be primarily affected by the forces of nature (not man), have outstanding opportunities for solitude or primitive recreation, be at least 5000 acres in size, and may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value

Wildfire - Any wildland fire not designated and managed as a prescribed fire within an approved prescription and occurring in natural fuels

Wildlife - All undomesticated mammals, birds, reptiles and amphibians living in a natural environment. Does not include feral animals, such as wild horses and burros

Wildlife Habitat Diversity - The distribution and abundance of different plant and animal communities and species within a specific area

WINI - Watershed Improvement Needs Inventory

Windthrow - Trees that have been uprooted by the wind

WIS - Watershed Information System

Wood Fiber Production - The growing, tending, harvesting and regeneration of harvestable trees

Woody Plant - Perennial plants that have stems consisting of wood (shrubs, trees, and vines)

Woody Residue/Residue - Organic materials such as plant stems and branches having a minimum diameter of three inches (small end). Included are both natural materials and materials remaining after timber harvest (slash)

WQL - Water Quality Limited. Water bodies listed by EPA as not meeting State water quality standards. They are to be monitored to determine if water quality standards are, or are not, being met. On those not meeting water quality standards, TMDLs may be assigned

-X-

Xeric - Refers to a habitat characterized by dry soil conditions

-Y-

Yield - The amount of forest produce that may be harvested periodically from a specified area in accordance with the objectives of management

-Z-

ZOI (Zone of Influence) - The area influenced by Forest Service management activities

Zoning - The demarcation of a planning area into zones, usually accompanied by the establishment of regulations to govern the types of activities and uses within each zone

Zoological Area - A protective area designated for its authentic, significant and interesting evidence of important animals, animal groups and animal communities

Decomposition Class (cont)

Log Characteristics	Log decomposition class				
	1	2	3	4	5
Bark	intact	intact	trace	absent	absent
Twigs < 3 cm	present	absent	absent	absent	absent
Texture	intact	intact to partly soft	hard, large pieces	small, soft, blocky pieces	soft and powdery
Shape	round	round	round	round to oval	oval
Color of wood	original color	original color	original color to faded	light brown to faded brown or yellowish	faded to light yellow or gray
Portion of log on ground	log elevated on support points	log elevated on support points but sagging slightly	log is sagging near ground	all of log on ground	all of log on ground

United States
Department of
Agriculture

Forest Service

Intermountain
Region

Targhee
National
Forest



Record of Decision Final Environmental Impact Statement (FEIS) for the Revised Forest Plan



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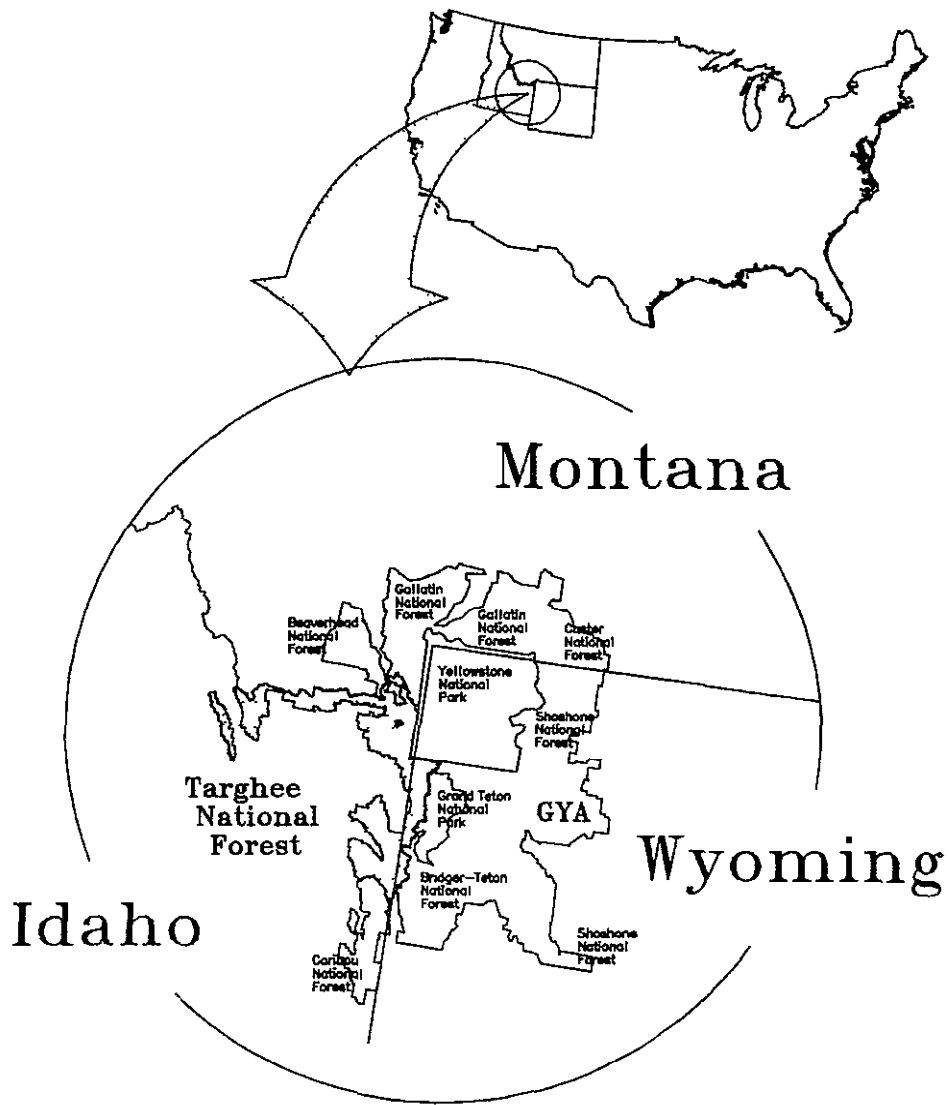
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INTRODUCTION

The Targhee National Forest covers approximately 1.8 million acres (this includes the portion of the *Caribou National Forest* which is administered by the Targhee). The majority of the Forest lies in eastern Idaho and the remainder in western Wyoming. Situated next to Yellowstone and Grand Teton National Parks, the Forest lies almost entirely within the Greater Yellowstone Ecosystem.

The Forest serves as a home for many plant and animal species. It also offers a wide range of recreation opportunities year-round, as well as a unique setting for a diversified local economy. The Targhee Forest personnel anticipate that over the next decade, more people will discover the Targhee and compete for its resources and services.

Vicinity Map of Targhee National Forest on a National Scale



The Decision - An Overview

This document presents my decision for a Revised Land and Resource Management Plan (Revised Plan or Revised Forest Plan) for the Targhee National Forest. It explains the reasons I have selected the Preferred Alternative 3M, as presented in the Final Environmental Impact Statement (EIS). Alternative 3M is the basis for the Revised Forest Plan which will guide the management activities for the Targhee National Forest for the next 10 to 15 years.

We are embracing the concept of adaptive management in this Revised Forest Plan. From a strategic perspective, this means that

- We will adjust our management if our strategies do not move us toward the achievement of the Revised Plan Desired Future Conditions, Goals and Objectives. New information will be incorporated as it becomes available.
- We will make decisions that leave future generations with as many options as possible.

Alternative 3M, as modified from the Draft EIS in response to public comment, responds to the issues in a reasoned, deliberate, comprehensive and equitable manner. I have selected Alternative 3M because it best meets the needs for change, positions the Forest Team to address the seven key issues in a balanced way and also addresses the other factors common to all alternatives in the Final EIS. Key features of Alternative 3M are (details provided in Chapter II of the FEIS)

- 1) Ecosystem Sustainability will be increased by allowing silvicultural treatments on 45,200 acres where forest structure can be maintained or improved during the next decade. Prescribed fire will also be allowed where appropriate to maintain or improve ecosystem health on 1,750,000 acres,
- 2) Desired Vegetative Conditions within aquatic influence zones will be improved by managing approximately 512,000 acres to promote health and function of riparian, wetland and aquatic ecosystems, ✓
- 3) Elk Security will be increased and, as a result 89 percent of the Forest will meet the state elk vulnerability threshold,
- 4) Grizzly Bear Habitat will be improved by managing almost 476,600 acres (Targhee portion within Grizzly Bear Recovery Zone) in a comprehensive strategy that provides "core" areas to ensure grizzly security and which reduces road and trail densities to the level needed to allow grizzly occupancy. Timing and other mitigation measures are applied to human activities within the recovery zone.
- 5) Reasonable access to the Forest by roads and trails open for motorized use will be provided on a system of designated routes. However, motorized road and trail density will be reduced to achieve the road density standards for each management prescription area. This means that during the next decade, 20 percent (408 miles) of roads will be closed and 30 percent (233 miles) of motorized trails will be closed. Acres currently available for off-highway vehicle use will be reduced by 90 percent, to about 121,000 acres. These changes are necessary to improve elk security, improve grizzly bear habitat and prevent other resource damage.

6) Roadless Areas - 106,000 acres will be recommended to Congress for wilderness designation in addition to the 65,000 acres already recommended, for a total of 171,000 acres. With the current 134,166 acres designated as wilderness, and the 49,300 acres designated as a wilderness study area (the Targhee portion of the Palisades Roadless Area), a total of almost 354,500 acres will be managed to retain the wilderness character until Congress takes legislative action on the wilderness issue.

7) Timber Harvest is allowed at a sustainable level, not to exceed 80 MMBF for the decade. An estimated 20,520 acres of forest land suitable for timber production will be harvested. The use of timber harvest as a tool to meet ecosystem health objectives will also be allowed on forest land unsuited for timber production. This harvest will not exceed 20 MMBF for the decade.

The balance of these key issues is weighed within the capabilities of the land and Alternative 3M provides for sustainable ecosystems across the Forest. The reasons to support these statements are discussed in full in the "Reasons for the Decision" section that follows the description of all "Alternatives Considered."

The Forest Team will implement a monitoring and evaluation strategy to improve our understanding of ecosystems and our use of management activities to achieve ecosystem objectives. We also want to test our assumptions made during this analysis, to be able to adjust our management as needed. We have learned much from our monitoring efforts of the 1985 Targhee Forest Plan and now have a better idea of what needs to be monitored to assure we are moving toward our desired future conditions. It was the evaluation of past monitoring that identified the needs for change which began this revision process.

Monitoring and evaluation will be given a high priority as implementation work plans are developed each year. In the Monitoring and Evaluation Plan (Chapter V of the Revised Plan), I have prioritized the monitoring items into three categories. First priorities are

- critical planning assumptions,
- activities with the greatest risk to resources,
- standards and guidelines that are potentially the most constraining on resource outputs

Monitoring of the first priorities is mandatory. Monitoring of second and third priorities will occur as funds are available. The Forest Team will develop monitoring partnerships with Federal, State, local and other agencies to further shared goals.

The sections of this record that follow include the needs for change and desired future conditions, public participation and the revision process, alternatives considered, the environmentally preferable alternative, reasons for the decision with comparisons of the 1985 Plan, changes made between draft and final EISs and responses of the alternatives to the key issues, findings required by other laws, implementation, and appeal.

NEED FOR CHANGE AND DESIRED FUTURE CONDITIONS

A Revised Plan for the Targhee National Forest, as well as each Forest in the National Forest System, is required by the rules implementing the Forest and Rangeland Renewable Resources Planning Act of 1974 (RPA), as amended by the National Forest Management Act of 1976 (NFMA). The purpose of a revised plan is to respond to the needs for change identified from the monitoring of the 1985 Plan and continue to provide multiple-use and sustained yield of goods and services from National Forest System lands in an environmentally sound manner. NFMA implementing regulations (36 CFR 219.10(g)) require a forest plan be revised on a 10 to 15 year schedule. This decision will remain in effect until this Revised Plan is revised, no later than 2012. In the final EIS, a 50-year planning period is used to project the environmental effects of alternative choices beyond the first decade for economic and timber harvest only. Short-term opportunities, problems, or conflicts may arise in managing the Forest that were not anticipated in the Revised Plan. When this occurs, the Plan can be adjusted through rescheduling activities, amendment, or revision.

The original Targhee Forest Plan, approved in 1985, emphasized an extensive salvage and reforestation program of dead lodgepole killed by a massive mountain pine beetle epidemic over the previous 30 years. This rate of salvage caused, in effect, a departure from a sustained yield of timber harvest and could not be continued beyond the first decade (1985 - 1995) in an environmentally sound manner. Monitoring of activities during this time showed it was increasingly difficult to meet the standards and guidelines in the 1985 Plan. New information on resource needs and various management practices became evident during this time, and by 1990 it was apparent that a full revision was needed. More specific needs for change are as follows:

- The salvage program has ended. Use of the many roads built during salvage operations by increasing numbers of people is causing unwanted effects to wildlife, riparian areas, and soil productivity.
- The need to review and incorporate new knowledge and techniques continues, especially in wildlife habitat management. For example, recent studies indicate motorized road and trail densities play a crucial role in availability of suitable habitat for elk and grizzly bears. Standards for management activities near nesting and foraging habitat for goshawks and other raptors are needed to protect these crucial areas. Results of studies analyzing fish habitat in the Upper Columbia River Basin are pointing out new ways to manage fisheries. Some of these findings have widespread implications that the revision process was intended to address.
- Although much of the lodgepole pine component on the Forest has been salvaged, there is still a need to use timber harvest as a tool to reach ecosystem objectives, supply a variety of timber products for local use, deter other epidemics like the mountain pine beetle outbreak, and manage the potential for a devastating wildfire, like the Yellowstone Wildfires of 1988.

Based on public, other resource management agencies, and Forest Service employee participation between 1991-1994, a set of goal statements emerged that collectively represent what ideal conditions would be for the Targhee National Forest. These statements, called "Desired Future Conditions for the Year 2007" are the foundation for the goals, objectives, standards and guidelines developed in the Revised Forest Plan. They have changed from the desired future conditions described in the 1985 Plan, reflecting changes in conditions and values of the local communities and knowledge gained over the decade. These titles of the desired future conditions also show how the analysis and documents are organized, and are described as follows:

Ecosystem Processes and Patterns Desired Future Conditions:

A mosaic of age classes and types of vegetation are sustained through time and exist across the landscape. Natural disturbances such as insects, disease and fires continue their natural roles in the ecosystem. The Forest functions as an integral part of the Greater Yellowstone Ecosystem as well as adjacent systems, sustaining habitat and conditions necessary for free movement of wildlife.

Biological and Physical Desired Future Conditions:

Riparian zones (aquatic influence zones) are healthy and productive. Aquatic systems are allowed to function naturally while protecting flows for downstream consumptive uses. Riparian area integrity contributes to productive fisheries and excellent water quality. Native plant and animal species are favored over undesirable non-native species and sustained populations of all native and desirable species thrive. Habitat conditions contribute toward the recovery of threatened, endangered and sensitive species.

Forest Use and Occupation Desired Future Conditions:

Growing and diverse recreational, cultural, visual, historical, and prehistoric management, interpretive, and spiritual needs are accommodated based on the capability of the ecosystem to sustain these uses. Recreation use is managed to minimize conflicts between incompatible uses and provide high levels of satisfaction. Year-round human access is managed to provide both motorized and nonmotorized opportunities. A system of trails and support facilities exist which are compatible with resource capabilities. Roadless characteristics are preserved in the recommended wilderness areas and in existing wildernesses.

Production of Commodity Resources Desired Future Conditions:

try count
① →

Commodity production, such as timber, firewood, mining, livestock forage, or outfitting and guide services are conducted at sustainable levels and maintain the capability of the land to produce an even flow and variety of goods and services for present and future generations. Timber harvest, prescribed fires and livestock grazing are tools used to achieve desired ecological vegetation conditions. Forest products are provided to sustain social and economic values and needs of the local communities within limits which maintain ecosystem health.

PUBLIC PARTICIPATION AND THE REVISION PROCESS

The Targhee National Forest Team conducted an extensive public involvement process that continues. The revision process began in December, 1990 when a notice of intent to prepare an environmental impact statement (EIS) was issued in the Federal Register. The notice of intent announced our interest in identifying changed conditions and need to revise the 1985 Plan. We held an initial set of public meetings in 1991 in the six communities where Forest offices are located.

The Revision effort included involvement, coordination, and comments from federal, state and local agencies and the Shoshone-Bannock Tribes. Some participants included the State of Idaho (Fish and Game, Parks and Recreation), State of Wyoming Game and Fish, the U.S. Fish and Wildlife Service, Yellowstone and Grand Teton National Parks. Representatives of county and city governments were involved along with the Henry's Fork Watershed Council, the Shoshone-Bannock Tribal Council and tribal members. The Forest Team kept the public informed of revision progress through a series of newsletters and news releases. Our mailing list includes more than 3,500 persons and organizations.

A series of public meetings and field trips was held between October 1991 and January 1994 (13 total) to determine the public's vision regarding what the Targhee National Forest should look like, and what uses they desired. This vision became the desired future conditions described above, and are the basis for the goals and objectives developed for the Revised Plan. The interaction also worked to improve communication, provide opportunity for mutual problem solving and increased understanding among the public, government agencies, tribal nations, and Forest personnel.

The public and Forest staff identified issues and concerns that evolved into the seven key issues, and over 70 additional sub-issues. Alternative management strategies for the Targhee National Forest were developed in response to the seven key issues. The environmental effects on the sub-issues were analyzed and are summarized in the EIS. The public reviewed the preliminary alternatives at work sessions beginning in May 1994. In June 1995, two meetings focused solely on the access issue, specifically which roads and trails were proposed open for motorized use in each of the six alternatives.

After publication of the draft EIS and draft Revised Forest Plan in February 1996, the Forest Team held another series of public meetings beginning in March and continuing through June. At these meetings, Forest personnel answered questions, displayed how the Preferred Alternative 3M responded to the seven key issues, compared the differences in Forest management from the 1985 Plan to the preferred alternative, and discussed the proposed changes in access, which was the most controversial issue. Forest personnel held numerous meetings with interest groups (such as conservation and preservation, motorized and nonmotorized recreation users, timber industry, and others).

Six of the nine counties of the sixth district of elected officials in southeast Idaho chose to put two alternatives on an "advisory referendum" on the May 1996 primary ballot. Citizens were asked to vote on four issues. Ballot results indicated that the people who voted wanted more motorized access and more focus on commodity uses, and less attention to wildlife needs that impact motorized access. Not all issues addressed in the EIS were on the ballot.

The public comment period on the draft documents stretched from February 27 to June 27, 1996. We received 2,168 individual responses in the form of letters, petitions, and postcards. The Forest Team responded to each substantive comment in the Final EIS, Appendix A. The Forest Team also made many changes as a result of these comments, including additional analysis and refinement of the Selected Alternative 3M.

Public involvement and discussions continue. The Targhee Forest staff listened to all points of view and incorporated many suggestions. I am confident it is evident that the staff has listened, and that public involvement in this process has strengthened the Revised Plan. Appendix A in the Final EIS summarizes the public comments and is larger than the Revised Plan because we responded directly to every substantive comment. The Revised Plan reflects the fact that we considered public comments, although we did not make every change suggested by the public. Often comments were mutually exclusive. For example, some people want a particular area to remain roadless and others want that area available for motorized recreation activities. In making this kind of trade-off decision, I have looked at the broader picture and reached a balance I believe is workable.

Planning Records

With all of the above collaboration with the public and other agencies and expertise from many Forest Service employees, an Interdisciplinary Team followed a revision process, completed the environmental analyses (summarized in the final EIS) and developed the Revised Plan from the Selected Alternative 3M. The Team has provided detailed explanations of the analysis and results of each revision process.

step in the process planning records. The final EIS includes references to the detailed planning records on file in the Forest Service office in St. Anthony, Idaho. These records can be reviewed at

Forest Supervisor's Office
Targhee National Forest
420 N. Bridge St.
St. Anthony, ID 83445

ALTERNATIVES CONSIDERED

A brief description of the of the alternatives considered in this analysis follows. Important points in the development of each alternative include

- The range of alternatives responds to the concerns and issues raised by the public, not on predetermined or unrealistic outputs
- All alternatives include the principles of multiple-use, sustained yield, and ecosystem management
- All alternatives share a set of basic goals and standards and guidelines which insure protection of Forest resources and compliance with applicable laws
- All alternatives, except the No Action, Alternative 1, achieve the purpose and need for a revised Forest Plan, based on the needs for change discussed previously
- All alternatives meet the management requirements of 36 CFR 219.17, and other legal and regulatory requirements

Objectives Shared by All Alternatives

All alternatives will meet the following objectives established in the Intermountain Regional Guide

- ~~Protect the basic soil, air and water resources.~~
- Provide for multiple uses and sustainability in an environmentally acceptable manner
- Provide for a quality of life through management of ecosystems
- Provide for scenic quality and a range of recreation opportunities that respond to our customers and local communities
- Emphasize cooperation with individuals, organizations, and other agencies in coordination of planning and project implementation
- Promote rural development opportunities
- In cooperation with other landowners, strive for improved landownership and access patterns, to the mutual benefit of both public and private landowners
- Improve the financial efficiency of all programs and projects

Alternative Descriptions

The Forest Team analyzed seven alternatives in detail. Alternative 1 is the No Action Alternative, or a continuation of management under the 1985 Plan. As the numbers increase from Alternatives 2-6, they generally move consistently toward the following

- Greater protection of wildlife habitat
- Greater protection of riparian areas
- More protection in Bear Management Units
- More security for elk
- More nonmotorized, dispersed recreation opportunities
- More recommended wilderness
- Less cross-country motorized use
- Fewer open motorized roads and trails
- Reduced livestock grazing and timber harvest
- Fewer lasting visual impacts from management activities

Alternative 1 (No Action)

The purpose of the No Action alternative is to show the current level of goods and services expected to be provided in the future if management of the Targhee National Forest were to continue under the 1985 Forest Plan. The 1985 plan has been updated with 24 non-significant amendments, requirements of court orders for grizzly bear habitat management, and changes needed to address habitat for new sensitive wildlife species in the last 10 years.

Timber harvest occurs at a high level within the management requirements for threatened and sensitive wildlife species like grizzly bears and goshawks. Vehicle access is slightly reduced over recent levels due to the requirements of the Interagency Grizzly Bear Committee Task Force Report, Grizzly Bear/Motorized Access Management, July 1994. Cross-country, motorized use in summer and winter would continue near recent levels. Grazing continues at current levels. Riparian, wildlife and recreation values are emphasized in specific areas of the Forest, consistent with the 1985 Plan. Alternative 1 recommends portions of the Lionhead, Italian Peaks and Winegar Hole roadless areas for wilderness designation. Legislative action is still needed to make these recommendations, the same as 1985, permanent.

Alternative 2

The purpose of this alternative is to resolve the key issues by emphasizing cross-country winter access and timber production, while adding more restrictions to summer cross-country access. Use of motorized vehicles to retrieve hunted game is allowed on 58 percent of the Forest. Timber harvest occurs at the highest levels within the management direction required to maintain threatened, endangered and sensitive species habitat. Grazing continues at current levels. Vehicle access is slightly reduced from recent levels to meet Interagency Grizzly Bear Committee (IGBC) Guidelines. Riparian, wildlife and heritage resource values are emphasized in specific areas of the Forest. Alternative 2 does not recommend any wilderness designation.

Alternative 3

This alternative responds to the key issues by emphasizing management of wildlife habitat and sustaining timber harvest levels within wildlife constraints. Grizzly bear recovery is enhanced with a reduction in motorized use allowed in each bear management unit (BMU). Grazing allotments continue at current levels and a larger percentage of riparian areas meet the desired vegetative condition. Cross-country summer motorized vehicle use is restricted to specific areas. Lionhead, Palisades and Italian Peaks, plus the Idaho portion adjacent to the Winegar Hole wilderness are recommended for wilderness designation.

Alternative 3M

This is the alternative which emphasizes wildlife habitat management and provides more core areas for grizzly bears. Motorized access, timber harvest levels and livestock grazing are all reduced. Cutthroat trout are further protected with increased vegetation requirements along streams. Cross-country, summer, motorized vehicle use is restricted to specific areas. Lionhead, Palisades, a portion of Diamond Peak and Italian Peaks, plus the Idaho portion adjacent to the Winegar Hole wilderness are recommended for wilderness designation.

Alternative 4

This alternative emphasizes watershed and wildlife habitat improvement and a reduction in timber harvest. Riparian areas have increased emphasis. Motorized access is restricted to designated routes and more roads are closed in BMUs than in previous alternatives. Lionhead, Palisades and Italian Peaks, plus the Idaho portion adjacent to the Winegar Hole wilderness and another 14,000 acres of presently roadless areas are recommended for wilderness designation.

Alternative 5

This alternative addresses the key issues by reducing resource management by people and reducing human disturbances of wildlife and riparian habitat. Motorized access is restricted to designated routes and more roads are closed in BMUs than in previous alternatives. Lionhead, Palisades and Italian Peaks, plus the Idaho portion adjacent to the Winegar Hole wilderness and another 100,000 acres of presently roadless areas are recommended for wilderness designation.

Alternative 6

This alternative meets the needs for change and addresses the key issues by de-emphasizing resource management by people and reducing human disturbance of wildlife and riparian habitat to the lowest level in all the alternatives. Timber harvest is not scheduled. All access is strongly restricted to designated routes and more roads and trails are closed to reduce human disturbances than in any previous alternative. Lionhead, Palisades and Italian Peaks, plus the Idaho portion adjacent to the Winegar Hole wilderness and another 340,000 acres of presently roadless areas are recommended for wilderness designation. Almost all the existing roadless areas retain their roadless characteristics.

Table ROD-1 Alternative Response to Key Indicators								
	Exist Level	Alt #1	Alt #2	Alt #3	Alt #3-M	Alt #4	Alt #5	Alt #6
Key Indicator - Sustainability								
- Thousands of acres where forest structure and composition maintained or improved	NA	48 5	58 6	52 9	45 2	39 8	29 8	20 7
Key Indicator - Riparian Health								
- Riparian acres (thousands) meeting Desired Vegetative Condition (DVC)	18 7	18 8	20 0	20 0	20 0	21 1	21 1	21 1
- moving toward DVC	5 3	4 9	5 2	5 2	5 2	4 9	4 9	4 9
-not meeting DVC	3 7	4 0	2 5	2 5	2 5	1 7	1 7	1 7
Key Indicator - Elk Security								
- Elk Vulnerability (EV) % of Forest meeting state thresholds	48	62	76	83	89	89	95	95
Key Indicator - Grizzly Bear Management within the Bear Management Units (BMU)								
- OROMTRD (open road and open motorized trail route density) (mi/sq mi) by subunit								
- Henry's BMU, Sub 1	0 83	0 64	0 62	0 63	0 55	0 44	0 52	0 55
- Henry's BMU, Sub 2	0 77	0 46	0 42	0 40	0 47	0 36	0 42	0 35
- Plateau BMU, Sub 1	0 91	1 08	1 37	0 85	0 58	0 63	0 60	0 74
- Plateau BMU, Sub 2	0 73	0 79	0 91	0 57	0 55	0 50	0 51	0 50
- Bechler/Teton BMU	0 76	0 59	0 63	0 51	0 50	0 43	0 42	0 42
Key Indicators - Access								
Miles of open roads	1,985	1,882	1,863	1,589	1,577	1,372	1,237	1,228
Miles of open trails	773	572	470	435	540	421	232	81
Key Indicator - Roadless Management								
Thousands of acres recommended wilderness	65	65	0	125	171	139	226	465
Key Indicators - Timber Harvest								
Allowable Sale Quantity in million board feet per year	60 Potential Yield	11	13	11	8	6	4	0

REASONS FOR THE DECISION

My decision is to approve the Revised Forest Plan for the Targhee National Forest which accompanies the Final Environmental Impact Statement (EIS). I have made this decision after fully reviewing and understanding the alternatives and environmental consequences. Alternative 3M provides for

- healthy riparian areas by specifying management standards to restore systems within aquatic influence zones,
- improved elk security by decreasing the densities of roads and trails open for use,
- quality grizzly bear habitat to meet recovery goals by designating core habitat areas and restricting some activities by their season of use,
- a balanced mix of motorized and nonmotorized access by designating roads and restricting some activities by their season of use,
- retaining the roadless character of most existing roadless areas by using a management prescription (Category 3) that protects the roadless character of these areas for recreation use and future options,
- recommend high-quality areas as additions to the wilderness system,
- a flow of goods and services to help maintain local economies and lifestyles

The Forest Supervisor determined the major public issues, management concerns, and resource use and development opportunities that are addressed in this revision process, as set forth in the planning regulations (36 CFR 219.12(b)). During the revision process, I made several trips to the Targhee Forest, including meetings and field trips with the public and Forest Team. The Forest Team also made several trips to the Regional Office to brief my office on developments and progress.

Alternative 3M is the result of the alternative development and public involvement stages of the Forest Plan Revision process. Important considerations to protect the environment that have influenced my decision include

- Protection of the basic resources (air, soil, and water), as mandated by our agency's mission, vision and guiding principles, are provided for with the management standards and guidelines and monitoring items
- The local and national people who use the Targhee National Forest, the communities they live in, and the relationship of the Forest Service with people and local communities
- Economics and the role the Targhee National Forest plays in local, regional and national economies
- Science, both social and biological as it applies to the management of National Forests, and because people are an integral part of ecosystems and this Revised Plan

- The role of the Targhee National Forest to provide multiple use opportunities in the Greater Yellowstone Ecosystem
- The role of fire in ecosystem dynamics
- The plans and policies of other government agencies (local, state, tribal and national), especially Snake River Activity Operations Plan
- The Forest Plan Revision considered and appropriately included existing scientific literature, including appropriate parts of the *Interior Columbia Basin Ecosystem Management Project* scientific assessment (see References Cited in the FEIS)
- The applicable laws and policies that govern the development of a Forest Plan and for management of National Forest lands Endangered Species Act, Clean Water Act

The environmental consequences and cumulative effects of these factors are disclosed in the Final EIS, Chapter IV by alternative. Details of the analysis completed can be found in the process papers

Components of the Decision and Comparison to the 1985 Plan

This decision is accompanied by the necessary supporting analysis and disclosure, summarized in the Final EIS, required by the National Environmental Policy Act (NEPA) and its implementing regulations (40 CFR 1500) Also incorporated are the requirements of the National Forest Management Act (NFMA) and its implementing regulations (36 CFR 219) The six components of the decision made in every forest plan are

- 1. The establishment of forestwide goals and objectives.**
- 2. The establishment of forestwide standards and guidelines**
- 3. The establishment of management area direction.**
- 4. The designation of suitable timber land and establishment of an allowable sale quantity**
- 5. The establishment of monitoring and evaluation requirements.**
- 6. Recommendations for Wilderness and Wild & Scenic Rivers.**

The descriptions that follow explain what these decisions mean for the Revised Targhee Forest Plan, and how they differ from the decisions made in the 1985 Plan

1. The establishment of forestwide goals and objectives.

Goals and objectives are described in Chapter III of the Revised Plan Goals are concise statements that describe a portion of the desired future condition (discussed previously) in broad terms that are timeless Objectives are more concise, usually time-specific statements of a condition, outcome or purpose necessary to accomplish during this next decade to move toward reaching a certain goal and achieving the desired future conditions on the Targhee National Forest Many of the goals are similar to the 1985 Plan, as the overall desired conditions for many resources have not changed New goals have been added where we have learned from our activities and are beginning to understand how ecosystems function

Some specific examples of these are described under goals for properly functioning condition of ecological processes and patterns (Revised Plan, p III-4)

2. The establishment of forestwide standards and guidelines.

There are changes in the standards and guidelines from the 1985 Plan, particularly the forestwide standards and guidelines. As we learned from implementation of the 1985 Plan, we have incorporated more resource protection standards and guidelines for management activities that will be implemented to achieve the objectives and goals, and move the forest conditions toward the desired future. Standards and guidelines are also in Chapter III of the Revised Plan. Some of these standards and guidelines apply forestwide and others apply to specific areas of the forest.

3. The establishment of management area direction.

Land allocations have been decided by assigning a management prescription to each area of the Targhee National Forest. These prescriptions contain the goals, objectives, standards and guidelines to be used when any management activities are to occur on a particular piece of ground. The prescriptions are permissive in that they allow certain activities to occur and prohibit or restrict other activities, but they do not require management actions to take place.

The Revised Plan includes 45 separate management prescriptions to address specific needs or desired uses on a particular piece of ground. These management prescriptions have been grouped into geographic units called subsections to provide a locational perspective to the overall management direction. These subsections are much larger than the management areas used in the 1985, as there were 22 management areas and now there are seven subsections. I think this broader geographic grouping will help us better understand processes and patterns and how our activities affect the ecosystems.

Again found in Chapter III of the Revised Plan, these management prescriptions guide future management activities within each specific area. The basic categories for prescriptions are consistent with categories used in the Interior Columbia River Basin Ecosystem Management Project. The same basic categories will be used in future Forest Plan Revisions in the Intermountain Region, and are briefly described here including the acres allocated to each management prescription category for Alternative 3M.

Table ROD-2 Description of Management Prescription Categories		
Management Category	Acres	Percent of total Forest area
1 - Wilderness, Wilderness Study Areas and Recommended Wilderness	337,846	19
2 - Special Management Areas, Maintenance of Visual Quality, Research Natural Areas, Eligible Wild, Scenic & Recreation Rivers, Grizzly Bear Habitat, Elk and Deer Winter Range, Aquatic Influence Zones, South Fork of the Snake River	437,335	24
3 - Semi-private Nonmotorized Recreation and Motorized Backcountry Rec	242,165	14
4 - Developed and Special Use Permit Recreation Sites, Dispersed Camping Management	8,103	0.40
5 - Lands Suitable for Timber Management with General, Urban Interface, Big Game Security, Visual Quality Improvement and Maintenance, Grizzly Bear Habitat, Elk and Deer Summer Range Emphases	601,559	33.60
6 - Non-forested Rangeland	157,385	9
7 - not used because this group of management prescriptions do not fit any management situations on the Forest	-	-
8 - Concentrated Development Areas	4,639	0

4. The designation of suitable timber land and establishment of the allowable sale quantity (ASQ). Designation of lands suitable for grazing and browsing. The identification of lands suitable and available for Oil and Gas Leasing.

There are 703,100 acres of tentatively suitable timber land on the Forest. In Alternative 3M, 465,000 acres are suitable for timber management and the allowable sale quantity is 80 Million Board Feet (MMBF) for the next decade. There are more acres in Category 5 prescription areas than what is considered suitable (601,559 compared to 465,000) because prescription areas are typically large, contiguous areas and inclusions of unsuitable land were not identified at the Forest scale. Land suitability will be evaluated on a site-specific basis. Fewer acres are identified as suitable for timber management than in the 1985 Plan because more recent inventories and subsequent improvement in mapping capabilities show about 290,000 more acres of non-forested land than the information used in the 1985 analysis. A further explanation of this can be found in the Final EIS (Chapter III) and in Process Paper C. After additional analysis between the Draft and Final EISs, some areas on the forest were added or deleted from the suitable timber land with no net change in the acres suitable for timber harvest.

The allowable sale quantity of 80 MMBF for the decade is an upper limit of harvest that can occur within the management direction in the Revised Targhee Plan. An estimated 32 MMBF of this will come from components of the Forest that have slopes greater than 40 percent, grizzly bear habitat areas (Prescription 5.3.5) or roadless areas. Any volume harvested from these areas is intended to be counted as a non-interchangeable component of the allowable sale quantity. This means that if the maximum 32 MMBF does not come from these components, it need not be replaced by timber volume from the

Table ROD-3 Acreage by Management Category, Ownership or Other Management Within Forest Boundary					
RX	NAME	TOTAL ACRES	RX	NAME	TOTAL ACRES
			3 2 (i)	Semi-Primitive Motorized	59,621
1 1 6	Wilderness, Opportunity Class I	102,34	3 2 (j)	Semi-Primitive Motorized	27,128
1 1 7	Wilderness, Opportunity Class II	19,565	4 1	Developed Recreation Sites	895
1 1 8	Wilderness, Opportunity Class III	12,572	4 2	Special Use Permit Recreation Sites	3,956
1 2	Wilderness Study, Snowmachine	49,236	4 3	Dispersed Camping Management	3,255
1 3	Wilderness, Recommended	154,13	5 1 (c)	Timber Management	82,459
2 1 1	Special Management Areas	13,627	5 1 3 (a)	Timber Management No Clearcut	34,354
2 1 2	Visual Quality Maintenance	10,000	5 1 3 (b)	Timber Management No Clearcut	13,924
2 2	Research Natural Areas	11,653	5 1 4 (a)	Timber Management Big Game	6,606
2 3	Eligible Wild River	21,709	5 1 4 (b)	Timber Management Big Game	126,437
2 4	Eligible Scenic River	15,132	5 1 4 (c)	Timber Management Big Game	23,354
2 5	Eligible Recreation River	8,833	5 1 4 (d)	Timber Management Big Game	2,898
2 6 1 (a)	Grizzly Bear Habitat	17,052	5 2 1	Visual Quality Improvement	7,017
2 6 2	Grizzly Bear Plateau Core	30,815	5 2 2	Visual Quality Maintenance	14,264
2 6 5	Grizzly Bear Bechler BMU	19,976	5 3 5	Grizzly Bear Habitat Out Core	216,480
2 7 (a)	Elk Deer Winter Range	82,257	5 4 (a)	Elk Deer Summer Range	13,300
2 7 (b)	Elk Deer Winter Range	37,585	5 4 (b)	Elk Deer Summer Range	14,289
2 8 3	Aquatic Influence Zone	163,97	5 4 (c)	Elk Deer Summer Range	46,176
2 9 1	South Fork Snake Scenic River	933	6 1 (b)	Range Management	157,386
2 9 2	South Fork Snake Recreation River	3,801	8 1	Concentrated Development Areas	4,641
3 1 1 (a)	Non-Motorized	46,070		Bureau of Land Managment	389
3 1 2	Non-Motorized	26,757		Bureau of Reclamation	20,837
3 2 (b)	Semi-Primitive Motorized	18,341		NFS (Non-Forest Service)	38,710
3 2 (c)	Semi-Primitive Motorized	9,309		Private	31,541
3 2 (d)	Semi-Primitive Motorized	5,118		State	25,702
3 2 (g)	Semi-Primitive Motorized	49,821		TOTAL ACRES	1,906,303

general suitable timber lands on the Forest. The specific breakdown of these non-interchangeable components is:

- slopes greater than 40 percent (maximum 0.7 MMBF for the decade),
- roadless areas within the Category 5 management prescription (maximum 11.3 MMBF for the decade),
- grizzly bear habitat within Category 5 management prescription (maximum 19.85 MMBF for the decade),

During implementation of the Revised Plan, all timber harvest will be analyzed on a site-specific basis.

Determination of land suitable for livestock grazing is another important consideration in this decision. Alternative 3M has 1,026,000 acres of suitable rangelands. These rangelands will continue to meet the needs of livestock permittees and grazing will continue to be a valued use of resources on the Targhee National Forest. The amount of suitable rangelands in Alternative 3M is slightly lower than in the 1985 Plan but will accommodate current livestock use.

With an emphasis on effective range management, monitoring and more clearly measurable standards and guidelines in the Revised Forest Plan, existing unsatisfactory rangeland conditions will improve. The quality of the rangelands in satisfactory condition will be maintained, as will the habitat for healthy herds of elk, deer and bighorn sheep. Integrated with this are the forestwide objectives to maintain and improve fish habitat, particularly cutthroat trout, protect and improve riparian areas and wetlands, and meet grizzly bear recovery goals.

The determination of areas available for oil and gas leasing and identification of protection clauses for leased areas will be disclosed in a separate analysis. The Draft EIS for this oil and gas leasing was issued for public comment October 1996, and a Final EIS is due to be released August, 1997. A decision on areas available for oil and gas leasing will be made when the Final EIS has been completed.

5. The establishment of requirements for monitoring and evaluation.

This decision component provides a basis for periodic determination and evaluation of the effects of management practices. While the 1985 Plan also included monitoring items, we have learned much about what is useful monitoring, and what we can afford. The monitoring described in Chapter V of the Revised Forest Plan will ensure this management strategy works over the long-term. Forest staff developed a Monitoring Plan that identifies the minimum legal requirements for monitoring and other requirements that are important. Many of these monitoring items resulted from concerns expressed by the public. I have prioritized items into three categories. First priorities are mandatory to accomplish. Second and Third priorities will be accomplished as funds and partnerships are available.

6. Recommendations for Wilderness and Wild, Scenic and Recreation Rivers.

This component of the decision considers any recommendations for additions to the National Wilderness Preservation System. The 1985 Plan recommended portions of three roadless areas (65,000 acres) be added to the three existing congressionally designated areas (2 wilderness, 1 wilderness study area) on the Targhee National Forest. My decision in the Revised Forest Plan retains these recommendations and adds an additional 106,000 acres of quality roadless area to be considered for addition to the Wilderness System by the US Congress. This helps balance the variety of goods, services and uses on the Targhee National Forest and leaves options available for future generations.

The other part of this decision component is determination of eligibility for inclusion in the Wild, Scenic and Recreation River System. A 1994 update to the inventory determined about 245.5 miles of rivers and streams were eligible to be included in the River System. This is only a minor change to the eligibility determinations identified in the DEIS. One creek was dropped from consideration after an analysis determined it did not have "outstandingly remarkable" qualities. A summary can be found in the Final EIS (Chapter IV) and details are covered in the Wild, Scenic and Recreational Rivers Eligibility Determination Process Paper R.

Comparison of Alternatives' Response to the Key Issues and Changes Made in response to Other Decision Factors

Resolution of key issues was achieved by the emphasis placed on each decision component described previously (establishment of goals, objectives, standards and guidelines, management area direction, suitable timber, rangeland, and allowable sale quantity, monitoring and evaluation requirements; and wilderness and wild & scenic river recommendations). The alternatives varied in their ability to resolve each issue. A comparison of the differences among the alternatives I considered, and changes made in response to the comments on the draft documents follows.

Key Issue 1: Sustainability, Fire and Natural Disturbances

A variety of management approaches to sustaining ecosystems are available for use. Of primary concern are the use of fire and timber harvest in relation to their effects on the health of the forest structure and composition. The key indicators for this issue are acres where forest structure and composition is maintained or improved and acres where prescribed fire is allowed.

The alternatives varied in how many acres would be silviculturally treated to improve structure and composition, and where prescribed burning would be allowed. Alternatives 1, 2 and 3 improved structure and composition on the most acres, near 60,000 for the decade for Alternative 2 and 50,000 for Alternatives 1 and 3. Alternative 3M improved sustainability on almost 45,000 acres. Alternatives 4 is around 40,000 and Alternative 5 around 30,000 acres, and Alternative 6 improved the fewest acres at 20,000.

The range of acres where prescribed burning would be allowed varied less among the alternatives. Alternatives 1 allows prescribed burning on about 1,630,000 acres for the first decade, while the rest of the alternatives allowed prescribed burning on just over 1,750,000 acres.

Public comments to the draft documents included some that disagreed with the Forest Team's approach for range of natural variability, sustainability, patch size, succession, old growth, use or non-use of natural disturbances (fire, insects), forest health, viability and biodiversity. Many disliked our ecosystem

management definition or requested more clarification and monitoring. The Forest Team was challenged on the use of ecosystem management as being simply an opportunity to harvest more timber. Some wanted more scientific studies prior to adoption of the Final Plan, especially related to Yellowstone National Park and the Interior Columbia Basin Ecosystem Management Project.

I have modified Alternative 3M since the draft documents and changed the emphasis on identifying the range of natural variation. Many people thought the objective was to duplicate historical vegetation patterns, although this was not the case. I added forestwide standards and guidelines to identify ecosystems that are functioning properly and those that are at risk. Management activities will prioritize the "at risk" ecosystem for treatment to bring these back into proper functioning condition. I intend to limit harvest to 20 million board feet (20 MMBF) for the decade on those lands that were not identified as suitable for timber management. Such harvest would only be done to foster proper functioning condition like removing conifers from sagebrush grass ecosystems.

Some additional sites in the Henry's Fork Basin which represent good examples of ecosystems functioning properly were added as Special Management Areas. These will serve as barometers for other systems within the basin.

Other changes included placing more emphasis on the use of prescribed fire and managed natural fire to achieve desired soil and habitat characteristics, improve forest health, and create or maintain diversity in vegetative structure, composition and patterns. Additional objectives were added to develop Fire Management Plans throughout the Forest.

Key Issue 2: Riparian

Although riparian areas constitute less than five percent of the total land base, they are the most productive areas in terms of plant and animal species diversity and consumptive use. A healthy riparian area indicates that most, if not all, of the water and soil components are also healthy.

The number of acres meeting the desired vegetation conditions for riparian areas was used as the key indicator for this issue.

Alternative 1 has just under 19,000 acres meeting the desired riparian conditions by the end of the decade. Alternatives 2, 3, and 3M have about 20,000 acres meeting the desired conditions. Alternatives 4, 5, and 6 would have the most acres meeting the desired vegetation conditions in riparian areas, just over 21,000 acres.

The primary concerns about riparian areas are the amount of vegetation which would be retained after grazing and other activities in riparian areas, primarily the height of the vegetation stubble remaining after grazing, concern over enforcement and monitoring of the standards, recreational use within the riparian areas, especially the allowance for camping and motorized use within 300 feet of the road, water quality limited streams, and interpretations of what management activities are allowed in these areas. Some people wanted more protection, monitoring and standards for fisheries, especially for native cutthroat trout, while others thought the management direction was too constraining on uses.

No changes were made to the height of vegetation stubble remaining after grazing activities because this standard is necessary to protect streambanks and to provide for a moderate rate of recovery of degraded riparian and aquatic systems together with a moderately high level of fisheries habitat quality. Additional objectives, standards and guidelines to address native cutthroat trout watershed were developed and added to the final Revised Plan. These include objectives to coordinate with the states of Idaho and Wyoming to

- 1) re-assess the health of native cutthroat trout populations within all seven subsections on the Forest,
- 2) use this information to further define species recovery needs and opportunities and to evaluate the effectiveness of the Native Trout Watersheds, and
- 3) determine which subwatersheds (drainages) within designated Native Trout Watersheds are non-essential to native trout recovery

Additional guidelines, modeled after the Inland Native Fish Strategy (INFISH) of June 1995 were added to meet the recovery objectives for native cutthroat trout. It is important to note that we intend to manage all native trout, fine spotted and Yellowstone, as sensitive, and site-specific impacts will be analyzed in a biological evaluation for each project affecting native trout habitat.

Key Issue 3: Security for Elk

Security for elk was chosen as a key issue relating to future hunting conditions and opportunities and cooperative relations with fish and game departments. Observations and studies by agency and university scientists determined that as motorized road and trail densities increase, elk security declines. Portions of the Forest have high densities of trails and roads open to motorized use due to the extensive road building associated with the salvage of dead lodgepole pine. The percent of the Targhee Forest meeting the Idaho state elk vulnerability thresholds (measured by miles of open roads and open motorized trails) was used as the key indicator.

Alternative 1 provides the least security for elk, with 62 percent of the Forest meeting the state vulnerability thresholds. Alternative 2 is at 76 percent and Alternative 3 at 83 percent. Alternatives 3M and 4 are approximately at 89 percent. Alternatives 5 and 6 provide the most security for elk, with 95 percent of the Forest meeting the state vulnerability thresholds.

Many of the letters on this issue cited a variety of studies supporting or not supporting our road density standards, and our findings on the impacts of people and motorized use on wildlife. Strong feelings were expressed supporting or not supporting the use of off-highway vehicles because of wildlife hunting and viewing opportunities.

Overall, the open motorized road and trail density standards did not change from the draft documents. These density standards make the Forest road and trail system cost effective by requiring low-use roads to be closed, resulting in fewer miles to maintain. Access needs by people are integrated with other resource values, including elk, grizzly bear and native cutthroat trout. Public comments were used to identify specific motorized roads and trails which could be opened and still meet standards. The miles of open motorized roads and trails increased between Draft and Final by approximately 20 miles. The decision on exactly which roads will remain open will be made by Supervisor Reese as one of his first implementation decisions for the Revised Plan.

Key Issue 4: Grizzly Bear Management

Portions of the Forest are within the Yellowstone Grizzly Bear Ecosystem which has been divided into Bear Management Units (BMUs) by the Interagency Grizzly Bear Committee (IGBC) that developed the Grizzly Bear Recovery Plan (Managing motorized access is one of the most influential parameters affecting grizzly bear habitat security). We now have better information on effective management of roads, timber and human activities in grizzly bear habitat. Miles of open roads and open motorized trails were used as the key indicator for grizzly bear management units.

Alternatives 1 and 2 provide the least grizzly bear habitat security with the greatest road densities in the bear management units (BMU), ranging from 42 miles per square mile in the Henry's BMU to 137 miles in the Plateau BMU. Alternatives 3 and 3M range between 40 miles per square mile in the Henry's BMU to 85 miles in the Plateau BMU. Alternatives 4, 5 and 6 have the most bear habitat security, ranging from 35 miles per square mile in the Henry's BMU to 74 miles in the Plateau BMU (Table ROD-1).

Management of grizzly bear habitat was one issue emphasized by local National Forest users. A meeting against any management for the grizzly bear was held in St. Anthony, ID, because some people thought the Forest Team had exceeded measures needed to protect the bear. Other groups supported our strategy for grizzly bear management or wanted more protection with even lower open motorized road and trail densities, and more core areas set aside.

The Endangered Species' Act requires certain elements for our grizzly bear strategy. We did note the public comments received, however, few changes were made except for the snowmobile change which is discussed later. The Final Revised Plan is consistent with the biological opinion of the US Fish and Wildlife Service. The objective to phase out sheep grazing in the BMUs as opportunities arise (such as when a sheep allotment permit expires) remains as it was in the draft documents, to reduce the chances of sheep and grizzly bear conflicts. The reduction sustained as a result of this phase out amounts to approximately 4,000 animal unit months (AUMs) on nine allotments, or about three percent of the permitted AUMs currently allowed on the Targhee National Forest. Some modifications were made to the standards and guidelines in the grizzly bear habitat prescription, in addition to the snowmobile changes listed under sub-issues, to clarify management practices and allow as much flexibility as is possible under the existing situations.

Key Issue 5: Access

Recreational motorized use has increased over the last decade. The 1985 Plan allowed cross-country motorized travel across much of the Forest and did not establish road density standards. Road closures provide more protection and fewer impacts on wildlife, threatened, endangered, and sensitive species, soils and water, and fisheries, less visual, garbage and noise pollution, reduced maintenance, and more nonmotorized opportunities for escape and solitude. Open roads and trails allow more access for hunting, fishing, berry-picking, developed camping, hiking and other recreational pursuits, increased opportunities for sight-seeing, challenging cross country travel for off-highway vehicles, and greater access for persons with disabilities and the elderly. The key indicators for access are the total miles of roads and open trails available for motorized use on the Forest.

Alternatives 1 and 2 provide the most open roads and trails, about 2,500 - 2,300 miles available for motorized use. Alternatives 3 and 3M provide slightly fewer open roads and trails, at 2,000 - 2,100 miles. Alternatives 4, 5 and 6 reduce the open roads and trails the most, with about 1,800 to 1,500 to 1,300 miles available for motorized use, respectively.

Motorized access is the most controversial of the seven key issues. Many people in the local area thought too many roads and trails were being proposed for closure, especially in grizzly bear and elk country, and too many restrictions on motorized use overall were considered in the draft documents. A few motorized recreation user groups wanted us to use studies that were being used on other Idaho forests which do not equate road use at the same level as trail use. After reviewing these comments, we completed this analysis and a comparison is shown in Chapter IV of the EIS. Other letters strongly suggested that we needed to decrease the miles of roads and trails that are open for use, and establish better enforcement because many of the existing closures are ineffective (based on the Road Scholar study). Our analysis methods were questioned, particularly the accuracy of the road inventory (inventory process is summarized in the Access Appendix C in the Final EIS).

Between the draft and final EISs we reviewed our inventory and found that the number of roads and trails that currently exist was less than what was displayed in the draft EIS, this figure has been corrected in the final EIS. The Forest Team made additional changes in response to public comments including restricting cross-country snowmobile access on all areas mapped as winter range on map #24 in the final EIS map packet, and making some minor changes in open road and trail density standards in the Palisades/Big Hole area. Overall there was an increase in the miles of roads and trails open for motorized use.

I am deciding to specify the maximum allowable road densities (miles of roads and trails open for motorized use per square mile) by the management prescriptions area described previously. Forest Supervisor Reese will decide which roads will be open to achieve these road density standards as one of his first implementation decisions. This discussion will be based on the analysis shown in Appendix C of the Final EIS and will be made shortly after the decision made here.

Key Issue 6: Management of Roadless Areas

As motorized recreation demands increased, public debate increased over whether or not the Forest should maintain the roadless character of the remaining roadless areas. Recommending more acres be congressionally designated as wilderness ensures protection from resource uses and national recognition of wilderness character. Allowing areas to remain roadless, but not as recommended wilderness, keeps more options available for the future. Fewer acres recommended for wilderness could allow more motorized access for recreation, oil and gas, timber and other industries.

Alternative 2 recommends the no roadless acres be added to the wilderness system and Alternative 6 recommends the most at 465,000 acres. Alternative 1 maintains the areas recommended in the 1985 Plan (65,000 acres).

Alternatives 3, 3M, 4 and 5 recommend increasing amounts, 125,000 to 171,000 to 139,000 to 226,000 acres, respectively.

This issue generated the most comments on the draft EIS and draft Revised Plan. Many comments either wanted more wilderness or less. Other letters addressed concerns for continued motorized use in roadless areas and areas recommended for wilderness, especially cross-country use. We were asked to prepare a supplemental draft EIS because some people thought our analysis was flawed. In the letters that supported more wilderness, people listed specific roadless areas they wanted to be recommended for wilderness. The draft documents were updated to reflect the most recent information and did not find a significant change in the results of the analysis, so no supplement was prepared.

Based on a review of roadless areas, the Alternative 3M recommends a moderate 171,000 acres be included in the wilderness system by legislative action, about 46,000 more acres than were analyzed in the draft EIS for Alternative 3M. The Diamond Peak roadless area has been added as recommended wilderness, based on its high wilderness capability rating.

There is a demand for backcountry recreation, both motorized and nonmotorized experiences and we have more management options available to satisfy that demand in a non-wilderness setting. The option is also preserved to include these areas in future wilderness recommendations with designation now of the semi-primitive management prescription. Alternative 3M allocates about 240,000 acres of roadless areas on the Targhee National Forest to a Semi-Primitive Motorized or Non-Motorized Management Prescription. These areas will remain roadless during the next decade.

Key Issue 7: Timber Harvest

Higher levels of timber harvest aid the local economy, better maintain the 25 percent payments to local governments, maximize the removal of the remaining dead or mature wood and assist in faster regeneration of the fire-dependent lodgepole pine. A reduction in timber harvest results in fewer impacts from motorized trail and road uses on wildlife, riparian areas, soils and water, aesthetics and other resources. In the past decade, large scale salvage of dead and dying lodgepole pine timber was conducted at levels that could not be sustained. Since the harvest of dead timber has largely been completed, we are now in a rest and recovery mode until higher levels of timber harvest can be sustained.

The alternatives ranged from 130 MMBF for the decade in Alternative 2 to 110 MMBF in Alternatives 1 and 3. Alternatives 3M, 4 and 5 go 80 MMBF to 40 MMBF respectively. Alternative 6 would have no harvest during the next decade.

	Exist Level	Alt #1	Alt #2	Alt #3	Alt #3-M	Alt #4	Alt #5	Alt #6
ASQ volume (MMBF/year)	60 Potential Yield	11	13	11	8	6	4	0

This issue drew major disagreement by those who commented on timber harvest. A local organized group called CUFF (Citizens For A User Friendly Forest), congressionals, legislators, county commissioners and many locals wanted more allowable sale quantity (ASQ), comments said the allowable sale quantity should be between 8 MMBF and 20 MMBF when specific numbers were used. Environmental groups wanted us to retain the ASQ of 3.7 MMBF as proposed in the DEIS, with more proposed wilderness and no below cost timber sales. A few people who commented wanted more firewood, especially for businesses.

Letters from some local elected officials in the Upper Snake River Valley, expressed concern over the future of the timber industry in the Upper Snake River Valley. They asked us to take another look at how various constraints on the suitable timber acres were applied in our analysis in the DEIS, and to select an alternative that assures a sustainable level of harvest but accomplishes harvest in an environmentally sound and aesthetically pleasing way.

Between the draft and final EIS, we found the model that estimates ASQ had been constrained more than necessary to model the effects of standards and guidelines, particularly the constraint on acres hydrologically disturbed in a watershed and the constraint to meet goshawk habitat needs. The limits on which acres could be available for harvest and meet the management direction for each alternative had been applied too narrowly. The model was changed, resulting in almost twice as many acres available for harvest in the next decade. This increase in acres also results in about twice as much timber volume estimated to be available. These changes are proportionately the same for all alternatives considered in the draft EIS. This re-analysis is summarized in Chapters II and IV of the final EIS. Details can be found in Process Paper B.

Although the acres available for timber harvest and corresponding volume estimates doubled from those disclosed in the draft EIS, the percent of the total forested acres that are proposed for treatment changed from about 1.0 to 1.5 percent, while the percent of tentatively suitable acres changed from 1.5 percent proposed in the draft EIS to approximately 3.0 in the final EIS. It was because of the comments received on the draft EIS that the change was made. Because the change is in how the management direction was modelled, and not a substantial change in the proposed action, I determined this was not significant new information that would require preparation of a supplemental draft EIS. The changes are proportionately the same for all alternatives considered, so the comparison of the effects is still proportionally the same as displayed in the draft EIS. In addition, the small percentage change in the forested acres treated did not significantly change the environmental effects displayed in the draft EIS.

The salvage operations of the 1980s, combined with the Endangered Species Act, the Grizzly Bear Recovery Plan and Guidelines, ecosystem management principles, the reduced availability of dead lodgepole, increased knowledge about the impacts of motorized use of roads and trails upon the Forest's resources, and other factors described in the final EIS, result in a reduced availability of timber for harvest for the next decade, when compared to the 860 MMBF allowed in the 1985 Plan for the past decade. This is why the allowable sale quantity has been calculated at 80 MMBF for the next 10 years in the selected Alternative 3M. The amount of firewood estimated to be available in the next decade is 38 MMBF.

Other Decision Factors

The following issues are important, but the key indicators did not vary much among the alternatives considered. An overview of the response to the comments received is given here. I encourage readers to review Appendix A of the final EIS where detailed responses to all substantive issues posed by those who commented on the draft documents can be found.

Old Growth

As described in the Final EIS, there are several reasons why responsible management should include retaining old growth forest areas. Of concern is how much old growth occurs on the Forest, how much land to retain in an old growth stage, and what constitutes old growth.

To respond to public comments, an analysis of 412 permanent forest inventory plots was completed to assess what percentage of the forested acres meet the old growth characteristics as described in the Intermountain Region Old Growth publication (see Process Paper D). Several guidelines were added to the final Revised Plan that apply to the management and retention of old growth and late seral forested areas. These include management direction for the retention of coarse woody debris and the inventory

and assessment of old growth and late seral forest stages during project planning. Identification of replacement forested acres to provide future old growth areas is planned in case a catastrophic event reduces the level of old growth below the minimum amount desired in a watershed.

Winter Range

Winter range for deer and elk is an integral part of the Targhee National Forest. Several people who commented stated that cross country snowmobiling should be restricted in winter range. Some letters requested crucial winter range for moose be designated.

The Forest staff met with representatives from both Idaho and Wyoming State Fish and Game Departments and agreed on the boundaries of crucial winter range on the Forest. Motorized cross country snowmobile restrictions were applied to these areas. I have included these refinements in Alternative 3M. They are displayed on map #24 of the final EIS map package.

Goshawks

Goshawks are a sensitive species that use much of the Forest for nesting and foraging. We received letters stating the guidelines in the Draft Plan were too restrictive and not restrictive enough, and that we should use or not use the southwest guidelines developed to provide for goshawk habitat.

Following re-analysis of the guidelines, additional literature review and examination of forest inventory data, I have decided to keep the guidelines in the final Revised Plan essentially the same as in the draft. I did make some minor changes in snag numbers and management opportunities within goshawk territories. These are patterned after the Southwest guidelines and meet goshawk habitat needs in all alternatives.

Bighorn Sheep

Maintaining historical habitat for bighorn sheep and preventing potential conflicts between domestic sheep and bighorn sheep was of considerable concern to some local biologists. Concerns included disease transfer potential, recreational use levels and lack of prescribed fire as a management tool to maintain historic ranges.

A task group composed of Forest personnel reviewed current literature, mapped bighorn sheep locations in relation to domestic sheep allotments and conducted telephone conversations with veterinarians with experience in this subject. Current restrictions within allotment management plans in bighorn sheep habitat areas reduce risk of disease transmission to low levels. However, some risk of disease transmission exists wherever bighorn sheep can come in nose to nose contact with domestic sheep.

Therefore, based on this additional review, I have decided to phase out domestic sheep grazing on an opportunity basis. This means that as sheep grazing permits expire, they will not be renewed in areas of the forest that currently support populations of bighorn sheep. This reduction amounts to approximately 2,600 AUMs on five allotments and one permit. There are two allotments within both grizzly bear and bighorn sheep habitat that will also be phased out on an opportunity basis and this reduction is about 1,800 AUMs.

Motorized Game Retrieval

Many comments on this issue opposed motorized game retrieval for similar reasons as some Forest employees. They are difficult to enforce, favoritism is perceived for hunters with off-highway vehicles, and obtaining the required permit is impractical in most situations. I have decided not to include this concept in the final Revised Plan.

Snowmobiling and Heliskiing

Many comments (over 500 letters were received before the official comment period began) opposed restricting snowmachines to designated trails in the grizzly bear units before Dec 15 and after April 1. Some groups wanted unrestricted cross-country snowmobile use, except in winter range, while others wanted no snowmachines, heliskiing, or any motorized use in roadless areas proposed as wilderness. Heliskiing companies and patrons want to be allowed to use roadless areas that are proposed for wilderness, especially in the Palisades area.

To address the issue a Forest task group reviewed data between draft and final documents to determine the average grizzly denning time for the area, location of dens (including an analysis done with information available on the geographic information system (GIS) to identify areas of high denning potential), and the number of conflicts that have been recorded between grizzly bears and snowmachines.

Based on this analysis, I have deleted the seasonal cross-country snowmobile restriction from all grizzly bear management prescriptions and replaced it with a standard to develop site-specific restrictions to resolve potential conflicts with grizzly bears during their denning time. I did this because we are not aware of any recent conflicts, and most of the area in question is not particularly desirable grizzly bear denning habitat. Desirable denning habitat is usually on steep slopes in timbered areas, typically not the area where most cross-country snowmobile use occurs. Problems identified can be addressed with site-specific analysis and restrictions as necessary. The US Fish and Wildlife Service concurred with this analysis in their Biological Opinion.

Centennial Mountain Range

Several comments opposed vegetation management in this area, particularly timber removal of Douglas-fir to regenerate decadent aspen. A large number of comments recommended this area be preserved as a wildlife corridor (primarily for grizzly bears and wolves) between Yellowstone National Park and other Montana, Wyoming and Idaho roadless areas. The Greater Yellowstone Coalition and many of their members submitted a new management prescription for the Centennial range to address this concern.

Habitat connectivity is important. After comparing the Grizzly Bear Recovery Plan with Alternative 3M, I conclude the activities that could occur in the Centennials will maintain this area as a potential linkage zone. The Recovery Plan also says that management prescriptions to maintain linkage potential should be similar to big game summer range prescriptions that address access management. The management prescriptions applied to this area in Alternative 3M address habitat connectivity by providing appropriate road density standards and maintaining ecosystem compositions to provide wildlife security cover. Except for some minor boundary refinements because of the updated roadless inventory, I have decided to keep the management prescriptions for the Centennial Mountain Range the same as those disclosed in the draft EIS.

Native American Treaty Rights

Government to government consultation was conducted with the Shoshone-Bannock Tribe on both the draft and final Revised Plan. We received formal substantive comments from the Shoshone-Bannock Tribe on the draft documents. Most of the comments were critical of the consideration given to Native American treaty rights. Forest personnel and Tribal members have different interpretations. The Tribes interpret their legal right to hunt, to include fishing and gathering and harvest of wood products owned by the Federal government. Following a review of the Fort Bridger Treaty and the relevant case law, it has been determined that the treaty rights do not encompass the gathering of wood products. No changes were made from the draft documents to address the gathering of wood products, and the Revised Plan does not infringe on Native American Treaty Rights.

Other comments received from the Shoshone-Bannock Tribe concerned access, cultural resource sites on grazing allotments and planning. A forestwide standard has been added to the final Revised Plan to address Tribal coordination. Procedures were also added to assure protection of cultural resources on grazing allotments.

Interior Columbia Basin Ecosystem Management Project

Some public comments questioned the relationship of the Revision with the Interior Columbia Basin Ecosystem Management Project science and EIS efforts. The Revision included appropriate parts of the scientific assessment. The Upper Columbia River Basin EIS decisions will not cover the Targhee National Forest.

FINDINGS REQUIRED BY OTHER LAWS

I have considered the multitude of statutes governing management of the Targhee National Forest and believe Alternative 3M is the best possible approach to harmonizing the current statutory duties of the Forest Service. Specific findings follow.

The Targhee Revised Plan is in compliance with the Clean Water Act because of the conclusions presented in Chapter IV, water quality section of the FEIS.

The Targhee Revised Plan is in compliance with the National Historic Preservation Act because of the conclusions presented in Chapter IV, Heritage Resource section of the FEIS.

The Targhee Revised Plan is in compliance with the Endangered Species Act and the US Fish and Wildlife Service Biological Opinion because of the conclusions presented in Chapter IV, Wildlife section of the FEIS. The US Fish and Wildlife Service (Service) has determined that the Revised Forest Plan may affect but is not likely to adversely affect the threatened bald eagle, Ute ladies'-tresses and the endangered peregrine falcon. The Service concurs that the Revised Forest Plan will not jeopardize the continued existence of the experimental, non-essential population of gray wolf. The Service has also determined that the implementation of the Revised Forest Plan is not likely to jeopardize the continued existence of the Greater Yellowstone Ecosystem grizzly bear population. No critical habitat has been designated for the grizzly bear, therefore, none will be affected.

~~The Targhee Revised Plan is in compliance with the Clean Air Standards because of the conclusions presented in Chapter IV, Air Resources section of the FEIS.~~

The Environmentally Preferred Alternative

Although Alternative 6 would allow the fewest ground disturbing activities, I am identifying the selected Alternative 3M as environmentally preferable based on the following interpretation of the law and agency policy.

Regulations implementing the National Environmental Policy Act (NEPA) require agencies to specify the alternative or alternatives which were considered to be environmentally preferable (40 CFR 1505.2(b)). Forest Service policy further defines environmentally preferable as an alternative that best meets the goals of section 101 of NEPA. Ordinarily this is the alternative that causes the least damage to the biological and physical environment and best protects, preserves, and enhances historical, cultural, and natural resources. In some cases there may be more than one environmentally preferable alternative (FSH 1909.15-05).

Section 101 of NEPA declares national environmental policy, calling on federal, state and local governments and the public to create and maintain conditions under which humans and nature can exist in productive harmony. This broad policy is further defined in six goals.

(1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations,

(2) assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings,

(3) attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences,

(4) preserve important historic, cultural, and natural aspects of our national heritage and maintain wherever possible an environment which supports diversity and variety of individual choice,

(5) achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities, and

(6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources

The goals of Section 101 are similar to the principles of ecosystem management and of this Revised Plan, calling for sustainable and balanced use, and provision for future generations. Section 101 does not call for the exclusion of Americans from use of their natural resources, but does demand that such uses avoid degradation of the environment. Alternative 3M best meets the goals of Section 101 of NEPA. By this standard, the selected Alternative 3M is the environmentally preferable alternative for the Revised Targhee Forest Plan.

IMPLEMENTATION

The Forest Supervisor will accomplish many management activities to implement the Revised Forest Plan. Unlike the programmatic decisions listed above, these activities are site-specific and require analysis and disclosure of the activity's effects under the National Environmental Policy Act (NEPA). These site-specific analyses will be done during implementation of the Revised Forest Plan.

Forest plans are permissive in that they allow, but do not mandate, certain activities to occur. Site-specific analysis of proposed activities will determine what can be accomplished. The outputs specified in the Revised Plan are estimates and projections based on available information, inventory data and assumptions.

All activities, many of which are interdependent, may be affected by annual budgets. The Revised Plan is implemented through various site-specific projects such as wildlife habitat improvements, campground development, road building and timber sales. Budget allocations for any given year may require re-scheduling projects. However, the desired future conditions, goals, objectives, standards and guidelines and management prescriptions described in the Revised Plan may not change unless the Plan is amended. If, over time, funds received are significantly different from those necessary to implement the Revised Plan, the Plan may need to be amended. This would likely reflect different outputs and environmental conditions from those disclosed in this revision analysis.

Implementation of this decision will occur 30 days following publication of the notice of this decision in the Federal Register. Resource plans, permits, contracts, and other instruments, when necessary, shall be revised as soon as practicable to incorporate the revised management direction.

As one of the first steps to implement this Revised Plan, the Targhee National Forest Supervisor will issue a separate Record of Decision for Travel Management that designates which roads and trails are open for motorized use. I am deciding now which standards, by management prescription area, apply to meet the desired open road and trail densities.

The proposed open motorized roads and trails are displayed on summer and winter access maps for Alternative 3M. A separate Travel Plan map will be available when Supervisor Reese makes his implementation decision.

APPEAL

This decision is subject to appeal pursuant to the provisions of 36 CFR 217. A written notice of appeal must be filed within 90 days following the date of publication of this decision in the Federal Register. The appeal must be filed with the reviewing officer.

Chief, USDA - Forest Service
14th and Independence, SW
201 14th Street
Washington, DC 20250

A copy of the appeal must simultaneously be sent to the deciding officer.

Regional Forester, Intermountain Region
USDA - Forest Service
324 25th Street
Ogden, UT 84401

Notice of appeal must include sufficient narrative evidence and argument to show why this decision should be changed or reversed (36 CFR 217.9). Requests to stay approval of the Revised Forest Plan will not be granted (36 CFR 217.10(a)).

Decisions on site-specific projects are not made in this Revised Forest Plan. Final decisions on proposed projects will be made after site-specific analysis and documentation in compliance with NEPA, and are subject to appeal at that time. Recommended wilderness designations contained in the Revised Forest Plan are nonbinding recommendations and not a decision within the context of appeal regulation and are not subject to appeal (36 CFR 217.4(4)).

More information on the final EIS and Revised Forest Plan may be obtained by contacting the Targhee National Forest Supervisor in St. Anthony, ID. Reviewers are encouraged to check with the Forest Supervisor on the Revised Forest Plan decisions before submitting appeals to determine if concerns or misunderstandings can be clarified or resolved.

Forest Supervisor, Targhee National Forest
USDA - Forest Service
420 N. Bridge Street
St. Anthony, ID 83445

CONCLUSION

I am pleased to announce this decision and bring the Forest Plan Revision to its beginning. This Revised Forest Plan is a framework for the present and a positive direction for the future. Now is the challenge before us all to work together, the public, Forest Service, ranchers, conservationists, preservationists, snowmobilers, campers, hunters, timber industry, and all of the others who have an interest in Forest management. Together, we must overcome the challenges, realize the opportunities, and achieve the goals and objectives of this Forest Plan.

We are committed to the philosophy of adaptive management as we work together to implement this Plan. We will monitor our activities, the condition of the land as projects are completed, the products produced, and the effectiveness of the resource protection measures included in the Revised Plan. Most importantly, this Plan is our commitment to the future to ensure healthy, resilient ecosystems for the next generation.



DALE N. BOSWORTH
Regional Forester

April 15, 1997
Date

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United States
Department of
Agriculture

Forest Service

Intermountain
Region

Targhee
National
Forest



Draft Environmental Impact Statement

Open Road and Open Motorized Trail Analysis

(Motorized Road and Trail Travel Plan)

Targhee National Forest - November 1998





United States
Department of
Agriculture

Forest
Service

Targhee NF

420 North Bridge Street
P. O. Box 208
St. Anthony, ID 83445

File Code: 1920

Date: November 16, 1998

Dear Participant.

Enclosed is a copy of the Draft Environmental Impact Statement (DEIS) for the Targhee National Forest Open Road and Open Motorized Trail Analysis. The primary purpose of the DEIS is to outline the proposed management of summer motorized travel on the Forest and consider alternatives to that proposal. The decision and management direction from the Final EIS for this process will be used to implement a new Travel Plan on the Forest in the summer of 1999.

I appreciate the comments many of you have provided which have been considered and used as we developed this analysis and documentation. The analysis in this DEIS is based on much of the analysis in the 1997 Revised Forest Plan FEIS, and references are provided to that FEIS. Copies of the Revised Forest Plan FEIS are available upon request.

Your review and comments on this DEIS are important to the analysis process. In your review, I encourage you to pay particular attention to concerns you may have raised earlier, to see if the analysis is responsive. Comments on the DEIS should be as specific as possible and must be received no later than February 1, 1999.

It would be helpful to know the reasons for your comments to help us make better, informed decisions. Positive comments about portions that are acceptable to you would also be appreciated. After the comment period ends, the comments will be analyzed and the Final EIS and Record of Decision will be prepared and issued.

You can also find the document on the Internet at <http://www.fs.fed.us/tnf/> and comments can be sent by e-mail to pcomment/r4_targhee@fs.fed.us

If you have questions or comments, please contact me or Alan Silker, Recreation Staff, at P O Box 208, St Anthony, ID 83445 or call (208) 624-3151

Sincerely,

JERRY B. REESE
Forest Supervisor



DRAFT ENVIRONMENTAL IMPACT STATEMENT
for the
TARGHEE NATIONAL FOREST
OPEN ROAD AND OPEN MOTORIZED TRAIL ANALYSIS
(Motorized Road And Trail Travel Plan)

Bonneville, Butte, Clark, Fremont, Jefferson,
Lemhi, Madison, and Teton Counties, Idaho
and
Lincoln and Teton Counties, Wyoming

Lead Agency	Targhee National Forest USDA Forest Service P O Box208 St Anthony, ID 83445 (208) 624-3151
Responsible Official.	Jerry Reese, Forest Supervisor Targhee National Forest USDA Forest Service P O Box208 St Anthony, ID 83445 (208) 624-3151
For Further Information Contact	Alan Silker Recreation Staff Targhee National Forest P O Box208 St Anthony, ID 83445

ABSTRACT This Draft Environmental Impact Statement (DEIS) documents the analysis of four alternatives, which were developed for possible management of summer motorized road and trail travel on the 18 million acres administered by the Targhee National Forest. Alternatives analyzed in detail are identified as 1M, 3M(+), 3M, and 3M(-). Alternative 3M(+) is identified as the preferred alternative.

The alternative ultimately chosen may change based on input from the public, other agencies, and this agency's own internal deliberation process. That alternative, selected by the Forest Supervisor, will be published in a Final EIS, and will become the basis for the Forest Travel Plan to be issued in the summer of 1999.

Date of transmission of this DEIS to the Environmental Protection Agency (EPA) and the public is November 20, 1998. Send comments regarding this DEIS to the Forest Supervisor, Targhee National Forest, at the above address by February 1, 1999. The comment period for this DEIS will be 60 days from the date the EPA publishes the Notice of Availability in the Federal Register.

Reviewers should provide the Forest Service with their comments during the review period of the draft environmental impact statement. This will enable the Forest Service to analyze and respond to the comments at one time and to use information acquired in the preparation of the final environmental impact statement, thus avoiding undue delay in the decisionmaking process. Reviewers have an obligation to structure their participation in the National Environmental Policy Act process so that it is meaningful and alerts the agency to the reviewers' position and contentions. Vermont Yankee Nuclear Power Corp v NRDC, 435 U.S. 519, 553 (1978). Environmental objections that could have been raised at the draft stage may be waived if not raised until after completion of the final environmental impact statement. City of Angoon v Hodel (9th Circuit, 1986) and Wisconsin Heritages, Inc v Harris, 490 F. Supp. 1334, 1338 (E.D. Wis. 1980). Comments on the draft environmental impact statement

should be specific and should address the adequacy of the statement and the merits of the alternatives discussed (40 CFR 1503.3)

To assist the Forest Service in identifying and considering issues and concerns on the proposed action, comments on the DEIS should be as specific as possible. It is also helpful if comments refer to specific pages or chapters of the DEIS. Comments may also address the adequacy of the DEIS or the merits of the alternatives formulated and discussed in the DEIS. Reviewers may wish to refer to the Council on Environmental Quality Regulations for implementing and procedural provisions of the National Environmental Policy Act at 40 CFR 1503.3 in addressing these points.

Please note that comments on the DEIS will be regarded as public information.

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Summary



SUMMARY OF THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE TARGHEE FOREST - OPEN ROAD AND MOTORIZED TRAIL ANALYSIS (Motorized Road and Trail Travel Plan)

NOTE to READERS Please refer to the 1997 Revised Forest Plan for a "Glossary" of terms used in this document

INTRODUCTION

The purpose of this document is to consider alternatives for and disclose the environmental effects of a Forest Travel Plan that will implement the 1997 Revised Forest Plan direction for the Targhee National Forest. The purpose of this Travel Plan is to offer a balanced network of summer motorized roads and trails that meet the Forest's transportation needs and the open motorized road and trail route density standards in the Revised Forest Plan. The need for this analysis and decision was directed by the Regional Forester in his 4/15/97 Record of Decision for the Revised Forest Plan (ROD - pages 22 and 30). This is one of the first steps needed to meet the objectives in the Revised Forest Plan and move the Targhee National Forest toward the desired future conditions of that Plan. In accordance with the Regional Forester's direction, no decision contained in the Revised Forest Plan will be changed, reversed, or superceded by the decision that will result from this analysis. Therefore, it should be understood that winter travel and summer, cross-country travel as decided in the Revised Forest Plan will also be displayed in the final Travel Plan along with the open roads and trails determined from this analysis.

The Forest Supervisor will decide which combination of roads and trails will be open for summer motorized use to remain within the density standards specified by management prescriptions in the Revised Forest Plan. This Draft Environmental Impact statement (DEIS) will summarize and review the previous (1997) open motorized road and trail decision and consider alternative actions that would remain within the direction of the Revised Forest Plan and respond to the issues raised. The analysis in this DEIS is based on much of the analysis in the 1997 Revised Forest Plan (RFP) Final Environmental Impact Statement (FEIS), and references that document. Throughout this DEIS, references to the RFP-FEIS will be indicated by (RFP-FEIS, page x,y,z). Copies of the RFP-FEIS are available from the Targhee National Forest Supervisor's Office.

LOCATION AND SETTING

The Targhee National Forest (hereinafter usually referred to as "the Forest") is an administrative unit of the US Department of Agriculture, Forest Service. The Forest lies almost entirely within the "Greater Yellowstone Area" (GYA). The Forest encompasses approximately 1.8 million acres. Established by President Theodore Roosevelt in 1908, the Forest is named in honor of a Bannock Indian warrior. The Shoshone-Bannock Tribe has ancestral Treaty Rights to uses of the Forest. The Forest Supervisor's Office is located in St. Anthony, Idaho, with District offices located in Dubois, Island Park, Ashton, Idaho Falls, and Driggs, Idaho. The Forest is bordered by six other National Forests (NF). This DEIS addresses travel on the Targhee National Forest and the portions of the Bridger-Teton and Caribou National Forests administered by the Targhee Forest.

The majority of the Forest lies in eastern Idaho, and the remainder in western Wyoming (Figure S-1). Situated next to Yellowstone National Park (the Park) and Grand Teton National Park (GTNP), the Forest is home to a diverse number of wildlife and fish (including Threatened and Endangered species), and contains two designated wildernesses, scenic panoramas and intensively managed forest lands (RFP-FEIS, p. I-1-2).

**Vicinity Map of Targhee National Forest
on a National Scale**

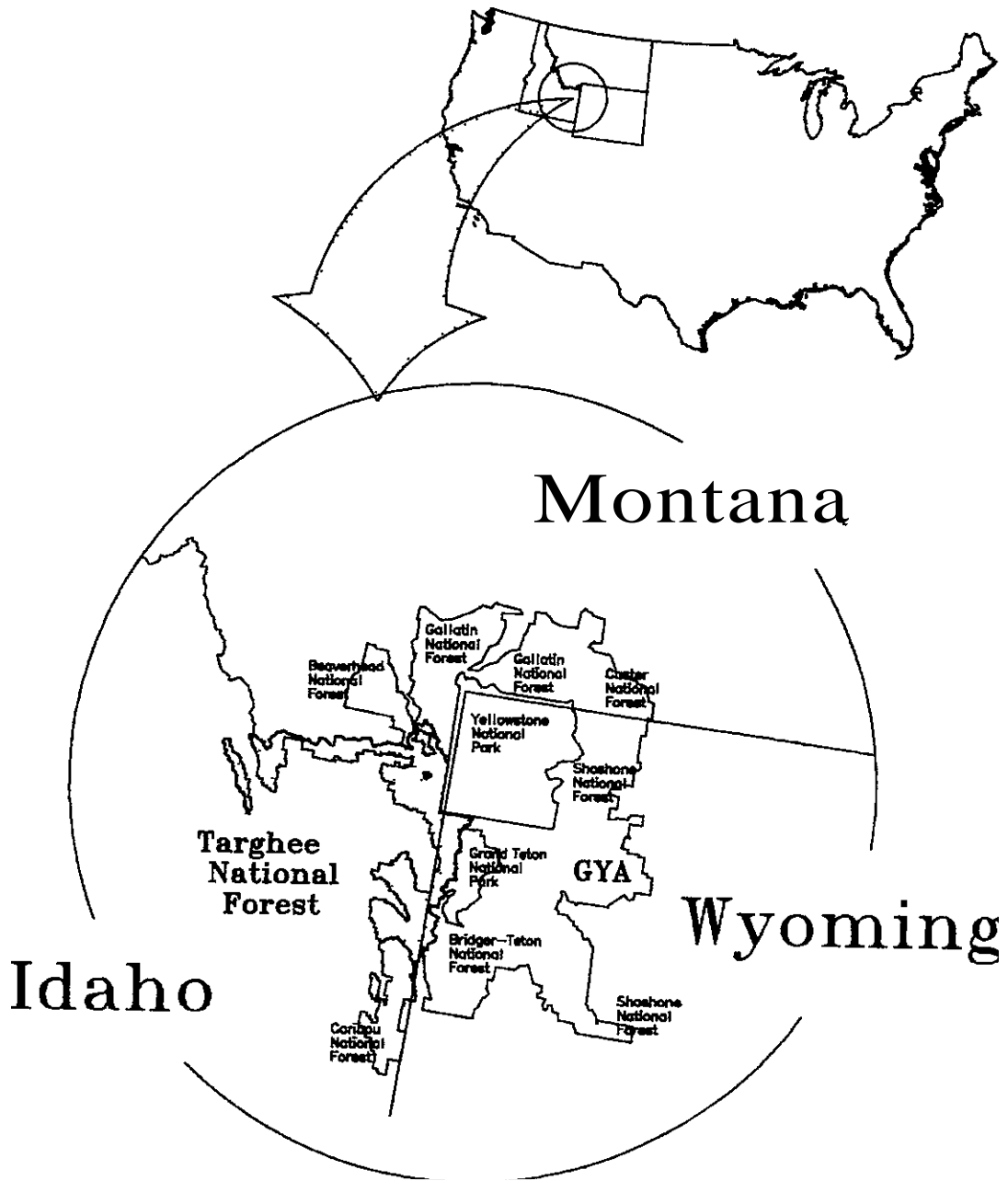


Figure I-1

ISSUES

The key issues identified through scoping are summarized as follows

- Adverse effects of specific roads and trails open for summer motorized travel on wildlife and fisheries (cutthroat trout) and their habitat, on roadless areas and recommended wilderness, and on water quality These specific roads and trails were identified on an overlay of the 1997 Travel Plan map for reference in the analysis These maps are on file in the Forest Supervisor's Office in the analysis records
 - Adverse effects of specific closed roads and trails on recreational and other access opportunities These specific roads and trails were identified on the same map overlays as described above for use in this analysis
- Revised Statute 2477 (RS 2477) road access This issue involves potential access rights the Counties may have on roads and trails that may have existed prior to the establishment of the Forest The assertions by the Counties that were available were mapped (see map #1 in map packet) for consideration in this analysis

The following public comments were also received and considered They were addressed in the Revised Forest Plan analysis, or are considered procedural comments and therefore will not be directly addressed in this analysis

- A broad, programmatic document was used to make site-specific decisions on road closures
- No new roads should be built, and existing roads should be decommissioned and rehabilitated
- Existing trails should not be reconstructed for OHV (<50") use
 - Accessibility needs to be addressed better for the less-abled
- Range of alternatives considered in the Revised Forest Plan FEIS and Travel Plan RODs was not adequate, and road density factors used were too constraining, or not constraining enough
- Appendix C Update and Draft Travel Plan need to be available for public review and comment

ALTERNATIVES CONSIDERED

Based on available data, public issues and the Final EIS for the Revised Forest Plan, four alternatives were considered and analyzed in detail Alternative 3M presented below is the same alternative as considered in the Revised Forest Plan FEIS (pages 11-34 and II-7-8) and in the ROD for the 1997 Open Road and Open Motorized Trail Travel Plan (ROD - page 4) Three new alternatives (3M+, 3M-, and 1M) have been created based on issues described previously, which resulted from consideration of public issues and appeals These issues were mapped as stated in Chapter 1-Issues, and these overlay maps are on file in the Forest Supervisor's Office These working maps are available for review Alternatives 3M(+) and 3M(-) are in response to specific public issues and appeals and, represent minor additions (+) or deletions (-) to the 3M alternative Alternative 1M is the existing situation as modified by the Regional Forester's remand. These alternatives only address summer access for roads and trails, since winter travel and summer cross-country access were already decided in the Revised Forest Plan

The four alternatives considered are briefly described as follows

- Alternative 1(M) - "No Action" - This alternative is based on the existing situation This alternative would leave the open, motorized roads and trails of the 1994/96 Travel Plans (old brown maps) in place for all of the Forest outside the bear management units (BMUs) Inside the BMUs, (see Figure III-6 in RFP-FEIS, page 11155) travel would be according to the Revised Forest Plan (Alternative 3M) Forest-wide, summer, cross-country travel would also be according to the Revised Forest Plan (Alternative 3M) This alternative is displayed on the summer transportation map (map #2) Approximately 2,077 miles of open, motorized road, 51 miles of seasonally restricted road, 467 miles of decommissioned roads, and 725 miles of open, motorized trail are included in this alternative (Table S-1) Appendix C(M) to this DEIS describes which roads and trails remain

open to motorized use and the reasons why routes were selected as open or closed. This alternative would not be consistent with the Revised Forest Plan and would require a plan amendment to the open road and open motorized trail density standards to be implemented. Its purpose here is to provide a baseline to compare site-specific effects with the other alternatives being considered.

- **Alternative 3M** - This alternative is the 1997 Travel Plan (summer - roads, trails and cross-country travel) as displayed by the summer Transportation Plan (map #3 - see map packet) for Alternative 3M in the Revised Forest Plan FEIS. This alternative has 1,617 miles of open, motorized road, 62 miles of seasonally restricted road, 939 miles of decommissioned roads, and 511 miles of open, motorized trail. Appendix C (1998 Update) and C(M) to this DEIS describes which roads and trails remain open to motorized use and the reasons why roads were selected as open or closed for each alternative. The 1997 Appendix C Update and the roads and trails GIS data layer were corrected (Appendix C-1998 Update) to delete duplicate segments, and to make other minor edits. These corrections resulted in approximately 40 miles of additional road inventory. It was discovered during this analysis, that road density for this alternative was below densities allowed for some prescription areas and lower than calculated in the RFP-FEIS. This is mostly due to GIS query data errors. It is also partially due to topography limitations and the design of prescription densities being just an initial goal to guide planning. During mapping of the alternative there was also a conscious effort to leave room for management flexibility, e.g. - by not pushing elk vulnerability to the limit.
- **Alternative 3M(+)** - **PREFERRED ALTERNATIVE** - This alternative includes additional open roads and trails to those in Alternative 3M, but is still within the road density standards of 3M as decided in the Revised Forest Plan. Alternative 3M(+) is displayed on Summer Transportation map #4. As noted in Alternative 3M, it was discovered in this analysis that road density of 3M was below the level allowed for some of the prescription areas. Therefore, roads and trails were added in this alternative to respond to some of the specific requests in public comment and appeal records as noted on the overlay maps (appeals) and RS 2477 maps.

The roads and trails added are shown in green on Map #4 in the map packet. This alternative has 1,672 miles of open, motorized road, 70 miles of seasonally restricted road, 984 miles of decommissioned roads, and 536 miles of open, motorized trail. Appendix C(M) to this DEIS describes which roads and trails remain open to motorized use and the reasons why routes were selected as open or closed. The total miles of open, motorized roads and trails in this alternative are similar to Alternative 3 in the Plan Revision FEIS, but the open roads and trails are in different locations. Summer, cross-country travel would be the same as Alternative 3M from the Revised Forest Plan.

This alternative has the same prescription areas as Alternative 3M, and road densities are within the prescription (Rx) density allowed, except as shown in Table S-2. Implementation of a new Travel Plan under this preferred Alternative (3M+) requires a minor amendment to the 1997 Forest Plan revision to cover the following, specific road density changes (Table S-2) for individual prescription areas which would vary from the Forest Plan prescription Access Tables (OROMTRD allowed).

All of the densities and associated motorized routes in Table S-2 were shown and approved in the Revised Forest Plan (Alternative 3M) Transportation Plan Map #11, except the Moody Creek road (80251). The Moody Creek change is in response to an RS 2477 assertion. Motorized use was approved by the RFP-FEIS in Indian Creek and was intended to be unrestricted as shown in the RFP-DEIS footnote, but when the footnote was prepared for the RFP-FEIS, an incorrect OROMTRD of 0.2 miles per square miles was put in the footnote to the Access Table. The working copy of the OROMTRD density map dated December, 1997 actually showed a density of 0.5 miles and all of the motorized routes in that density were displayed in the Transportation Plan for Alternative 3M.

Many of the variances occur to accommodate roads running along or through small prescription areas (approximately 5 square miles or less) which are affected disproportionately by their presence.

Table S -1 Comparison of Environmental Effects by Key Issue Indicators

Indicator	Issue	Alt 1(M)	Alt 3M(+)	Alt 3M	Alt 3M(-)
ROADS (miles)	Access				
Open		2,077	1,672	1,617	1,613
Seasonal Restriction		51	70	62	62
Yearlong Restriction		399	289	303	303
Decomm in BMU's		467	466	463	465
Decomm outside BMU's		0	473	521	524
Total Miles		2,994	2,970	2,966	2,967
TRAILS (miles)	Access				
Open		725	536	511	454
Seasonal Restricted		0	0	0	0
Yearlong Restricted		651	862	879	933
Total Miles		1,376	1,398	1,390	1,387
Total Miles Rds/Trs		4,370	4,368	4,356	4,354
Miles of motorized rd/tr de-commissioned & reclaimed	Soil and water quality	467	473	521	989
Miles of motorized rd/tr on unstable soils	Soil and water quality	1,297	950	916	860
Miles of motorized rd/tr in AIZ	Soil and water quality	863	702	677	642
Number of rd/tr stream crossings	Water quality and fisheries	4,248	3,263	3,153	2,988
Miles of rd/tr in cutthroat AIZ	Cutthroat trout habitat	220	196	189	174
Number of rd/tr stream crossings in cutthroat AIZ	Cutthroat trout habitat	618	610	595	545
OROMTRD (mi /sq mi)	Grizzly habitat				
Henry's BMU - Sub 1		0.59	0.60	0.61	0.60
Henry's BMU - Sub 2		0.52	0.52	0.52	0.52
Plateau BMU - Sub 1		0.61	0.61	0.61	0.61
Plateau BMU - Sub 2		0.55	0.55	0.55	0.55
Bechler - Teton BMU		0.47	0.45	0.44	0.44
TMARD (mi /sq mi)	Grizzly habitat				
Henry's BMU - Sub 1		0.82	0.82	0.83	0.82
Henry's BMU - Sub 2		0.53	0.54	0.53	0.53
Plateau BMU - Sub 1		0.97	0.97	0.97	0.97
Plateau BMU - Sub 2		0.74	0.74	0.74	0.74
Bechler - Teton BMU		0.63	0.61	0.64	0.61
Elk Habitat Effectiveness	Wildlife effects	0.59	0.62	0.63	0.63
Elk Vulnerability 1/	Wildlife effects	85	90	91	91
Miles of motorized rd/tr in roadless	Potential impact on roadless or on wilderness designation	776	548	520	469

Table S-2 Proposed Minor Forest Plan Amendment for Prescription Road Densities

DISTRICT	AREA NAME/	Rx	RD DENSITY of Forest Plan	PROPOSED RD DENSITY	REASONS DENSITY EXCEEDED
Dubois	Eightmile	3 1 1(a)	0 0	0 1	Existing road
	Spring Mtn Cyn	3 2(g)	1 0	1 1	Existing road
Island Park	E Lionhead	1 3	0 0	0 1	Small Rx area
Palisades	Palisades Cr	1 3	0 0	0 1	Indian Cr trails *approved in RFP
	Kelly Cyn	5 1 4(d)	1 5	2 2	Small Rx area
	Moody Cr	5 1 4(b)	1 5	1 6	RS 2477
	Indian Cr	1 2	0 2	0 5	Access Table error - RFP
	Sheep Cr	3 2(d)	1 0	1 8	Small Rx area
	Poker Peak	3 1 1(a)	0 0	0 1	Adjacent road

A Travel Plan (map and Restriction Order) would be developed and implemented using the same format as the 1997 Travel Plan Map. The Travel Plan would include the details from the Transportation Plan (map #4 of map packet) for this alternative along with the 1998 Travel Plan Addendum (Appendix A), and road, trail, and cross-country matrices. This procedure will be followed using the appropriate data and maps for any alternative selected in the final EIS.

- **Alternative 3M(-)** - This alternative has slightly fewer open roads/trails than Alternative 3M. This alternative is essentially the same as Alternative 3M, but with the reduction of specific open roads and trails as requested in public comment and appeal records. Roads and trails were eliminated in response to some of the specific requests noted on the overlay maps described previously in the issues analysis. The roads and trails eliminated are shown in red on map #5 in the map packet. This alternative has the same prescription areas as Alternative 3M and 3M(+), but road densities are lower in several prescription areas than in Alternative 3M. This alternative is similar to Alternative 4 in the Plan Revision FEIS in total open motorized roads and trails, but the roads and trails are in different locations. Summer, cross-country travel is the same as Alternative 3M from the Revised Forest Plan. The Transportation Plan for this alternative is enclosed in the map packet for this DEIS as map #5. This alternative has 1,613 miles of open, motorized road, 62 miles of seasonally restricted roads, 989 miles of decommissioned roads, and 454 miles of open, motorized trail. Appendix C(M) to this DEIS describes which roads and trails remain open to motorized use and the reasons why routes were selected as open or closed.

ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY

Other alternatives were considered that would address additional requests for opening or closing road and trail segments beyond the maximum road density or significantly below the density allowed for prescriptions. The formal administrative appeal requests and public comments were mapped and reviewed for alternative consideration and development as described in the issues analysis and Alternatives 3M(+) and 3M(-) above. Our analysis of these options was found to match the same range of alternatives considered in the Revised Forest Plan FEIS. For example, an alternative with more open roads and trails than 3M is represented by Alternatives 1, 2, and 3 of that FEIS. An alternative with fewer open roads and trails would be represented by Alternatives 4, 5, and 6. Since an infinite array of alternatives could be constructed from issues indicated by the comments and appeals, and since

that array has already been considered in the previous FEIS, it would not be helpful to reconstruct those alternatives in this analysis

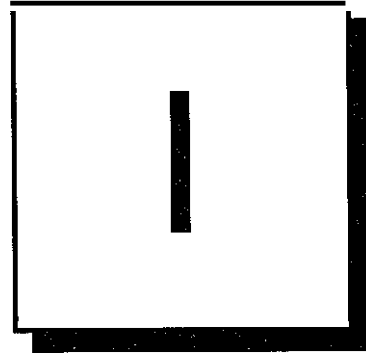
Furthermore, any alternative with a higher road/trail density than allowed by the Revised Forest Plan prescription direction would be outside the standards established in the Revised Forest Plan and contrary to the Purpose and Need for this decision. The scope of this analysis is limited to alternatives that meet the open road and open motorized trail density standards decided in the recently revised Forest Plan, as directed by the Regional Forester (remand letter of 1/14/98). Because these density standards have recently been decided, whether they should be adjusted is not ripe for decision at this time. Effectiveness monitoring is a requirement of the Revised Forest Plan. An evaluation of the effectiveness of these road density standards will be made at appropriate intervals in the annual monitoring plan report.

ANALYSIS AND CONCLUSIONS

As indicated in the Alternative 3M description, the 1997 Appendix C was updated for the seven alternatives originally considered in the Revised Forest Plan to show reasons roads and trails were open or closed. This analysis formed the basis for a new Appendix C(M) which was developed to analyze the four alternatives for this EIS. Each road and trail was considered and reasons for open or closed status were documented for each specific road or trail for each alternative. This resource analysis is further documented in each resource consequences section in Chapter IV of this EIS.

The consequences analysis indicates that the Preferred Alternative (3M+) has slightly higher impact potential than Alternative 3M as described in the Revised Forest Plan. Alternative 3M(+) addresses some of the RS 2477 assertions and other specific open road concerns. However, the analysis indicates this alternative will still not have significant effects on soil, vegetation, water quality, or fish habitat except in minor, localized areas. The analysis also indicates that potential effects of motorized road and trail density on grizzly bear and elk habitat will be within one or two percent change of the levels determined in the Revised Forest Plan FEIS (RFP-FEIS).

Chapter



Purpose and Need for a Travel Plan Revision



CHAPTER I

PURPOSE AND NEED

READER'S GUIDE - In this chapter you will find:

- BACKGROUND INFORMATION
- LOCATION AND SETTING
- PURPOSE AND NEED

NOTE to READERS Please refer to the 1997 Revised Forest Plan for a "Glossary" of terms used in this document

BACKGROUND INFORMATION

On April 15, 1997, the Intermountain Regional Forester issued a Record of Decision (ROD) for the 1997 Revised Forest Plan for the Targhee National Forest. This Revised Forest Plan contained travel management direction in the form of winter and summer Transportation Plans (open, motorized roads and trails) and management prescription direction for road density and cross-country travel. During the summer of 1997 a final Travel Map was prepared to represent this management direction and specifically to disclose which roads and trails would be open for motorized use to meet the road density standards specified in the Revised Forest Plan. The 1997 Travel Map was approved by a Record of Decision (ROD) signed August 15, 1997, by Targhee Forest Supervisor, Jerry Reese.

The August 15, 1997 decision for the Travel Map was appealed to the Regional Forester by individuals and groups representing both sides of the issues. Most of the appeals resulted from issuance of an "Updated Appendix C - Summer and Winter Access", which displayed the roads and trails to remain open to motorized travel. The same list of roads and trails was included as the original "Appendix C" in the RFP-FEIS. This Appendix C Update contained minor edits and revisions that were done to correct duplications of listings and to delete or add minor road segments in the Transportation Plan Map for Alternative 3-M (selected alternative) in the Plan Revision Final Environmental Impact Statement (FEIS). This update did not change the road and trail data or maps that were used in that analysis. On January 14, 1998, the Intermountain Regional Forester reversed (remand letter of 1/14/98) the Travel Map decision and directed that a supplemental environmental analysis be prepared and disclosed. The basis for his appeal decision was

- Some procedural requirements for public involvement had not been fully met, specifically, some people may not have understood the decision to be made in the Travel Map and may not have had adequate opportunity to review and comment on the site-specific actions indicated in the Appendix C Update (1997 Travel Plan ROD)
- The roles of the counties and the Forest Service in management of roads with RS 2477 assertions were not completely assessed and analyzed

This DEIS is tiered to and will refer to and incorporate much of the analysis from the 1997 Revised Forest Plan FEIS. This DEIS will also document subsequent analysis concerning affected environment and environmental consequences of alternatives developed in response to comments and issues presented by interested public and agencies.

LOCATION AND SETTING

The Targhee National Forest (hereinafter usually referred to as "the Forest") is an administrative unit of the U.S. Department of Agriculture, Forest Service. The Forest lies almost entirely within the "Greater Yellowstone Area" (GYA). The Forest encompasses approximately 1.8 million acres. Established by President Theodore Roosevelt in 1908, the Forest is named in honor of a Bannock Indian warrior. The Shoshone-Bannock Tribe has ancestral Treaty Rights to uses of the Forest. The Forest Supervisor's Office is located in St. Anthony, Idaho, with District offices located in Dubois, Island Park, Ashton, Idaho Falls, and Driggs, Idaho. The Forest is bordered by six other National Forests.

(NF) This DEIS addresses travel on the Targhee National Forest and the portions of the Bridger-Teton and Caribou National Forests administered by the Targhee Forest

The majority of the Forest lies in eastern Idaho, and the remainder in western Wyoming (Figure I-1) Situated next to Yellowstone National Park (the Park) and Grand Teton National Park (GTNP), the Forest is home to a diverse number of wildlife and fish (including Threatened and Endangered species), and contains two designated wildernesses, scenic panoramas and intensively managed forest lands (RFP-FEIS, p I-1-2)

**Vicinity Map of Targhee National Forest
on a National Scale**

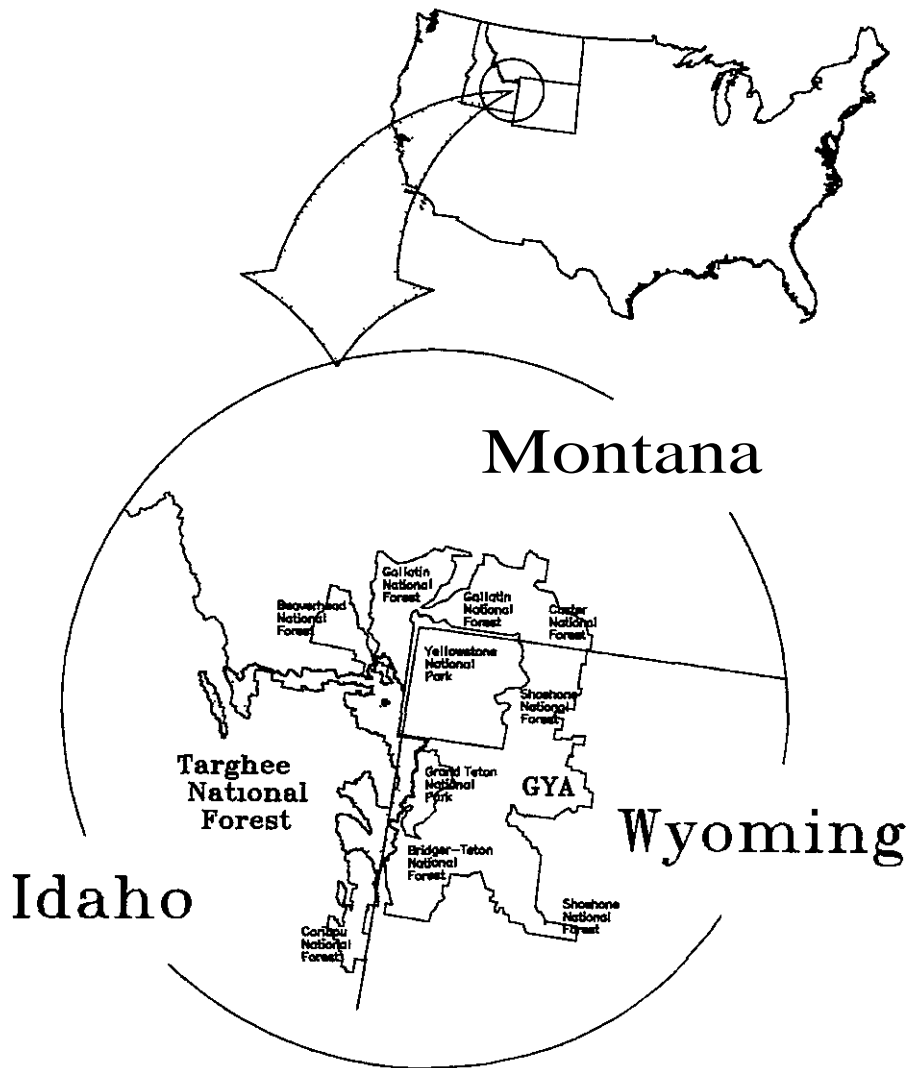


Figure I-1

PURPOSE AND NEED

Introduction

The purpose of this document is to consider alternatives for and disclose the environmental effects of a Forest Travel Plan that will implement the 1997 Revised Forest Plan direction. The purpose of this Travel Plan is to offer a balanced network of motorized road and trails that meet the Forest's transportation needs and the open motorized road and trail route density standards in the Revised Forest Plan. The need for this analysis and decision was directed by the Regional Forester in his 4/15/97 Record of Decision for the Revised Forest Plan (ROD - pages 22 and 30). This is one of the first steps needed desired future conditions of that Plan. In accordance with the Regional Forester's direction, no decision contained in the Revised Forest Plan will be changed, reversed, or superceded by the decision that will result from this analysis. Therefore, winter travel and summer, cross-country travel as decided in the Revised Forest Plan will also be displayed in the final Travel Plan along with the open roads and trails determined from this analysis.

The Forest Supervisor will decide which combination of roads and trails will be open for summer motorized use to remain within the density standards specified by management prescriptions in the Revised Forest Plan. This document will summarize and review the previous open motorized road and trail decision and consider alternative actions that would remain within the (1997) direction of the Revised Forest Plan and respond to the issues raised.

Issues

In an effort to obtain public comments and concerns, news releases were sent to area newspapers and media on February 6, and April 1, 1998. An analysis process information letter was also mailed March 24, 1998 to the approximately 1200 appellants of the 1997 Travel Pan ROD. In response to these information releases and the Notice of Intent filed in the Federal Register (March 24, 1998), we received 40 letters providing comments and suggestions for consideration in this analysis. We have summarized those comments into the following ~~issue~~ topics.

- Adverse effects of specific roads and trails open for summer motorized travel on wildlife and fisheries (cutthroat trout) and their habitat, on roadless areas and recommended wilderness, and on water quality. These specific roads and trails were identified on an overlay of the 1997 Travel Plan map for reference in the analysis. These maps are on file in the Forest Supervisor's Office in the analysis records.
- Adverse effects of specific closed roads and trails on recreational and other access opportunities. These specific roads and trails were identified on the same map overlays as described above for use in this analysis.
- RS 2477 road access. This issue involves potential access rights the Counties may have on roads and trails that may have existed prior to the establishment of the Forest. The assertions by the Counties available were mapped (see map #1 in map packet) for consideration in this analysis.

The following public comments were **also** received and considered. They were addressed in the Revised Forest Plan analysis, or are considered procedural comments and therefore will not be directly addressed in this analysis.

- A broad, programmatic document was used to make site-specific decisions on road closures.
- No new roads should be built, and existing roads should be decommissioned and rehabilitated.
- Existing trails should not be reconstructed for OHV (<50") use.
- Accessibility needs to be addressed better for the less-abled.
- Range of alternatives considered in the Revised Forest Plan FEIS and Travel Plan RODs was not adequate, and road density factors used were too constraining, or not constraining enough.

- Appendix C Update and Draft Travel Plan need to be available for public review and comment

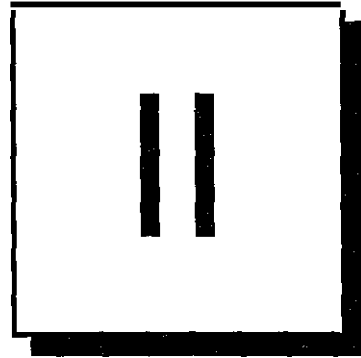
We have reviewed all of the approximately 1,200 appeals received on the 8/15/97 Travel Plan Decision. As indicated in the issues above, we also mapped all of the requests for opening or closing roads and trails as contained in the appeals and public comments on this DEIS. The resulting overlay maps highlight existing roads and trails that were previously considered in Alternatives 1 through 6 for the Revised Forest Plan. The Revised Forest Plan scoping and issue analysis (RFP-FEIS, pages I-5-11), as well as public comments on that EIS, considered almost identical summer transportation plan maps and Appendix C analysis as contained in this new DEIS.

The public involvement Process Paper A from the RFP-FEIS is incorporated by reference. It summarizes the early public involvement efforts in the Forest Plan revision process from 1990 through 1995, until the release of the RFP-DEIS. Throughout that process roads and access were significant issues. The public involvement discussion in RFP "Appendix A, Response to Public Comments, Volume 1," is also incorporated by reference. That discussion details the extensive public involvement during the draft RFP review.

The issues concerning motorized travel and access from the Revised Forest Plan FEIS analysis were considered in relation to public issues identified from comments concerning development of this DEIS. This current analysis of specific road and trail issues indicates existence of the same polarization concerning access issues as identified during the original public scoping processes for the Revised Forest Plan.

In the Forest Plan appeals, many of the roads to be closed or decommissioned by the Revised Forest Plan, were requested to be left open, and many of the roads and trails to be left open were requested to be closed. Public comments received concerning opening or closing roads were summarized into the issue topics identified previously. The displays (map overlays) of these appeal and public comment issues are on file in the Forest Supervisor's Office and are available for review upon request. These overlay maps were used as the basis for developing new Alternatives 3M(+) and 3M(-) as described in the following alternatives section.

Chapter



Alternatives Including the Proposed Programmatic Action (Preferred Alternative)



CHAPTER II

ALTERNATIVES INCLUDING THE PREFERRED ALTERNATIVE

READERS GUIDE - In this chapter **you** will find:

- ALTERNATIVES CONSIDERED
- ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY

NOTE to READERS Please refer to the 1997 Revised Forest Plan for a "Glossary" of terms used in this document

ALTERNATIVES CONSIDERED

Based on available data, public issues and the Final EIS for the Revised Forest Plan, four alternatives were considered and analyzed in detail. Alternative 3M presented below is the same alternative as selected in the Revised Forest Plan FEIS (pages 11-34 and 11-7-8) and in the 1997 ROD for the Open Road and Open Motorized Trail Travel Plan (ROD - page 4)

Three new alternatives (3M+, 3M- and 1M) have been created based on issues described in Chapter I which resulted from consideration of public comments and appeals. Alternatives 3M(+) and 3M(-) are in response to specific public issues and appeals and represent minor additions (+) or deletions (-) to the 3M Alternative. These issues were mapped as stated in Chapter 1 and these overlay maps are on file in the Forest Supervisor's Office. These working maps are available for review. Alternative 1M is the existing situation as modified by the Regional Forester's remand. For a complete analysis and discussion of each alternative and its consequences, see Table 11-1 and Chapter IV of this FEIS, and Appendix C (1998 Update) and Appendix C(M) Appendix C (1998 Update) is the same as Appendix C in the 1997 Travel Plan ROD, except that the 1997 forms have been updated by deleting the rows with "strikeovers" and by adding ratings in the blanks to show reasons why every road was left open, or closed. Appendix C (1998 Update) has been provided as a bridge between the 1997 version and the new Appendix C(M). Appendix C(M) was developed by using ratings from Alternative 3M from the 1998 Update and by adding ratings for the three new alternatives considered.

These alternatives only address summer access for roads and trails because winter travel and summer cross-country access were already decided in the Revised Forest Plan. It should also be understood that cleanup of GIS layers resulted in slight changes in existing road and trail totals, and thus in representation of Alternative 3M from the RFP-FEIS. Also, it is not possible to have all totals for the alternatives presented here match exactly due to difficulties with the GIS layer overlays as data queries are created. Small segments of roads and trails exist or are created during the overlay process that cannot be accounted for or made to match. These discrepancies are minor and the data used was the best available from any source.

It should also be noted that more miles of road show on each alternative map referenced below than in Alternative 1 - existing situation (map #2, RFP-FEIS) for the Revised Forest Plan, because the yearlong restricted roads were not shown on the RFP-FEIS maps.

The four alternatives considered are briefly described as follows:

- Alternative 1(M) - "No Action" - This alternative is based on the existing situation. This alternative would leave the open, motorized roads and trails of the 1994/96 Travel Plans (old brown maps) in place for all of the Forest outside the bear management units (BMU's). Inside the BMU's, travel would be according to the Revised Forest Plan (Alternative 3M). Location of the BMUs is displayed in Figure III-6 in the RFP-FEIS, page 111-55. Forest-wide, summer, cross-country travel would also be according to the Revised Forest Plan (Alternative 3M). This alternative is displayed on the summer transportation map (map #2). Approximately 2,077 miles of open, motorized road, 51 miles of seasonally restricted road, 467 miles of decommissioned roads, and 725 miles of open, motorized trail are included in this alternative (Table 11-1). Appendix C(M) to this DEIS describes which roads and trails remain open to motorized use and the reasons why routes were selected as open or closed. This alternative would not be consistent with the Revised Forest Plan.

and would require a plan amendment to the open road and open motorized trail density standards. Its purpose here is to provide a baseline to compare site-specific effects with the other alternatives being considered.

- **Alternative 3M** - This alternative is the 1997 Travel Plan (proposed action) from the Revised Forest Plan FEIS (summer - roads, trails and cross-country travel) as displayed by the summer Transportation Plan (map #3 - see map packet) for Alternative 3M in the Revised Forest Plan FEIS. This alternative has 1,617 miles of open, motorized road, 62 miles of seasonally restricted road, 939 miles of decommissioned roads, and 511 miles of open, motorized trail. Appendix C (1998 Update) and C(M) to this DEIS describes which roads and trails remain open to motorized use and the reasons why roads were selected as open or closed for each alternative. The 1997 Appendix C Update and the roads and trails GIS data layer were corrected (Appendix C-1998 Update) to delete duplicate segments, and to make other minor edits. These corrections resulted in approximately 40 miles of additional road inventory. It was discovered during this analysis, that road density for this alternative was below densities allowed for some prescription areas and lower than calculated in the RFP-FEIS. This is mostly due to GIS query data errors. It is also partially due to topography limitations and the design of prescription densities being just an initial goal to guide planning. During mapping of the alternative there was also a conscious effort to leave room for management flexibility, e.g. - by not pushing elk vulnerability to the limit.
- **Alternative 3M(+)** - **PREFERRED ALTERNATIVE** - This alternative includes additional open roads and trails to those in Alternative 3M, but is still within the road density standards of 3M as decided in the Revised Forest Plan. Alternative 3M(+) is displayed on Summer Transportation map #4. As noted in Alternative 3M, it was discovered in this analysis that road density of 3M was below the level allowed for some of the prescription areas. Therefore, roads and trails were added in this alternative to respond to some of the specific requests in public comment and appeal records as noted on the overlay maps and RS 2477 maps.

The roads and trails added are shown in green on Map #4 in the map packet. This alternative has 1,672 miles of open, motorized road, 70 miles of seasonally restricted road, 984 miles of decommissioned roads, and 536 miles of open, motorized trail. Appendix C(M) to this DEIS describes which roads and trails remain open to motorized use and the reasons why routes were selected as open or closed. The total miles of open, motorized roads and trails in this alternative are similar to Alternative 3 in the Plan Revision FEIS, but the open roads and trails are in different locations. Summer, cross-country travel would be the same as Alternative 3M from the Revised Forest Plan.

This alternative has the same prescription areas as Alternative 3M, and road densities are within the prescription (Rx) density allowed, except as shown in Table 11-2. Implementation of a new Travel Plan under this preferred Alternative (3M+) requires a minor amendment to the 1997 Forest Plan revision to cover the following, specific road density changes (Table 11-2) for individual prescription areas which would vary from the Forest Plan prescription Access Tables (OROMTRD allowed).

All of the densities and associated motorized routes in Table 11-2 were established and approved in the Revised Forest Plan (Alternative 3M) Transportation Plan Map #11, except the Moody Creek road (80251). The Moody Creek change is in response to an RS 2477 assertion. Motorized use was approved by the RFP-FEIS in Indian Creek and was intended to be unrestricted as shown in the RFP-DEIS footnote, but when the footnote was prepared for the RFP-FEE, an incorrect OROMTRD of 0.2 miles per square miles was put in the footnote to the Access Table. The working copy of the OROMTRD density map dated December, 1997 actually showed a density of 0.5 miles and all of the motorized routes in that density were displayed in the Transportation Plan for Alternative 3M.

Many of the variances occur to accommodate roads running along or through small prescription areas (approximately 5 square miles or less) which are affected disproportionately by their presence.

Table II -1 Comparison of Environmental Effects by Key Issue Indicators

Indicator	Issue	Alt 1(M)	Alt 3M(+)	Alt 3M	Alt 3M(-)
ROADS (miles)	Access				
Open		2,077	1,672	1,617	1,613
Seasonal Restriction		51	70	62	62
Yearlong Restriction		399	289	303	303
Decomm in BMU's		467	466	463	465
Decomm outside BMU's		0	473	521	524
Total Miles		2,994	2,970	2,966	2,967
TRAILS (miles)	Access				
Open		725	536	511	454
Seasonal Restricted		0	0	0	0
Yearlong Restricted		651	862	879	933
Total Miles		1,376	1,398	1,390	1,387
Total Miles Rds/Trs		4,370	4,368	4,356	4,354
Miles of motorized rd/tr de-commissioned & reclaimed	Soil and water quality	467	473	521	989
Miles of motorized rd/tr on unstable soils	Soil and water quality	1,297	950	916	860
Miles of motorized rd/tr in AIZ	Soil and water quality	863	702	677	642
Number of rd/tr stream crossings	Water quality and fisheries	4,248	3,263	3,153	2,988
Miles of rd/tr in cutthroat AIZ	Cutthroat trout habitat	220	196	189	174
Number of rd/tr stream crossings in cutthroat AIZ	Cutthroat trout habitat	618	610	595	545
OROMTRD (mi/sq mi)	Grizzly habitat				
Henrys BMU - Sub 1		0.59	0.60	0.61	0.60
Henrys BMU - Sub 2		0.52	0.52	0.52	0.52
Plateau BMU - Sub 1		0.61	0.61	0.61	0.61
Plateau BMU - Sub 2		0.55	0.55	0.55	0.55
Bechler - Teton BMU		0.47	0.45	0.44	0.44
TMARD (mi/sq mi)	Grizzly habitat				
Henrys BMU - Sub. 1		0.82	0.82	0.83	0.82
Henrys BMU - Sub 2		0.53	0.54	0.53	0.53
Plateau BMU - Sub 1		0.97	0.97	0.97	0.97
Plateau BMU - Sub 2		0.74	0.74	0.74	0.74
Bechler - Teton BMU		0.63	0.61	0.64	0.61
Elk Habitat Effectiveness	Wildlife effects	0.59	0.62	0.63	0.63
Elk Vulnerability 1/	Wildlife effects	85	90	91	91
Miles of motorized rd/tr in roadless	Potential impact on roadless or on wilderness designa-	776	548	520	469

1/ Percent of Forest meeting State Fish and Game agency goals or thresholds for elk vulnerability

Table 112 Proposed Minor Forest Plan Amendment for Prescription Road Densities

DISTRICT	AREA NAME/	Rx	RD DENSITY of Forest Plan	PROPOSED RD DENSITY	REASONS DENSITY EXCEEDED
Dubois	Eightmile	3 1 1(a)	0 0	0 1	Existing road
	Spring Mtn Cyn	3 2(g)	1 0	1 1	Existing road
Island Park	E Lionhead	1.3	0 0	0 1	Small Rx area
Palisades	Palisades Cr	1.3	0 0	0 1	Indian Cr trails *approved in RFP
	Kelly Cyn	5 1 4(d)	1 5	2 2	Small Rx area
	Moody Cr	5 1 4(b)	1 5	1 6	RS 2477
	Indian Cr	1 2	0 2	0 5	Access Table error - RFP
	Sheep Cr	3 2(d)	1 0	1 8	Small Rx area
	Poker Peak	3 1 1(a)	0 0	0 1	Adjacent road

A Travel Plan (map and Restriction Order) would be developed and implemented using the same format as the 1997 Travel Plan Map. The Travel Plan would include the details from the Transportation Plan (map #4 of map packet) for this alternative along with the 1998 Travel Plan Addendum (Appendix A), and road, trail, and cross-country matrices. This procedure will be followed using the appropriate data and maps for any alternative selected in the FEIS.

- **Alternative 3M(-)** - This alternative has slightly fewer open roads/trails than Alternative 3M. This alternative is essentially the same as Alternative 3M, but with the reduction of specific open roads and trails as requested in public comment and appeal records. Roads and trails were eliminated in response to some of the specific requests noted on the overlay maps described previously in the issues analysis. The roads and trails eliminated are shown in red on map #5 in the map packet. This alternative has the same prescription areas as Alternative 3M and 3M(+), but road densities are lower in several prescription areas than in Alternative 3M. This alternative is similar to Alternative 4 in the Plan Revision FEIS in total open motorized roads and trails, but the roads and trails are in different locations. Summer, cross-country travel is the same as Alternative 3M from the Revised Forest Plan. The Transportation Plan for this alternative is enclosed in the map packet for this DEIS as map #5. This alternative has 1,613 miles of open, motorized road, 62 miles of seasonally restricted roads, 989 miles of decommissioned roads, and 454 miles of open, motorized trail. Appendix C(M) to this DEIS describes which roads and trails remain open to motorized use and the reasons why routes were selected as open or closed.

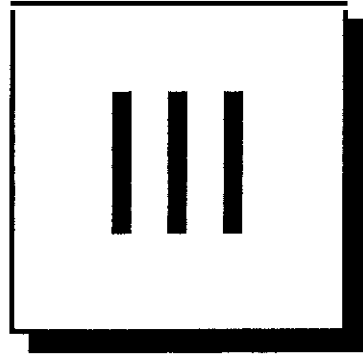
ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY

Other alternatives were considered that would address additional requests for opening or closing road and trail segments beyond the maximum road density or significantly below the density allowed for prescriptions. The formal administrative appeal requests and public comments were mapped and reviewed for alternative consideration and development as described in the issues analysis and Alternatives 3M(+) and 3M(-) above. Our analysis of these options was found to match the same range of alternatives considered in the Revised Forest Plan FEIS. For example, an alternative with more open roads and trails than 3M is represented by Alternatives 1, 2, and 3 of that FEIS. An alternative with fewer open roads and trails would be represented by Alternatives 4, 5, and 6. Since an infinite array of alternatives could be constructed from issues indicated by the comments and appeals, and since

that array has already been considered in the previous FEIS, it would not be helpful to reconstruct those alternatives in this analysis

Furthermore, any alternative with a higher road/trail density than allowed by the Revised Forest Plan prescription direction would be outside the standards established in the Revised Forest Plan and contrary to the Purpose and Need for this decision. The scope of this analysis is limited to alternatives that meet the open road and open motorized trail density standards decided in the recently revised Forest Plan, as directed by the Regional Forester (remand letter of **1/14/98**). Because these density standards have recently been decided, whether they should be adjusted is not ripe for decision at this time. Effectiveness monitoring is a requirement of the Revised Forest Plan. An evaluation of the effectiveness of these road density standards will be made at appropriate intervals in the annual monitoring plan report.

Chapter



Affected Environment



CHAPTER III

AFFECTED ENVIRONMENT

READERS GUIDE - In this chapter you will find:

A description of the following components of the Forest

- INTRODUCTION TO ECOSYSTEM MANAGEMENT
- PHYSICAL ELEMENTS OF THE ENVIRONMENT
- BIOLOGICAL ELEMENTS OF THE ENVIRONMENT
- FOREST USE AND OCCUPATION
- PRODUCTION OF COMMODITY RESOURCES

This chapter describes the existing environment that will be affected by implementation of any of the alternatives. It describes the existing physical, biological and social environment of the Forest and the surrounding area. Most of the following information is a summary of the information contained in the 1997 Revised Forest Plan FEIS (pages III-1 through III-100). References to the Plan Revision FEIS, will be shown throughout this document as (RFP-FEIS, page x,y,z). In some cases, a topic or resource summary is not presented in detail, because the topic is not relevant to the issues or alternative analysis. In these cases, a reference to the resource topic location in the RFP-FEIS is all that is provided. We have also added some new information to update the status of resource conditions.

NOTE to READERS: Please refer to the 1997 Revised Forest Plan for a "Glossary" of terms used in this document.

INTRODUCTION TO ECOSYSTEM MANAGEMENT

Principles

In recent years the Forest Service has embraced the concept of Ecosystem Management (EM). This is an approach to natural resource management that strives to ensure healthy, productive, sustainable ecosystems by blending the needs of people (e.g. - roads and trails as discussed in this EIS) and environmental values in a given area such as the Forest. An ecosystem is a complex system of living and nonliving components that interact and change continually. Healthy ecosystems (Glossary - RFP-FEIS, page G-19) are those that are in Properly Functioning Condition (PFC). Ecosystems that are in PFC display resilience to disturbance to the structure, composition and process of their biological and physical components. They retain all of their parts and functions for future generations even though vegetation patterns, human uses or other conditions may change. Understanding ecological processes (fire and other natural disturbances) and how these processes shaped vegetation patterns over time in a landscape are important steps towards implementing EM.

The Targhee Forest remains committed to ecosystem management principles as outlined in the Revised Forest Plan and as analyzed in the FEIS for that Plan. Those processes and principles include adaptive management, PFC, range of variability (ROV), use of geographic scales (ecological units known as subsections), and ecological processes and patterns including succession, fire, insects and disease, vegetation types, connectivity, etc. (RFP-FEIS- pages III-1-17).

One change in condition is the approval of the Fire Management Plan for the Jedediah Smith Wilderness which was implemented with the Revised Forest Plan approval in 1997. Since that time, one fire was approved for management in the summer of 1997. It burned **less** than one tenth of an acre.

Subsections

Many resources are described in this chapter using the ecological units known as subsections. These units exhibit unique patterns in soils, landform, topography and potential natural vegetation, among

other characteristics The Forest encompasses part or all of the following seven subsections (RFP-FEIS-Figure III-1, page III-3)

- Lemhi/Medicine Lodge
- Centennial Mountains
 - Island Park
- Madison-Pitchstone Plateaus
- Teton Range
- Big Hole Mountains
 - Caribou Range Mountains

PHYSICAL ELEMENTS OF THE ENVIRONMENT

Soils and Geology

Soils and geology are described (RFP-FEIS, pages 111-17-19) and summarized for each ecological subsection as follows

Lemhi/Medicine Lodge - This subsection consists of fault block mountains, which exhibit a northwest-southeast trend. The dominant rock types are limestone and sandstone. The landscape is dissected by parallel drainage systems.

Soils on these landscapes are greater than 60 inches to bedrock, having gravelly, medium textured surface layers and extremely gravelly, medium textured subsurface layers. These soils have a low to moderate inherent fertility, are droughty, are high in carbonates and have a high erosion hazard.

The principal management activities affecting soil quality are roads, grazing concerns along incised drainages and OHV use. Secondary management activities affecting soil quality include water developments and mining impacts which have not been reclaimed.

Centennial Mountains - This subsection consists of a fault block mountain range, which exhibits an east-west trend along the Continental Divide. The dominant rock types are rhyolite, sandstone and shale. The landscape is dissected by dendritic and parallel drainage systems.

Soils on these landscapes are greater than 60 inches to bedrock, having nongravelly to gravelly medium to medium-fine textured surface layers and gravelly to extremely stony medium to medium-fine subsurface layers. These soils have a moderate to moderately high inherent fertility, are susceptible to compaction and puddling, have a moderate to high erosion hazard, exhibit plant competition concerns and demonstrate slumping hazards on mountain side-slopes and escarpments at higher elevations.

Principal management activities that are concerns affecting soil quality include roads and OHV use, dispersed recreation impacts, grazing concerns along drainages and water developments. Secondary management activities that are affecting soil quality include mining impacts which have not been reclaimed, past timber/firewood harvest which have resulted in roads, compaction, organic matter removal or displacement and loss of woody residue.

Island Park - The Island Park Caldera was formed by the collapse of a large rhyolite shield volcano. After the collapsing of the caldera, volcanic activity continued, resulting in basalt flows covering much of the caldera floor. The entire subsection has been overlain by wind blown silts (loess). The dominant rock types are rhyolite and basalt. The landscape is dissected by dendritic and parallel drainage systems on the caldera rim and associated tablelands. The caldera floor has very little dissection.

Soils on these landscapes are greater than 60 inches to bedrock, having nongravelly to gravelly medium textured surface layers and medium fine to extremely cobbly medium textured

subsurface layers. These soils have a moderately low to moderate inherent fertility. Soils on the caldera floor have plant competition concerns on deeper soils, reforestation concerns on more shallow soils, and a moderate susceptibility to compaction. Soils on the caldera rim have a moderate susceptibility to compaction, moderate to high erosion hazard, low bearing strength and plant competition concerns.

Principal management activities affecting soil quality (caldera rim) are roads, OHV use, and extensive past ~~timber~~/firewood harvest which have resulted in roads, compaction, organic matter removal or displacement and loss of woody residue. Principal management activities (caldera floor) are the same as for the rim, plus dispersed recreation, which is especially heavy near summer home areas, and grazing along certain riparian areas and meadow complexes.

Madison-Pitchstone Plateaus - This subsection consists of a large consolidated ash flow that came out of the Park and overtopped the east rim of the Island Park Caldera. The landscape is dissected by dendritic and parallel drainage systems.

The soils in the northern part are greater than 60 inches to bedrock, having medium textured surface layers and stratified gravelly coarse textured to extremely gravelly coarse textured subsurface layers. The soils in the southern part are greater than 60 inches to bedrock, having gravelly medium textured surface layers and very gravelly to extremely cobbly medium textured subsurface layers. These soils have a moderately low inherent fertility, are droughty and have windthrow hazards. They are highly erodible if the subsoil is exposed, as it is in the northern part of this subsection due to the North Fork Fire.

Principal management activities affecting soil quality include roads and OHV use, dispersed recreation, effects associated with timber harvest which have resulted in roads, compaction, organic matter removal or displacement and loss of woody residue.

Teton Ranae - This subsection includes a north-south trending mountain range. The dominant rock types are granite, limestone, sandstone, dolomite, slate, gneiss and quartzite. The landscape is dissected by parallel drainage systems.

This subsection consists of two primary landscape settings. These include foothills on lower to mid elevations and mountain side-slopes at mid to high elevations. Soils on these landscapes are 40 to greater than 60 inches to bedrock, having nongravelly to very gravelly medium textured surface layers and gravelly to extremely stony medium textured subsurface layers. These soils have low to moderately low inherent fertility, low to moderate compaction hazard, moderate to high erosion hazard, reforestation concerns and low to high mass instability hazards.

Principal management activities affecting soil quality include roads, grazing along drainages, OHV use and dispersed recreation. Secondary management activities affecting soil quality include the effects of timber harvest which have resulted in road construction, compaction, organic matter removal or displacement and loss of woody residue.

Bia Hole Mountains - This subsection consists of a mountain range of multiple, parallel overthrusts (faults) and benches of mixed rocks and eolian material that have been modified by thrust faulting.

Soils on these landscapes are greater than 60 inches to bedrock, having gravelly medium textured surface layers and very gravelly moderately coarse to moderately fine textured subsurface layers. These soils have a moderate to high inherent fertility, moderate compaction and rutting hazard, moderate to high erosion hazard, moderate to high slumping and earth-flow hazard, plant competition concerns and areas of low bearing strength.

Principal management activities affecting soil quality are roads, OHV use, dispersed recreation and grazing along drainages. Secondary management activities affecting soil quality include erosion along sheep driveways, effects resulting from timber harvest and big game feeding areas along Rainey Creek.

Caribou Ranae Mountains - The Caribou Range Mountains Subsection is a southeast to northwest trending overthrust (multiple faults) mountain range. The northeast side of the range is moderate relief mountains on mixed sediments. The southwest side of the range is low relief foothills and basins on fine-textured marine sediments. The dominant rock types are a mix of sedimentary materials with a loess influence. The landscape is dissected by dendritic drainage systems.

Soils on these landscapes are greater than 60 inches to bedrock, having medium textured surface layers and moderately-coarse to fine textured subsurface layers. These soils have a moderate to high inherent fertility, moderate compaction and rutting hazard, moderate to high erosion hazard, moderate to high slumping and earthflow hazard, plant competition concerns and areas of low bearing strength.

Principal management activities affecting soil quality include roads, OHV use, dispersed recreation and grazing along drainages. Secondary management activities affecting soil quality includes erosion along sheep driveways and effects from timber harvest.

Air Quality (see RFP-FEIS, page III-20)

Caves (see RFP-FEIS, page III-20)

Lands (see RFP-FEIS, page 111-20)

Minerals (see RFP-FEIS, page 111-22-23)

BIOLOGICAL ELEMENTS OF THE ENVIRONMENT

This section is divided into various types of ecosystems so that the relationships between biological elements within the same system can be better understood. Aquatic, riparian and terrestrial ecosystems (upland forested and upland nonforested) will be considered.

Riparian and Aquatic Ecosystems

Riparian

Riparian areas lie adjacent to water and are composed of vegetation communities influenced by water (RFP-FEIS, page 111-23-25).

Grazing is considered to have shifted the species composition on 8,988 acres (32 percent) of riparian communities across the forest. Under current range management, 5,338 of these acres are moving toward higher ecological conditions with increasing plant biodiversity. Some 3,650 acres are remaining in less stable, lower ecological conditions, with lower plant diversity (Table III-6, RFP-FEIS, page 111-24). Where grazing decreases species diversity, shallow, fine-rooted species such as Kentucky bluegrass (*Poa pratensis*) become dominant and replace the deeper, thicker-rooted native herbaceous species, thus decreasing streambank stability. Specific riparian conditions are presented by subsection as follows.

Lemhi/Medicine Lodge - The principal ecological concern affecting riparian quality in this subsection is that upland vegetation has expanded into riparian zones due to past over-utilization and/or a drop in the water table levels. A secondary ecological concern affecting riparian quality in this subsection is that within some riparian areas willows are dying out and are not being regenerated.

Principal management influences affecting riparian quality include past overuse by ungulates (domestic and wild), dispersed recreation, OHV use and roads in or adjacent to riparian areas and associated stream crossings.

Centennial Mountains - Principal ecological concerns affecting riparian quality include the expansion of upland vegetation into riparian zones due to past over-utilization and/or a drop in the water table levels and some areas of fine-textured subsoils which have a moderate to high slumping potential. A secondary ecological concern affecting riparian quality is that within some riparian areas, willows are dying out and are not being regenerated.

Principal management concerns affecting riparian quality are overuse in some areas by ungulates (domestic and wild), dispersed recreation, OHV use and roads in or adjacent to riparian areas and associated stream crossings. Secondary management concerns affecting riparian quality include past mining sites that have not been rehabilitated, past timber harvest that left inadequate buffers and fuel wood gathering.

Island Park - The principal ecological concern affecting riparian quality is that there are areas where willows are dying out and are not being regenerated.

Principal management concerns affecting riparian quality include high use recreation areas (including summer home, dispersed and developed recreation areas), OHV use, roads in or adjacent to riparian areas and associated stream crossings, past timber harvest which left inadequate buffers and fuelwood gathering. A secondary management concern affecting riparian quality is overuse in some areas by ungulates (domestic and wild).

Madison-Pitchstone Plateaus - The principal ecological concern affecting riparian quality is in the area of the North Fork Burn. Principal management concerns affecting riparian quality include dispersed recreation, OHV use, roads in or adjacent to riparian areas and associated stream crossings, past timber harvest which left inadequate buffers and fuelwood gathering. A secondary management activity affecting riparian quality is overuse in some areas by ungulates (domestic and wild).

Teton Ranae - The principal ecological concern affecting riparian quality is mass wasting.

Principal management activities affecting riparian quality include high levels of dispersed recreation, horse and OHV use, trails in close proximity to or within riparian areas and associated crossings, isolated areas of overuse by ungulates (domestic and wild), roads in or adjacent to riparian areas and associated stream crossings. Secondary management activities affecting riparian quality include past timber harvest which left inadequate buffers and fuelwood gathering.

Bia Hole Mountains - The principal ecological concern affecting riparian quality is mass wasting.

Principal management activities affecting riparian quality include high levels of dispersed recreation, horse and OHV use, trails in close proximity to or within riparian areas and associated crossings and areas of overuse by ungulates (domestic and wild). Secondary management activities affecting riparian quality include sheep driveways, past timber harvest which left inadequate buffers, fuelwood gathering and IDFG feed grounds in Lower Rainey Creek.

Caribou Ranae Mountains - The principal ecological concern affecting riparian quality is mass wasting.

Principal management activities affecting riparian quality include high levels of dispersed recreation, OHV use, trails in close proximity to or within riparian areas and associated crossings, areas of overuse by ungulates (domestic and wild), sheep driveways and roads in and adjacent to riparian areas and associated crossings.

Water

It is important to determine which streams are naturally "unstable" (i.e., dynamic) due to landforms, bed and bank materials, etc. and which ones have instability induced by management practices. An attempt is made in the text to make this determination where possible (RFP-FEIS, page III-26-31).

Water Yield - Total annual water yield on the Forest is about 1.4 million acre-feet. Water is lost or used in many ways, including evaporation, infiltration, use by plants and animals and diversion from stream channels. Because of these and many other factors, the amount of water reaching the Forest boundary will be less than what is produced.

Water Quality - The biggest pollutant on the Forest is excess sediment, derived from within-channel erosion and upland erosion reaching stream channels. The main source of management-produced sediment is roads, specifically those segments within riparian areas, including stream crossings.

Forest roads generally contribute an estimated 85 to 90 percent of the management-produced sediment reaching streams in disturbed Forest land (Burroughs 1990 - RFP-FEIS, page R-2) Currently there are 2,957 stream crossings and 323 miles of road in Aquatic influence Zones (AIZs) on all lands within the Forest boundary (including inholdings) The amount of water meeting State water quality goals on the Forest is unknown Idaho Code Section 39-3601 et seq (effective July 1, 1995) approved adoption of new water quality standards Streams targeted for the new regulations are those listed as Water Quality Limited (WQL) under section 303(d) of the Clean Water Act

The Forest is in the process of validating WQL streams to determine where we have water quality concerns, and if they exist, to find the source of the concerns Many of the water bodies currently listed have very limited data, so there is a great deal of speculation as to whether they should remain listed Until we can verify the condition of these streams, particularly the condition of fish habitat and fish populations, the Forest is employing especially stringent management requirements in the WQL watersheds We have begun baseline monitoring in at least one WQL watershed where new management activities are planned Impacts to WQL streams are analyzed at the project level, where site-specific BMPs can be tailored to a given situation Specific subsection conditions for stream channels and water quality are summarized as follows

Lemhi/Medicine Lodge - Major streams in this subsection are Medicine Lodge Creek and its tributaries There are many perennial streams that have their headwaters in the Bitterroot and Beaverhead Ranges, that eventually flow through broad valleys Channel stability ranges from fair (-) to good (+) This subsection has generally declining trends in channel stability, sometimes even where grazing has been excluded

Idaho DEQ sampled sites on streams in this subsection to assess changes in water quality from management On Irving, Edie and Fritz Creeks, water quality was similar above and below where forest management was occurring All sites showed impacts from grazing at the time of the survey

Centennial Mountains - Streams having headwaters along the front of the Centennial Mountains generally flow south and their water comes from both snowmelt and spring sources

Channel stability ratings generally range from fair (-) to good (+) with stable or declining trends throughout most of the subsection The only standout is a poor rating on part of West Dry Creek, though there is no apparent management related reason Some portions of the Henry's Fork Headwaters rated as excellent The most frequent management problems are livestock damage and roads

Sampling at Big Springs in 1994 found water quality to be excellent and water temperatures consistently low Monitoring by the State of Idaho in the Henry's Fork headwaters showed limited impacts to beneficial uses

Island Park - Many streams here show a strong influence from groundwater, having relatively low variation in flow throughout the year

Channel stability ratings range from fair (-) to excellent Management impacts stem from roads, livestock and recreation, which vary in significance in different places The Buffalo River was sampled in the late 1970s and water quality was found to be good

Madison-Pitchstone Plateaus - Surface drainage here is not very well-developed, due to the underlying volcanic rocks which allow more water to percolate than to run off. These streams originate in or near the Park and exhibit strong groundwater influence

Channel stability ranges from fair (+) to excellent The North Fork Fire in 1988 caused major changes in channel stability to Moose Creek Road systems were a watershed concern in this area even before the fire After the fire, erosion from uplands accelerated due to loss of vegetation and burning effects on soils, which caused more water to run off slopes

Five of the streams in the subsection (Rock, Robinson, Fish and Porcupine Creeks and Warm River) had been named by Idaho as Stream Segments of Concern before this designation was eliminated in 1995 Water quality has been generally good on these streams

Teton Ranae - Streams in this subsection originate along the west slope of the Teton Mountains. They are steep, dynamic and characterized by coarse substrate (up to boulders in size) due to the proximity of this material to the stream channel. Glaciation has been an important influence on stream systems here.

Channel stability ranges from fair (-) to good (+). Impacts to channels stem mostly from natural causes such as avalanche debris, unstable bank materials and failed beaver dams. Localized management effects are related to roads, recreation and livestock.

Bia Hole Mountains - Streams here contribute to either the Teton River or the South Fork Snake River. They are generally confined within steep-sided valleys or canyons, and are high-energy systems, able to move a considerable amount of sediment. Snowmelt is important in these streams, so they have high spring peak flows which later drop to their late summer levels.

Channel stability ranges from poor to good (+). Impacts exist in most drainages from recreation **use**, especially trails along the streams and dispersed camping. Management impacts associated with cattle and roads are also very common.

In-depth water quality sampling was conducted on Big Elk Creek in the late 1970s. Water temperatures were consistently good, and turbidity was consistently low. Little Elk Creek was sampled once, and had readings similar to Big Elk. In general, it appears that stream channel stability is a concern in many places, but (based on available data) water quality impacts are not evident.

Caribou Ranae Mountains - Geology has played an important role in this subsection. The underlying geology of folded and faulted sedimentary rocks has produced perpendicular drainages, and the streams follow the weaknesses in the rocks.

All reaches rated from fair (-) to good (+) in channel stability. Grazing, powerline clearing, roads in riparian areas and heavy recreational use are all listed as problems in the Fall Creek drainage. Most streams here have not been surveyed.

Idaho DEQ sampled several streams in 1994, Antelope, Sawmill, Lava, Hell, Willow and Brockman Creeks. Conclusions have not yet been drawn from their data regarding support of beneficial uses.

Fisheries

Streams delineated as "fish-bearing" are those stream segments that are used by any fish species to satisfy all or a portion of its requirements such as spawning, rearing of young, adult feeding and winter survival. Of the 39 primary watersheds on the Forest, 17 have been designated as native trout watersheds, Elk Creek (003), Palisades Creek (004), Rainey Creek (005), Pine Creek (006), Heise (007), Henry's Fork Headwaters (008), Robinson Creek (013), Trail Creek (017), Mahogany Creek (022), Moody Creek (024), Bitch Creek (032), Burns-Pat Canyon (035), McCoy-Jensen Creeks (036), Elk-Bear Creeks (037), Fall Creek (038), Prichard Creek (039) and Brockman Creek (040) (RFP-FEIS, page 111-31-34).

The land area immediately surrounding the various water bodies is referred to as the aquatic influence zone (**AIZ**). These zones control the biological diversity and integrity of the aquatic environment. It is within these zones that the ecological functions and processes necessary for the maintenance of healthy fisheries habitat take place. Aquatic habitat conditions are expressed in terms of water quality, quantity, and timing of flow, conditions within the stream channel (pools, woody material, etc), and health of associated plant communities. Since the hydrologic, geomorphic and ecological processes that shape the various water types differ by hydrologic unit, the sensitivity of fisheries habitat to disturbances also varies by hydrologic unit. Human-induced disturbances within the AIZ, including stream-flow diversion, livestock grazing, road construction, timber harvesting, and recreation use can disrupt natural processes and functions. Where these are intense or prolonged, fisheries distribution, abundance and productivity can be impaired.

A complete list of the fish species on the Forest by hydrologic unit is shown in Table III-8 of the RFP-FEIS (page 111-32). Descriptions of the condition and trends of aquatic and riparian habitats are shown in Table III-6 of the RFP-FEIS (page 111-24).

Yellowstone cutthroat trout (large-spotted and fine-spotted form) is selected to represent the many species of fish occupying the Forest. This species requires high water quality and high habitat diversity for survival. Since these conditions are indicative of healthy aquatic ecosystems, with associated healthy riparian plant communities and functioning watersheds, it is assumed that by providing for these habitat needs, the habitat needs of all other aquatic life would be provided as well.

Birch, Medicine Lodge and Beaver-Camas Hydrologic Units - Fish populations within the Birch, Crooked, Medicine Lodge and Beaver-Camas Creek systems are now physically and genetically isolated from the Snake River system and from each other.

Fish-bearing streams on Forest lands are small, steep to moderate-gradient and fed by snowmelt runoff and baseflow from groundwater sources. The natural capabilities of this area to produce abundant or diverse fisheries resources is relatively limited. Specific conditions are presented by following hydrologic units.

Upper Henry's Hydrologic Unit - All drainages flow into Henry's Lake or the Henry's Fork of the Snake River above the confluence of Fall River. Spring-fed creeks provide an environment capable of producing abundant aquatic insect and plant biomass. Where fisheries life history requirements are met, these streams are among the most productive trout fisheries in the world.

Fisheries resources in this hydrologic area are very productive and varied. Duck and Targhee Creeks are important economically and scientifically as they provide key spawning habitats for the Henry's Lake native cutthroat trout fisheries and associated Idaho Fish and Game managed hatchery.

Lower Henry's Hydrologic Unit - All drainages flow into the Henry's Fork of the Snake River near the confluence of Falls River. The fisheries resources of importance within this area are primarily small headwater streams and alpine lakes spread across a small portion of the landscape.

Teton Hydrologic Unit - This area drains the western aspect of the Tetons and the northern aspect of the Big Hole Mountains. Fish-bearing streams originating in the Teton Mountains are steep, dynamic and strewn with large boulders. Stream channels developed from the sediment and rock that was delivered through glaciation. Within the Big Hole Mountains, fish-bearing streams are relatively small, moderate-gradient and fed by snowmelt runoff and baseflow from groundwater sources.

Palisades Hydrologic Unit - All drainages originate along the south aspect of the Big Hole Mountains and the north aspect of the Caribou Mountains and are tributary to the South Fork of the Snake River.

The fisheries resources found here are very productive and varied. Many of the streams flowing into Palisades Reservoir, and Palisades, Rainey, Pine and Burns Creeks, provide key spawning and rearing habitats for the native cutthroat trout fisheries.

Cutthroat Trout

Cutthroat trout is a sensitive species and has been selected as a management indicator. Table 1119 of the RFP-FEIS (page 111-34) illustrates cutthroat trout population status and distribution on the Forest by hydrologic unit. Yellowstone cutthroat trout currently occupy 41 percent of their historic habitat. Within Idaho, approximately 45 percent of the historic habitat is presently occupied. German brown, rainbow, and brook trout have been stocked into many drainages and compete with cutthroat trout. Table III-8 of the RFP-FEIS (page 111-32) shows rainbow trout have been introduced into every hydrologic unit on the Forest and have hybridized with cutthroat trout, causing genetic contamination of cutthroat trout populations, and threatening their long-term survival.

Wildlife Associated with Aquatic and Riparian Habitats

Wildlife management indicator species include bald eagles, trumpeter swans, spotted frogs, common loons and harlequin ducks. Table III-10 in the RFP-FEIS (page 111-35) illustrates the distribution of these species and their habitats by subsection. A brief overview of these species and habitats follows. Additional information is available in the RFP-FEIS (pages 111-34-39) and Process Paper D.

Bald Eagle

Southeast Idaho and Forest Overview - The data we compiled on bald eagle nesting populations in southeast Idaho dates back to 1972. In 1972, there was one recorded bald eagle nest along the South Fork of the Snake River, which was not on the Forest. As of 1998, total known nesting territories in southeast Idaho numbered 47. The first recorded bald eagle nest on the Forest occurred in 1975 along the Palisades Reservoir. From 1975 to 1998, the bald eagle nesting populations on the Forest increased to 19 nesting pairs.

Bald Eagle Recovery Plan - The Forest is within the "Greater Yellowstone Bald Eagle Management Zone" as outlined in the Pacific States Bald Eagle Recovery Plan (USFWS 1986 - RFP-FEIS, page R-16). All of the Recovery Plan goals have been exceeded with the current bald eagle populations.

Trumpeter Swan

From less than 200 birds in 1930, the Rocky Mountain Population (RMP) increased to about 2,500 birds by 1996, the highest in over a century (Maj and Shea 1996 - RFP-FEIS, page R-8). About 80 percent of the RMP winters in southeast Idaho along the Henry's Fork of the Snake and southeast Montana along the Madison River.

For the period 1982 to 1994, 31 lakes and ponds on the Forest have been used at least during one or more summers, 17 of these 31 have had at least one nesting attempt, 13 of these 31 have successfully produced young during one or more years (RFP-FEIS, page 111-36-37).

Spotted Frog

We do not know and are not able to provide a spotted frog population estimate for the Forest. An amphibian survey conducted on the Forest in 1992 and 1993 provides an overview on the distribution of spotted frogs on the Forest (Clark and Peterson 1994 - RFP-FEIS, page R-3). This amphibian survey documented spotted frogs at 51 sites, distributed within five subsections.

Common Loon

Common loon abundance on the Forest is highest during spring and fall migrations. Common loons have been documented using four reservoirs, nine lakes and an unnamed pond within five subsections (RFP-FEIS, page 111-38).

The following lakes and ponds within the Island Park and Madison-Pitchstone Plateaus subsections have been identified as capable of providing suitable breeding habitat for common loons: Loon Lake, Moose Lake, Indian Lake, Thompson Hole, Junco Lake, Fish Lake, Bergman Reservoir and an unnamed pond. Only Indian Lake, Thompson Hole and Bergman Reservoir have documented nesting and rearing of young.

Harlequin Duck

Harlequin ducks have been observed along four creeks within three subsections on the Forest: Big Elk Creek, Teton Creek, Darby Creek and McCoy Creek. Successful reproduction has been documented at Big Elk Creek, Teton Creek and Darby Creek. One to two pairs have been documented along each creek, therefore we estimate the breeding population on the Forest to be between three and six pairs. However, not all streams with potential suitable habitat have been surveyed, so this is considered a minimum estimate of breeding pairs (RFP-FEIS, page 111-38-39).

Harlequin ducks are only present on the Forest during the nesting and brood-rearing seasons, they migrate to the coasts of Oregon and Washington to winter.

TERRESTRIAL ECOSYSTEMS

Upland Forested Ecosystems (see RFP-FEIS, page 111-39)

TES and Biodiversity Indicator Plant Species

Fifteen sensitive plant species and one threatened plant species (RFP-FEIS, page 111-42) are currently listed on the Forest TES plant species list (Process Paper F - RFP-FEIS) and occur in a broad range of habitats (Table III-11 - RFP-FEE, page 111-43). Twenty-two rare Idaho and Wyoming plant species occur on the Forest and are indicator of biodiversity and unique habitats on the Forest (Process Paper G - RFP-FEIS).

One sensitive plant species, *Astragalus paysonii*, occurs in forest ecosystems of lodgepole pine and mixed Douglas-fir/lodgepole pine communities. The plant is found in disturbed or open areas in mature stands or in early seral lodgepole pine stands following fire. Fire suppression has been identified as a cause of decline of this species over its range (Fertig et al. 1993 - RFP-FEE, page R-4). Currently, there is one known location for the species on lands managed by the Forest within the Caribou Range Mountains subsection.

One threatened plant species (Table 111-11 - RFP-FEIS, page III-43) is known to exist on the Forest. Listed in 1992 and discovered on the Forest in 1996, Ute ladies'-tresses (*Spiranthes diluvialis*) occurs on the Palisades Ranger District along the South Fork of the Snake River. The species is suspected to occur elsewhere on the Forest within riparian and wetland habitats below 7,000 foot elevation.

Upland Nonforested Ecosystems

Herbaceous and shrub ecosystems dominate the landscape in the Lemhi/Medicine Lodge Subsection and are significant in the Centennial, Big Hole Mountains and Caribou Range Mountains Subsections (RFP-FEIS, page 111-42).

Fire suppression has modified the historical 10-25 year frequency of fire in the low to mid elevation areas. Fire suppression coupled with grazing and drought cycles has increased shrub canopy cover and decreased herbaceous species composition within the sagebrush/grass and mountain brush community types.

Noxious Weeds (see RFP-FEE, page 111-46)

Wildlife Associated with Terrestrial Habitats

Wildlife management indicator species include, elk, gray wolf, grizzly bear, primary cavity nesting species (eight species), northern goshawk, red squirrel and peregrine falcon. Table 111-16 (RFP-FEIS, page III-50) illustrates their distribution by subsection. A brief overview of these species and habitats follows. Additional information for these species and other wildlife species is available in the (RFP-FEIS, pages III-47-50) and Process Paper D.

Elk Populations

We do not know the total population of elk which use the Forest (RFP-FEIS, page 111-47). The number of elk changes with seasons. Elk populations are lowest during the winter period because they migrate to lower elevation winter ranges. Many of the winter ranges occur off Forest lands. Elk populations on the Forest are highest during the spring, summer and fall periods, as elk migrate back from winter range areas. Some elk migrate through the Forest and summer in the Park.

For the Idaho Game Management Units which encompass the Forest (Figure 111-4, RFP-FEIS, page III-48), elk populations have sustained annual harvests which have ranged between 940 to 3,111 animals harvested between 1979 to 1995. Elk harvests have shown a general increasing trend from 1979 to the present. The average annual harvest for the period 1979 to 1995 was 1,915 animals.

For the Wyoming Elk Hunt Areas which encompass the Forest (Figure 111-4, RFP-FEIS, page III-48), elk populations have sustained annual elk harvests which have ranged between 66 to 205 animals harvested for the years 1979 to 1995. Elk harvests have shown a general increasing trend from 1979 to the present. The average annual harvest for the period 1979 to 1995 was 134 animals.

Age and sex composition data reported for elk populations on or adjacent to the Forest range from 29 to 53 calves per 100 cows, and the mid to low teens to 22 bulls per 100 cows (USDI Fish and Wildlife Service 1994 - RFP-FEIS, page R-15) Using an average age and sex composition of 40 calves per 100 cows and 20 bulls per 100 cows, the pre-harvest elk population to sustain the average elk harvests from 1979 to 1995 is calculated to be 10,250 animals (the post harvest elk population would be 8,201) This is considered a minimum population estimate because it does not include the need to account for animals dying from natural causes and unreported wounding losses

Elk Vulnerability (EV)

At the present time, 48 percent of the Forest meets State Fish and Game thresholds for EV (RFP-FEIS, page 111-49)

Elk Habitat Effectiveness (EHE)

EHE is defined as the percentage of available habitat that is usable by elk outside the hunting season (RFP-FEIS, page 111-49).

An EHE of 100 percent (usually displayed as 1.0) would require no motorized roads and trails within a watershed, and 50 to 60 percent of the watershed being in hiding cover The existing values for EHE range from a low of 0.46 in a portion of the Centennial Mountains to a high of 0.74 in the Madison-Pitchstone Plateaus Subsection just south of the Park, an average Forest-wide EHE value is 0.57

Elk & Deer Winter Range

Generally, elk and deer winter range are those areas at lower elevations with lower snow accumulations, used by elk and deer during the winter months (Lyon and Christensen 1992, RFP-FEIS, page R-7) Map number 24 (RFP-FEIS map packet) displays these winter ranges on the Forest There are 313,825 acres of crucial mid-to-late elk and deer winter range on the Forest. Currently, 78 percent of the winter range acres are meeting DVCs for condition, 13 percent of the winter range acres are improving and moving toward DVCs, and 9 percent of the winter range acres are not improving

All elk and deer winter range is closed to cross-country snowmachine use (RFP-FEIS, page IV-30)

There is one feed ground for wintering elk and deer on the Forest, this is in Rainey Creek, within the South Fork/Palisades winter range area The number of animals fed at this site varies each winter, primarily based on the severity of the winter Because of recent documentation of the disease brucellosis, the State Fish and Game Department is considering other management options to winter feeding

Grizzly Bear Population

Portions of the Forest are within the Yellowstone Grizzly Bear Ecosystem (YGBE), (RFP-FEIS, page 111-53) The YGBE has been divided into Bear Management Units (BMUs) Portions of the Forest are within the following BMUs Henry's Lake (Subunits 1 and 2), Plateau (Subunits 1 and 2), and Bechler/Teton (Figure III-6 - RFP-FEIS, page 111-55)

The following are recovery goals for the YGBE (U S Fish and Wildlife Service 1993, RFP-FEIS, pages 111-53-54)

"Fifteen females with cubs over a running 6-year average both inside the recovery zone and within a 10-mile area immediately surrounding the recovery zone, 16 of 18 BMUs occupied by females with young from a running 6-year sum of observations, no two adjacent BMUs shall be unoccupied, and known, human-caused mortality not to exceed 4 percent of the population estimate based on the most recent 3-year sum of females with cubs Furthermore, no more than 30 percent of this 4 percent mortality limit shall be females These mortality limits cannot be exceeded during any two consecutive years for recovery to be achieved"

As of 1997, the status of the grizzly bear population in relation to the recovery goals was as follows

- The running 6-year average for unduplicated females with cubs was 24.0, compared to the recovery goal of 15

- Average annual human-caused mortality was 8.7 bears, compared to the recovery goal mortality limit which is to be < 10.5 bears (< 4 percent mortality limit of the population estimate).
- Average annual human-caused female mortality was 3.5 bears, compared to the recovery goal mortality limit which is to be < 3.2 bears (< 30 percent of the total known mortalities)
- The distribution of females with young was 18 of 18 BMUs, compared to the recovery goal of 16 of 18 BMU's

Gray Wolf Populations and Habitat

Possible sightings of gray wolves have occurred on the Forest and are summarized in the AMS and Process Paper D. There have been no reported sightings of packs or evidence of successful breeding (RFP-FEIS, page III-60-61)

The portion of the Forest west of Interstate 15 is within the Central Idaho Nonessential Experimental Population Area. The portion of the Forest east of Interstate 15 is within the Yellowstone Nonessential Experimental Area (Figure 111-7, RFP-FEIS, page III-59). All wolves found in the wild within the boundaries of these management areas, after the first wolf releases, will be considered nonessential experimental animals (USDI Fish and Wildlife Service 1994a and b, RFP-FEIS, page III-60)

This gray wolf reintroduction does not conflict with existing or anticipated Federal agency actions or traditional public uses of park lands, wilderness areas or surrounding lands (USDI Fish and Wildlife Service 1994b). Land use restrictions may be temporarily used by land or resource managers to control intrusive human disturbance, primarily around active den sites between April 1 and June 30, when there are five or fewer breeding pairs of wolves in a recovery area. After six or more breeding pairs become established in a recovery area, land-use restrictions would not be needed (USDI Fish and Wildlife Service 1994a)

Wolf recovery will not result in wolf travel corridors or linkage zones being established. The size and proximity of the areas where wolves will be managed for recovery are large enough, close enough and have enough public land between them that additional areas (travel corridors) are not required in the foreseeable future to maintain a viable wolf population after the three subpopulations become established (USDI Fish and Wildlife Service 1994a)

Primary Cavity Nester Populations (see RFP-FEIS, Daae 111-61)

Primary Cavity Nester Habitat (see RFP-FEIS, Daae III-62)

Forest Owl Populations (see RFP-FEIS, Daae 111-62)

Furbearer Populations (see RFP-FEIS, Daae III-63)

Canada Lynx

Lynx habitat in the western mountains consists primarily of two structurally different forest types occurring at opposite ends of the stand age gradient. Lynx require early seral forests that contain high numbers of prey (especially snowshoe hares) for foraging and late seral forests that contain cover for kittens (especially deadfalls) and for denning. Intermediate seral stages may serve as travel cover for lynx, but function primarily to provide connectivity within a forest landscape. Although such habitats are not required by lynx, they fill in the gaps between foraging and denning habitat within a landscape mosaic of forest seral types.

According to a recent report (USFWS, 1998), lynx were distributed throughout northern Idaho in the early 1940s. This report indicates the only documented reports of lynx on the Targhee National Forest have occurred on the Wyoming portion in the Palisades Mountains. However, in 1993, 1997 and 1998, lynx tracks were documented in the Centennial Mountains subsection in four watersheds (TNF files)

Northern Goshawk Populations (see RFP-FEIS, Daae III-65)

Red Squirrel Populations and Habitat (see RFP-FEIS, Daae III-67)

Peregrine Falcon Populations

The Forest is within the American Peregrine Falcon Recovery Plan • Rocky Mountain/Southwest Population (USDI Fish and Wildlife Service 1977/revised 1984, RFP-FEIS, page R-16) The objectives for the Recovery Plan are a minimum of 183 breeding pairs with the following distribution Arizona-46, Colorado-31, Idaho-17, Montana-20, Nebraska-1, New Mexico-23, North Dakota-1, South Dakota-1, Texas-8, Utah-21 and Wyoming-14 (RFP-FEIS, page 111-67)

At the present time, there are 575 known peregrine falcon pairs within the area covered by the Recovery Plan, surpassing the recovery objective by 392 pairs (Robert Mesta, personal communication, 1998)

In 1998, there were seven occupied peregrine falcon eyries on or adjacent to the Forest

The current population and reproductive levels has been sufficient to support considerable population growth which exceeds recover goals At this time, the U S Fish and Wildlife Service has proposed to remove the American peregrine falcon from the list of endangered and threatened wildlife (USDI Fish and Wildlife Service 1998)

Biahorn Sheep Populations and Habitat (see RFP-FEIS, page III-69)

Neotropical Migratory Bird Populations and Habitat (see RFP-FEIS, Daae III-70)

Predator Control (see RFP-FEIS, Daae III-70)

Unique Ecosystems

Research Natural Areas (RNAs) (see RFP-FEIS, Daae III-71)

FOREST USE AND OCCUPATION

Access Management

Road System

The Forest road system provides access for recreation, industry and administration (RFP-FEIS, page 111-73-74) Land transportation by motorized vehicles is the principle means of travel on the Forest Seven major highways run through the Forest and all primary access begins from one of these highways Average daily traffic counts collected by the Idaho State Highways Department (Gillespie 1994, RFP-FEIS, page R-4) suggest the heaviest traffic occurs on the highways between Idaho Falls and the northeast part of the Forest (Figure 111-8, RFP-FEIS, page 111-72) Many of the Forest's roads were constructed in the mid-1970's as part of the timber salvage program and provided access to recreationists, firewood gatherers and hunters The roads have also proved useful for fire suppression activities Forest-wide there are 2,077 miles of open roads In addition, motorized use is restricted on some roads as follows 51 miles of roads have seasonal restrictions, 399 miles of roads have year-long restrictions (Table 11-1) Approximately 85 percent of the 467 miles of roads inside the grizzly bear management units have been decommissioned during the summer of 1998

The Forest road system is essentially in good shape, with annual maintenance on arterial and collector roads and some local roads depending on resources needs and funding available Further information on the Forest Development Road System can be found in the Transportation section of the AMS

The current road system has created resource conflicts with wildlife, fish and watershed resources Road restrictions or decommissioning have been requested by agencies and individuals to reduce resource conflicts Law enforcement problems have also increased over the years due to the need to enforce restrictions

The Forest has begun restricting and/or reclaiming roads to reduce resource conflicts Many of the local spur roads built during the salvage program are now restricted Motorized use was restricted on 377 miles of road from 1981-1991 and on an additional 1,245 miles in 1992-1993

There are approximately 2,994 miles of existing roads Of this total, only 2,077 miles are open Of these open roads, 10 percent are classified as arterials They are often two-lane and paved or have a

good gravel surface and can handle unrestricted traffic at moderate speeds. Branching from the arterial roads are the collectors. Collector roads are medium standard roads that constitute about 25 percent of the mileage in the transportation system. Collector roads are stable enough for most traffic during normal season of use. Small single-lane roads, known as local roads, are found throughout the Forest and make up 65 percent of the road system. These minimum standard roads provide access for specific purposes, such as harvesting timber, maintaining electronic communication sites or reaching a trailhead. They allow limited passing, but the road conditions require that vehicles move slowly. Many of the local roads are currently closed to vehicular traffic much of the time.

Two-track roads exist that are referred to as low standard roads (sometimes called "ghost roads"). These isolated roads were not designed or maintained for public use, they are created by repeated use by the public. Some vehicles cannot travel on these roads. Road surfaces are generally rough and irregular with no drainage. Some of these roads are closed to motorized use.

Concern has been expressed by County officials of several counties regarding Revised Statute (RS) 2477 roads and trails under the 1866 Act. The intent of requirements under this Act have not yet been clarified by additional legislation or Forest Service policy. During the last year, County representatives have prepared lists and maps displaying RS 2477 assertions for roads and trails they believe were in existence (as required by the law) prior to the establishment of the Forest. These RS 2477 assertions are on file in the Forest Supervisor's Office, and the routes are displayed in Map #1 (map packet).

The National Forest Scenic Byways Program was developed to increase public awareness and understanding of the National Forest and State activities and recreation opportunities. Presently there are two Scenic Byways that pass through the Forest, the Mesa Falls and Teton Scenic Byways. The Mesa Falls Scenic Byway follows old State Highway 47 from Ashton to where it ties back to US Highway 20. About 20 of the total 29 miles are located on the Forest. The Teton Scenic Byway Route travels east from Idaho Falls to Swan Valley along Highway 26, then north to Victor on Highway 31, from Victor to Teton on Highway 33 to the intersection of Highway 32, and then to Ashton on Highway 32.

The Forest has been working with the Federal Highway Administration on improving Forest Highways. Funding provided by the Federal Highways Administration allows the Forest to make improvements on roads which normally could not be made. Roads that are identified for improvements are required to accommodate current conditions and impending future growth and road uses. Without improvements, the highways cannot satisfy current and future traffic demands, safety requirements, Forest Service land and resource management objectives and maintenance capabilities of the various agencies.

The roads that have been slated for improvement and the expected year for reconstruction are Forest Highway number 62, Mesa Falls (1999-2000), Forest Highway number 76, Fred's Mountain or Grand Targhee road (1999-2000), and part of the Yale-Kilgore road (est 2000).

Summer Access for Off-Highway Vehicles (OHV)

Approximately seven percent of the Forest (121,000 acres) is currently open for summer cross-country motorized and mechanized vehicle access (RFP-FEIS, page 11-20, Alternative 3M data). There are currently 2,077 miles of open road and 725 miles of open trail useable by OHV's due to the Regional Forester's remand direction to return to 1997 open road conditions. The Forest conducted an analysis of motorized access and road/trail density in the spring of 1995 and again in 1998 to accurately inventory these opportunities. The analysis is documented in Appendix C - 1998 Update.

There are very few trails designed specifically for motorized OHVs or mountain bikes, although some are suitable in their present condition. The Forest is currently reconstructing four to six miles of trail each year for motorized use. There is a significant increase in demand for such opportunities. Both types of use are increasing at a rate of five to ten percent per year on the Forest and adjacent lands. The highest concentration of these activities is in the Big Hole and Caribou Range Mountains Subsections, where there is significant use by motorcycles and mountain bikes. There are currently moderate conflicts arising between two-wheel and four-wheel OHV users which are making planning for reconstruction somewhat difficult. As noted in the Soil and Riparian section, there are areas of concern for OHV effects on soil and vegetation. Although there are a few areas of new OHV hill-climbs occurring,

there are no serious adverse consequences as a result of OHV use. However, it is possible that motorized use is affecting some big game wildlife habitat potential or vulnerability to hunting pressure. Also, some conflict between OHV users and hunters is now being experienced.

Winter Access (see RFP-FEIS, page III-75)

Many snowmachines currently use roads in the winter which are open for summer, motorized travel.

WILDERNESS AND RECREATION RESOURCES

Recreation, tourism and National Forest use are important to the area economy (RFP-FEIS, page III-75-81). The Idaho Department of Commerce estimates that tourism in Idaho is a two billion dollar industry, with 23 million visitors each year. The visitors to the Forest may account for over 10 percent of this industry. Table 111-26 in the RFP-FEIS (page 111-76) displays current recreation and wilderness information by ecological subsection.

Wilderness and Recommended Wilderness

There are currently two designated wilderness areas on the Forest. These are the Jedediah Smith Wilderness (123,451 acres) and the Winegar Hole Wilderness (10,715 acres). The Jedediah Smith is mostly in the Teton Range Subsection with the balance in the Madison-Pitchstone Plateaus Subsection. Winegar Hole is totally within the Madison-Pitchstone Plateaus Subsection. Winegar Hole is largely primitive with very little recreational use. This is mostly due to access difficulty, since there are only four miles of trail in the area. Use of this area is mostly for hunting big game.

The Jedediah Smith is intensively used in the summer with approximately 60,000 visits for hiking, backpacking and horseback riding. This is a spectacular mountainous area on the west slope of the famous Teton Mountain Range. These wilderness areas are two of twelve designated in the GYA which total 3.8 million acres, and provide significant areas of biodiversity important to the GYE.

The Wyoming portion of the Palisades Roadless Area was designated by Congress as a Wilderness Study Area in 1984. The Study Area contains approximately 129,100 acres. Of these acres, over 79,800 are administered by the Bridger-Teton N.F. and 49,300 acres are administered by the Forest. In addition, there are 110,520 acres of this roadless area in Idaho which have had no action taken on them. However, a large part of the Palisades Roadless area was recommended for wilderness designation in the 1997 Revised Forest Plan. The studies on the Wyoming portion have not been conducted. Much of the Palisades Roadless area is under special use permit for heli-skiing operations which have been in existence for over 15 years. This heli-skiing operation is a recreational business operating out of Jackson, Wyoming. The Palisades area is also used by a large number of snowmobilers, except in the steep, avalanche prone areas.

Portions of Diamond Peak, Italian Peak, Lionhead, and Winegar Hole and Palisades Roadless Areas (171,000 acres) were recommended for wilderness consideration in the 1997 Revised Forest Plan, but no legislative action has been taken to date.

Roadless Areas

There are 16 areas on the Forest which qualify as roadless or roadless adjacent to designated wilderness. These areas are described in the Process Paper Q and Forest Plan map number 25 (RFP-FEIS). These areas total about 841,000 acres. This acreage is approximately 30,000 acres less than the 1993 inventory. This is due to improved calculation from computer digitizing the area boundaries. The new roadless area acreages are shown in the Rating of Wilderness Characteristics Factors Table in Process Paper Q (RFP-FEIS). Within these roadless areas, some 243,000 acres are closed to summer OHV use. The majority of the roadless acres are contained in the Lemhi/Medicine Lodge, Centennial Mountains, Big Hole Mountains and Caribou Range Mountains Subsections. The 1993 roadless inventory showed a net increase in qualifying acres over the inventory in the 1985 Forest Plan. This is because several of the roading and timber harvest projects proposed in that Plan were never completed. These areas were added to the previously inventoried areas. In contrast, the Signal Peak, Warm River South and East and Moody Creek areas incurred enough development to require them to be removed from the inventory. In 1990, the Centennial Mountains Wilderness Suitability Study EIS (Mt. Jefferson) was completed and none of the Forest portion was recommended.

wilderness The Mt Jefferson area was thereby released for management according to the 1985 Forest Plan direction

There is an existing appeal settlement agreement with the Caribou N F concerning Bear Creek and Caribou City roadless areas on that Forest The agreement states that no timber entry is scheduled before the year 2000 and that none will be made

Wild, Scenic and Recreational Rivers (see RFP-FEIS, page 111-77)

Visual Resources

The Forest has some very unique and outstanding scenery It encompasses peaks over 10,000 feet, arid lands, timbered highlands, lakes and waterfalls During the past decade, the greatest change in visual resources occurred among the vast expanses of mature lodgepole pine found in the Madison-Pitchstone Plateaus and Island Park Subsections Large portions of this mature timber were clearcut Some of this timber harvest occurred near major travel routes and use areas such as campgrounds, resorts, summer home areas and private lands This changed many of the solid timbered areas to open meadow-like mosaics of scattered timber stands Even though this was a drastic change from the past, it also provided variety in terms of scenic views and vistas In some instances, this type of harvest enhanced areas from a visual standpoint

Developed Recreation Sites (see RFP-FEIS, page III-78)

Dispersed Recreation

The largest number of dispersed activity and camping sites are in the Caribou Range and western Centennial Mountains Subsections as shown in Table 111-26 (RFP-FEIS, page 111-76) The next largest numbers of sites are in the Lemhi/Medicine Lodge and Big Hole Mountains Subsections These sites receive approximately 1,147,000 visits and result in 992,000 RVDs annually Dispersed sites have few or no structural facilities for recreation They are used for general camping and to provide access to fishing, hunting, OHV areas and trails Some of these sites have received increased use and as a result, have increased the number of camping spots, such as at Horseshoe Lake which has increased from three to seven sites in the last decade Many dispersed activity uses are increasing at a rate of approximately four percent

The capacity in PAOT of these sites is greater than the developed sites on the Forest There are 106 heavy use dispersed sites on the Forest, and some of these dispersed campsites are showing damage to vegetation and soils Field reviews during the summer of 1996 and 1997 indicate a few of these sites are in need of management actions to stabilize or minimize such impacts Monitoring studies during the summer of 1997 indicate that only a small percentage of these dispersed campsites have soil disturbance in excess of the Forest-wide soil standard in the Revised Forest Plan These more disturbed sites have had management action recommendations developed that will be implemented on a trial basis over the next few years

Outfitters and Guides (see RFP-FEIS, page 111-79)

Special Uses (see RFP-FEIS, page 111-79)

ECONOMIC AND SOCIAL ENVIRONMENT

The area primarily affected by the Forest in terms of economic and social concerns comprises Bonneville, Clark, Fremont, Jefferson, Madison and Teton counties in Idaho (RFP-FEIS, page 111-79-92) Together these counties make up the great majority of the Forest's total administrative area and account for the largest part of Forest-related employment, personal income and payments to local governments These counties are recognized as being the Area of Primary Forest Economic Influence (APFEI) (Table 111-27 - RFP-FEIS, page III-80) Information for the Shoshone-Bannock reservation at Fort Hall is also provided

Some observations can be readily made Bonneville county has the highest median household income and the highest incidence of college graduates Clark county has the highest incidence of Social Security recipients Fort Hall's median household income is somehow comparable to the counties listed and yet its unemployment rate seems inconsistently high This may be the result of having more

wage-earners per household and/or some distortion in the estimate of unemployment Fremont county's high rate of unemployment was possibly associated with timber harvests which were declining from peak levels Jefferson county had the highest incidence of owner-occupied housing units and high school graduates Because most of these counties have very small populations, statistics must be thought through Teton county's infant death rate for instance, actually reflects the death of only a single infant Teton county has the highest rate of heating with wood and the lowest unemployment rate

The Forest is of lesser economic importance to other area counties including Teton and Lincoln counties in Wyoming and the Idaho counties of Bannock, Bingham, Butte and Lemhi Bannock and Bingham counties have no lands administered by the Forest The Forest does manage significant amounts of land in Butte, Lemhi, Lincoln, and Teton (Wyoming) counties However, management of the Forest as depicted in the various alternatives under consideration is not expected to have significant effects on these counties Even though these counties are not included in the APFEI they still have important links to the Forest The Grand Targhee Ski Resort, for instance, is located in Teton County, Wyoming It is an important source of income and employment Services and supplies for the facility must come through Teton County, Idaho, however

People from outside this area also have strong ties to the Forest Besides Idaho, Wyoming and Montana the Forest receives many visitors from Utah, California, and the rest of the nation The designation of an area of influence does not diminish the interests others have in the area or the attention paid to their input

Most of the area's population lives in cities like Idaho Falls, Blackfoot and Rexburg The area's population is relatively small and concentrated in Bonneville County which contains Idaho Falls, the area's largest city with a population in excess of 42,000 It regularly ranks as Idaho's second- or third-largest city

Perhaps the most striking characteristic of the area's population is the growth that has occurred in Bonneville and Madison counties during recent decades, and Teton county in recent years Since 1950 the population within the APFEI has more than doubled, from 63,334 in 1950 to 137,991 in 1994 (REIS 1996, RFP-FEIS, page R-9) Bonneville and Madison counties have increased over 2.5 times during that same period Teton county's population has increased by more than six percent annually from 1990 to 1995 Available information indicates this population growth is traditional (based on employment growth), rather than being the cause of employment growth (Taylor and Fletcher 1995, RFP-FEIS, page R-11)

Employment and Income (see RFP-FEIS, page 111-81)

Payments to Local Governments (see RFP-FEIS, page 111-84)

Amenity Interests

Many people in the area, and outside the area, enjoy the Forest for the recreational opportunities it provides, for the scenic vistas it offers, for its aesthetic values, for its importance to wildlife and fish and for the contributions it makes to the greater ecosystem Interests include those associated with the effects of clearcutting on the visual landscape and on area plants, fish, and wildlife, spiritual concerns, land ethics, and environmental concerns in general

Tribal Interests

The Forest lies within the aboriginal territory of the Shoshone-Bannock Tribes The Tribes collectively comprise a single, federally recognized Indian tribe with a governing body, the Fort Hall Business Council, which is duly recognized by the Secretary of the Interior Tribal members are successors-in-interest of Indian signatories to the Fort Bridger Treaty In part, that treaty led to the creation of the Fort Hall Indian Reservation in the Idaho Territory as a permanent tribal homeland The 544,000-acre reservation lies generally between Blackfoot and American Falls, Idaho

Article 4 of said treaty secured for the Tribes in perpetuity the continuation of a wide variety of "use rights" to off-Reservation lands More specifically, by virtue of Article 4 of the treaty, the Tribes expressly reserved the right to hunt on the unoccupied lands of the United States so long as game

may be found thereon" including such lands owned by the federal government outside the boundaries of the Reservation. The courts decided in the Tinno decision (State v Tinno 1972) that the right to hunt also included a right to fish (Shoshone-Bannock Tribes 1992b, RFP-FEIS, page R-10). Hanes (1995, RFP-FEIS, page R-5) observed, "The court agreed that the Indian peoples expected rights to harvest food on the unsettled lands as a means of subsistence and an integral part of their way of life."

The Tribes have historically used the Forest for hunting, fishing and gathering. American Indians historically used at least 838 species of plants on the Forest, covering virtually every type of plant community. These activities are important economically as well as socially and culturally. Part of the economic importance to the Tribes lies in their use of hunted meat to provide food for the elderly and the disabled. "The philosophy and management direction from the Tribes has always been for subsistence hunting and this is reflected in the Tribes Big Game Regulations," (Shoshone-Bannock Tribes 1992a, RFP-FEIS, page R-10).

Rights to believe, express, and exercise traditional religions are protected by various federal laws, including the American Indian Religious Freedom Act of 1978. This includes, but is not limited to, access to sites, the use and possession of sacred objects and the freedom to worship through ceremonial and traditional rites. Additionally, rights reserved under treaty may possess an inherent measure of resource protection (U.S. v. Washington (759 F.2d 1353, 1985) in Shoshone-Bannock Tribes 1992b).

The Forest has worked with representatives of the Tribes to coordinate the Revision with them. Representatives of the Tribes have stressed the following points:

- Treaties are the supreme law of the land (U.S. Constitution, Article 6, Clause 2). Treaty rights cannot be negotiated at the Department level of the United States government. Consultations with the Tribes are on a government-to-government basis.
- The multiple jurisdictions they have to work with make any attempts at working with the Forest an extremely frustrating exercise. Their territory lies within the boundaries of many National Forests, on lands administered by the Bureau of Land Management, on state lands and on lands privately held. This complicates even relatively simple matters like interpretive signs.
- The processes the Forest uses to handle archaeological sites and cultural values do not fully address the Tribes' concerns. It is important to protect sites, to keep them unpublished and to recognize that providing access to sites invites vandalism. It is important for the Forest to consult with the Tribes on a case-by-case basis when providing protection to sites. It is important that vandalism of sites be vigorously prosecuted to serve as a deterrent.
- The Revision must recognize the sacredness of the land, need for protection, obligation to consult with the Tribes as outlined in the American Indian Religious Freedom Act, the NEPA and NFMA, and many aspects of reserved rights including, but not limited to, the priority nature of rights reserved under the treaty, as well as an inherent measure of resource protection to satisfy these rights.
- The Forest must be recognized for its religious and spiritual significance to the Tribes. That significance is not limited to vision quest sites or traditional camp sites. The Forest and even the lands beyond its borders are important in their entirety. As with many other religions, tribal members are not free to share all the dimensions of their faith.

The Tribes also have a significant economic interest in the Forest. These include subsistence activities like hunting, fishing and gathering. They also include important aspects of Tribal life like sharing the fruits of the land. Riverine ecosystems are important to the Tribes not only for their resources but also for the role they play in the Tribes' religion. The Forest will continue to work and coordinate with the Tribes.

Heritage Resources

Heritage resources are described for each of the subsections as follows:

Lemhi/Medicine Lodge - This area contains over 200 heritage resources of predominately American Indian sites including habitation sites and rock art

Centennial Mountains - The Centennial Mountains contain the highest frequency of heritage resource sites on the Forest. Over 400 heritage resources of predominately American Indian sites have been identified

Island Park - Heritage resources in the Island Park area are primarily related to the Tie Hack Period (cutting trees for railroad ties) and early Forest Service history. The 140 sites identified are composed primarily of tie hack camps associated with the Yellowstone Railroad, Forest Service administrative sites such as guard stations, ranger stations, fire lookouts and recreational cabins dating to the early 1900s

Madison-Pitchstone Plateaus - The Madison-Pitchstone Plateaus contains one of the lowest frequencies of heritage resource sites on the Forest. Relatively extensive inventory has identified only 25 sites

Teton Range - The Teton Range has high frequencies of American Indian sites in the upper reaches of the drainages. Over 79 heritage resource sites have been identified

Big Hole Mountains - This area contains over 100 heritage resource sites with most sites located along the northwestern edge of the Big Hole Mountains

Caribou Range Mountains - The Caribou Range is one of the least inventoried areas of the Forest, however, 50 heritage resources have been identified

Quality of Life

The Center for Business Research and Science (CBRS) and the Center for Rural Economic Development (CRED) of Idaho State University have conducted recent surveys of Quality of Life perceptions among area residents in Fremont County and the City of Idaho Falls. These two areas are vastly different in terms of population, income structure, employment opportunities and other demographic characteristics. In both surveys, many of the questions relate to concerns people have with regard to their everyday lives - things like shopping and local government services. The amount of information presented which relates to the Forest is limited. The surveys do provide some insight into how area residents perceive their living environments.

The Center for Business Research and Science (CBRS) and the Center for Rural Economic Development (CRED) of Idaho State University have conducted surveys of Quality of Life perceptions among area residents in Fremont County and the City of Idaho Falls. The amount of information presented which relates to the Forest is limited.

Fremont County respondents were most satisfied with Air Quality and Open Spaces and Green Spaces and least satisfied with Employment Opportunities and the Availability of Retail Shopping. Forty-three percent felt that Tourism was the type of ideal business they would like to see locate in Fremont County. Some 34 percent felt the same way about General Manufacturing. The most important factors in determining Quality of Life were Employment Opportunities, Level of Individual Well-Being, and Public Education. (CBRS, CRED a and b)

City of Idaho Falls respondents identified a Low Local Tax Rate, Medical Services, and Salary and Wage Levels as favorable characteristics of their community. When faced with making choices, people preferred to Limit Economic and Population Growth (32 percent) and Increase Taxes and the Local Cost of Living (31 percent). Their least desirable courses of action were to Permit Degrading of the Environment (30 percent) and Increase Taxes and the Local Cost of Living (27 percent). (CBRS)

Minorities and Women (see RFP-FEIS, page 111-92)

Coordination with Other Agencies (see RFP-FEIS, page 111-92)

PRODUCTION OF COMMODITY RESOURCES

Timber

The amount of forested land by species group, age class and subsection on the Forest was displayed in Table 1113 in the RFP-FEIS (page III-12)

Table 11133 in the RFP-FEIS (page 111-93) displays the average mature volume of saw timber growing on the Forest by species and subsection

Tentatively Suitable Forest Land (see RFP-FEIS, page III-93)

Future Supply and Demand (see RFP-FEIS, page III-97)

Reforestation/Timber Stand Improvement (see RFP-FEIS, page III-98)

LIVESTOCK GRAZING

Livestock Grazing

Livestock grazing has been a use of both forested and non-forested plan communities throughout the Forest since before 1900 (RFP-FEIS, page III-98-100). Approximately 73 percent (1,371,066) of the 1.87 million acres under Forest grazing administration are identified as being in grazing allotments. Of these acres, about 782,005 (53 percent) are capable for livestock grazing. Approximately 496,049 acres (27 percent) are presently closed to grazing. There are 145 allotments (76 cattle and 69 sheep) on the Forest where livestock grazing occurs, of which 109 have AMPs.

As documented in the Annual Operating Plans and/or the Allotment Management Plans, all of the allotments open to grazing have grazing systems in place which implement various grazing strategies. These plans include grazing utilization standards that implement direction from the Revised Forest Plan (page 111-29).

The current permitted livestock use reported on the Forest is 148,775 AUMs. Permitted livestock consists of 22,066 cattle and 71,985 sheep. Currently 182 permittees hold 277 grazing permits which authorize grazing on the Forest. Presently, based on 1993 data, the numbers of livestock actually using the forest are 20,362 cattle for 84,212 AUMs and 54,478 sheep for 44,006 AUMs.

To better manage livestock, many structural improvements have been constructed using equal (50 percent Forest Service and 50 percent permittee) contributions from the Forest Service and the grazing permittees. These improvements include 563 miles of fence, 670 water developments, 72.5 miles of pipeline, 8 wells, 16 corrals, 7 stock bridges, 2 herder cabins, 74 cattleguards, and 25 miles of stock trail. The Forest portion of these improvements is generated from grazing receipts (range betterment funds) and usually is in the form of materials and supplies. Range improvement structures are maintained by the grazing permittees.

Chapter

IV

Environmental Consequences



CHAPTER IV

ENVIRONMENTAL CONSEQUENCES

READER'S GUIDE - In this chapter you will find.

A description of the consequences of implementing the alternatives with respect to the following components and key issues

- **ECOSYSTEM MANAGEMENT**
- **PHYSICAL ELEMENTS OF THE ENVIRONMENT**
- **BIOLOGICAL ELEMENTS OF THE ENVIRONMENT**
- **FOREST USE AND OCCUPATION**
- **PRODUCTION OF COMMODITY RESOURCES**
- **IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES**

The consequences are described in some or all of the following terms - Consequences Common to All Alternatives, Consequences Which Vary by Alternatives, and Cumulative Effects

NOTE to READERS Please refer to the 1997 Revised Forest Plan for a "Glossary" of terms used in this document

ECOSYSTEM MANAGEMENT

The RFP-FEIS, pages IV-1 through IV-12 describes the ecological processes and patterns which would result from management actions of the Revised Forest Plan Road and trail transportation management were also considered during that analysis, and management goals and objectives and standards and guidelines were developed to minimize environmental consequences of motorized travel

PHYSICAL ELEMENTS

Soils and Geology

Indicators

- 1 Road and trail acres removed from productive land base
- 2 Miles of roads and trails transecting soil types having mass stability concerns
- 3 Acres placed back into productive land base

Consequences Common to All Alternatives - Soil disturbance from dispersed camping and OHV use will continue to be a challenge to soil quality management. Demand for these uses will continue to escalate with corresponding concerns

Consequences Which *Vary by Alternative* -

Land removed from the productive land base, due to roads and trails, would be greatest under Alternative 1M - approximately 9,120 acres (Table IV-1) or roughly 5 percent of the Forest's land base Of these acres, approximately 1,527 acres (17 percent) would naturally recover over the long-term due to having year-long restrictions

Alternative 3M(+) would result in approximately 7,389 acres removed from the productive land base or roughly 4 percent of the Forest's land base Of these acres, approximately 1,184 acres (16 percent) would naturally recover over the long-term due to having year-long restrictions Alternative 3M would result in approximately 7,215 acres removed from productive land, or 5 percent of the Forest's land base Of these acres, approximately 1,237 acres (17 percent) would naturally recover over the long-term due to having year-long restrictions Alternative 3M(-) would have the fewest acres

removed from the productive land base - approximately 7,200 acres. Of these, approximately 1,248 acres (17 percent) would naturally recover over the long-term due to having year-long restrictions. These lands (minus the acres with year-long restrictions in the long-term) would be effectively removed from the Forest's total productive land base for the life of the road and trail and would be susceptible to erosion and subsequent sedimentation. A high percentage of these acres occur within the Aquatic Influence Zones (AIZs), thus having a short delivery distance to a stream channel. One objective under the watershed activity schedule is to inventory roads, trails, culverts, fords and stream crossings within the AIZ's by the year 2007. This inventory will identify problem areas and suggest remedial actions (RFP-FEIS page IV-13-14).

Table IV-1 Alternative Effects on Soils and Productivity

Alternative	1M	3M(+)	3M	3M(-)
Acres removed from productivity for short-term	9,120	7,389	7,320	7,200
Acres removed from productivity for long-term	7,593	6,025	5,978	5,952
Miles of roads/trails on unstable soils	1,297	950	916	860
Miles of roads/trails on unstable soils >40 percent	900	644	614	570
Acres back in productivity short-term	1,635	3,287	3,444	3,462
Acres back in productivity long-term	3,161	4,470	4,681	4,709

Thus, in the short-term the ranking (greatest to least) of Alternatives that would remove acres from the productive land base would be 1M, 3M(+), 3M, and 3M(-). In the long-term (taking into consideration the recovery of year-long restricted access routes) the ranking of acres removed from productivity (greatest to least) would also be 1M, 3M(+), 3M, and 3M(-).

Miles of roads/trails transecting soil types having mass instability concerns would be greatest under Alternative 1M, approximately 1,297 miles of which 900 miles (69 percent) occur on slopes over 40 percent. None of the roads planned for decommissioning¹ under this alternative would occur on soils where mass instability is a concern, 44 percent (41 of the 93 miles) of the roads on soils having mass instability concerns and that have slopes over 40 percent would have year-long restrictions. Alternative 3M(+) would result in approximately 950 miles of roads on unstable soils, of which 644 miles (68 percent) occur on slopes over 40 percent. Approximately 61 percent (104 of the 171 miles) of the roads on soils having mass instability concerns and that have slopes over 40 percent would be decommissioned. In addition, 50 percent (29 of 58 miles) of the roads on soils having mass instability concerns and that have slopes over 40 percent would have year-long restrictions. Alternative 3M would result in approximately 916 miles of which 614 (67 percent) occur on slopes over 40 percent. Approximately 62 percent (121 of the 195 miles) of the roads on soils having mass instability concerns and that have slopes over 40 percent would be decommissioned. In addition, 48 percent (30 of

¹ Decommissioned Road: Any road which has been treated in such a manner so as to no longer function as a road or trail for summer restricted use. This can be accomplished through one or a combination of several means including recontouring to original slope, placement of logging, deadfall piles, planting of shrubs, etc. See Appendix B of the DEIS for a list of locations on the Forest.

62 miles) of the roads on soils having mass instability concerns and that have slopes over 40 percent would have year-long restrictions. Alternative 3M(-) would result in approximately 860 miles of which 570 miles (66 percent) occur on slopes over 40 percent. Approximately 61 percent (120 of the 196 miles) of the roads on soils having mass instability concerns and that have slopes over 40 percent would be decommissioned. In addition, 50 percent (31 of 62 miles) of the roads on soils having mass instability concerns and that have slopes over 40 percent would have year-long restrictions.

Thus, in both the short and long-term the ranking of Alternatives having the greatest to least potential effect on mass instability concerns would be 1M, 3M(+), 3M, and 3M(-).

Acres placed back into productivity (stabilized and revegetated) through road reclamation/ decommissioning would be ranked (greatest to least) 3M(-), 3M, 3M(+), and 1M. This would occur in the short-term with active road decommissioning and reclamation. Taking into account long-term recovery resulting from roads having year-long restrictions (these would recover with time) the ranking (greatest to least) would be 3M(-) - 4,709 acres, 3M - 4,681 acres, 3M(+) - 4,470 acres, and 1M - 3,161 acres. Decommissioned roads would have a lower inherent site productivity than adjacent undisturbed sites but overall benefits from decommissioning and year-long closures is beneficial to soil and watershed conditions.

Overall, in ranking the alternatives as to their benefits to soil productivity and soil hydrologic function (soil quality) the ranking (most beneficial to least beneficial) would be 3M(-), 3M, 3M(+), and 1M. This is mainly because of the potentials associated with roads on soils having mass instability concerns, especially on slopes that are over 40 percent and due to short and long-term reclamation differences. The difference between Alternatives on acres taken out or placed back into productivity are fairly close and thus do not play as significant a role in making this determination of ranking Alternatives.

Cumulative Effects - Effects indicated above and for all foreseeable projects would be very similar to those stated in the RFP-FEIS and including those for cross-country travel, since there is no change in cross-country from that indicated by the Revised Forest Plan. Overall, soil quality on the Forest should improve over the existing situation under all alternatives (RFP-FEE, page IV-15). This effect is due to the decommissioning and reclamation and yearlong restrictions of roads which will allow for recovery of soil productivity and hydrologic function. Soil quality standards and guidelines have been established to help direct soil quality improvement, maintenance and/or enhancement within managed portions of the Forest. These standards and guidelines have been incorporated in the 1997 Revised Forest Plan.

Air Quality

Consequences Which Vary *by* Alternative - Alternative 1M allows the most open motorized routes, however this is not as much potential activity as described for Alternative 1 in the RFP-FEIS (page IV-15). Alternative 1M has the most potential for adverse effects to air quality from dust. The three 3M alternatives have somewhat less potential for air quality impacts from open roads.

Another consequence which would vary would be potential for severe wildfire as indicated in the RFP-FEIS (page IV-15). As more roads are decommissioned from Alternative 1M toward Alternative 3M(-), the potential for severe wildfire increases because access for fire crews becomes more restricted.

Caves

Consequences *Common to All Alternatives* - Impacts on cave resources would result from normal recreational use that would be similar for all alternatives (RFP-FEIS page IV-16).

Lands

Consequences *Common to all Alternatives* - There would be no impacts on lands from any alternative (RFP-FEIS page IV-16).

Minerals

Consequences Which Vary by Alternative - Since overall access will decrease from Alternative 1M through Alternative 3M(-), access for potential mineral exploration or development could likewise be limited somewhat

BIOLOGICAL ELEMENTS

Aquatic and Riparian Ecosystems

Analysis of consequences specific to these motorized travel alternatives is covered under the soils, water, and fisheries sections. The Revised Forest Plan FEIS addressed the major aquatic and riparian issues which dealt mostly with improving riparian vegetation conditions to meet Desired Vegetative Condition (DVC) and Properly Functioning Condition (PFC) objectives along the hydric greenline (HGL) - (RFP-FEE, pages IV-17-19). Overall, aquatic and riparian conditions (DVC and PFC) will improve as the alternative range moves from 1M toward 3M(-). The effects of Alternative 1M would result in slow improvement of vegetative composition and percent of riparian areas meeting DVC. The three 3M alternatives would all have a slightly improved rate of recovery of these ecosystems over the recovery rate of Alternative 1M.

Water

Indicators:

- 1 Miles of road and trail in AIZ
- 2 Acres of road and trail in AIZ
- 3 Number of Stream Crossings

Consequences Common to All Alternatives - Land disturbance and impacts to riparian resources will take place under all alternatives, however, the magnitude of the impacts will vary between alternatives as discussed below. Decommissioning of roads and trails in the AIZ will result in soil disturbance, with short-term creation of sediment sources which will have the potential to deliver sediment to streams for approximately 3 years, or until they are stabilized. Determination of exact amounts of sediment is very difficult due to the wide variety of soils, slopes, vegetation, etc that exist on the Forest. Decommissioning would, however, provide a long-term benefit to aquatic and riparian resources once it became effective (i.e., when the vegetation is established). Closing roads by installation of gates may slowly provide benefits over time, by not allowing continued rutting of road surfaces, but recovery is slower than if a road is decommissioned (i.e., ripped). Since road prisms will not be removed where they exist in floodplains (Appendix B - Road Decommissioning Protocol), floodplain and stream functions could be adversely affected by the confinement presented by these features, even with road decommissioning and/or closure. This is the reason for including closed roads as sources of impact in the assessment of effects.

Consequences Which Vary by Alternative - Direct impacts to streams and riparian areas are of three general types (p. IV-19, RFP-FEIS)

- 1 Changes in riparian soil, vegetation and streambank characteristics,
- 2 Direct in-channel alterations (e.g., putting a structure into a stream or altering its geometry),
- 3 Changes in the amount of sediment delivered to streams and therefore the load that the stream must transport (Note some of this may be a result of indirect effects)

Roads and trails in Aquatic Influence Zones (AIZs) have the potential to cause the impacts listed in numbers 1 and 3, above. The greatest overall potential for direct impacts would exist under Alternative 1M, with 863 miles (3020 acres) of roads and trails in AIZs (Table IV-2), followed by Alternatives 3M(+), 3M, and then 3M(-) - the latter having 641 miles (2244 acres) of AIZ roads and trails. Such a decrease in roads and trails within the AIZ means a proportional decrease in the potential for sediment delivery to streams, for delivery of other pollutants and for detrimental impacts to riparian areas (RFP-FEIS, page IV-20). A relative comparison of the four alternatives follows.

Alternative 1M vs 3M(+) - Alternative 1M would have more open, motorized roads and trails than 3M(+) and the other 3M alternatives along Fritz Cr , Henrys Fork, Brockman Cr , East and West Camas Cr , and Sheridan, North Moody, and Kelly Canyon These streams are either listed by the State as existing or proposed Water Quality Limited (WQL) streams or are streams recognized as being potentially impacted by adjacent roads Therefore, there is more potential for adverse effect to WQL streams in Alternative 1M than in the other alternatives However, improvement of the Skyline Road in Alternative 1M would reduce the risk of impacts to water quality in at least one location

Table IV-2 Indicators of Potential Effects to Water Quality

Alternatives	1M	3M(+)	3M	3M(-)
Miles of rd/tr in AIZ	863	702	677	641
Acres of rd/tr in AIZ	3,020	2,457	2,370	2,244
Number of stream crossings	4,248	3,263	3,153	2,988

Alternative 3M(+) vs Alternatives 3M and 3M(-) - Under Alternative 3M(+), there would be approximately 13 more miles of road and motorized trail along intermittent tributaries to perennial streams than under Alternative 3M, with the associated potential to deliver sediment to streams Most of these miles are on the Dubois Ranger District There are also approximately 12 more miles along probable perennial stream reaches than under 3M and again, most of the miles are proposed on the Dubois Ranger District The most noteworthy differences between Alternative 3M(+) and Alternative 3M would include the following conditions in 3M(+) which would not exist in Alternative 3M

- Proposed open roads and trails up Fritz Creek under 3M(+) are in the headwaters of a perennial stream that has its lower reaches (from the Forks to Medicine Lodge Creek) listed as Water Quality Limited (WQL)
- The four wheel drive road/trail up Grouse Canyon under 3M(+) would be along a perennial stream which flows into a listed WQL stream (Warm Springs Creek)
- Two roads/trails would exist under 3M(+) up intermittent tributaries to West Camas Creek, which flows into Camas Creek - a listed WQL stream
- A road/trail crosses the headwaters of tributaries to Horseshoe Creek under 3M(+), which is WQL listed

All roads or motorized trails being proposed for deletion under Alternative 3M(-) are on the Palisades and Teton Basin Ranger Districts Approximately 21 miles are proposed to be dropped along probable perennial reaches of stream, while an additional 10 miles are proposed for deletion along intermittent tributaries to perennial streams Noteworthy deletions include the following

- Patterson Creek the road is confining the creek and is frequently flooded at the lower end The district is considering graveling the flooded section of the road and installing a culvert to remedy the wet area problems Under Alternative 3M(-) the road would be closed and the impacts to riparian-dependent resources reduced
- Henderson Creek AIZ Road Inventory Forms cited this road as confining the stream channel Closing it would benefit riparian-dependent resources
- Murphy Creek, Pole Canyon, and Patterson are included in the WQL reach of the Teton River that includes the headwaters to Trail Creek confluence
- North and South Indian Creeks (from the Wyoming state line to Indian Creek) are newly proposed for listing as WQL on the 1998 list
- There is a gully in the bottom of Long Spring Canyon that developed in the existing road during spring runoff in 1997 Watershed specialists advised moving the trailhead further down the

canyon to avoid large-scale vehicle **use** where the gully occurred. An improved road/trail could exacerbate runoff-related problems, while in contrast, leaving the area undeveloped and rehabilitated under **3M(-)** would reduce the probability of similar impacts.

Stream crossings, including both fords and those that have crossing structures (mainly culverts), have the potential to cause the impacts listed in numbers 1, 2, and 3 (above) during construction, and numbers 2 and 3 in the long run. Unprotected ford crossings may cause accelerated sediment delivery to streams via five major processes (Brown, 1994)

- a undercutting of banks due to vehicle bow-wave attack on banks (waves created by the vehicle),
- b creation of wheel ruts (on approaches) and the concentration of surface runoff after a precipitation event ,
- c backwash created by water draining from a vehicle as it emerges after fording a stream,
- d the existence of tracks, and therefore areas of exposed surface, and
- e compaction and subsequent reduction in infiltration rates of soils, leading to increased surface runoff

Although culverts and bridges reduce or eliminate these effects, placement and maintenance of structures still creates sediment sources, and approaches to crossings may still be rutted during precipitation events or early in spring. For all these reasons, stream crossings are used as an indicator of potential impacts to water resources. Potential for adverse impacts associated with stream crossings is highest under Alternative 1M, with 4248 crossings. This potential then decreases from Alternative **3M(+)**, through **3M**, to a low under **3M(-)** which has a total of 2988 stream crossings.

Indirect effects include higher water quantities (flows) from Alternative 1M than from the 3M alternatives which would be approximately the same in terms of quantity. This is a result of higher delivery to streams due to greater amounts of collection surfaces and more efficient delivery systems (culverts, ditches, etc).

Cumulative Effects - Effects discussed above would be cumulative in the sense that all roads remaining under each of the alternatives, regardless of when they were constructed, would contribute to any resulting effects to streams and riparian areas. Potential for sediment delivery to streams, and changes in other channel and water quality parameters (e.g., water temperature) would all be reflected in the indicators chosen. Actual implementation of Best Management Practices and Revised Forest Plan (RFP) objectives, standards, and guidelines will largely determine the on-the-ground success of management in protecting aquatic and riparian-dependent resources. This will be independent of the alternative chosen. All alternatives would meet State water quality standards (RFP-FEIS, page IV-21) Forest-wide except for localized areas with possible sedimentation concerns.

Fisheries

Indicators

- 1 Miles of open and closed road and motorized trail within AIZs occupied by cutthroat trout
- 2 Number of stream crossings of open and closed road and motorized trail within cutthroat trout streams

Consequences Common to A// Alternatives

1 Miles of Open and Closed Road and Motorized Trail - Impacts to AIZ's along cutthroat trout streams from land management activities associated with livestock grazing, grazing by recreational stock, camping in designated and dispersed sites, fishing, firewood cutting, and vehicular travel on and off of designated routes will continue under all alternatives. These activities are secondary impacts associated with roads and motorized trails and tend to increase with increased access (Furniss, et al 1991). RFP standards and guidelines do not fully protect AIZs, they merely limit the amount and type of impacts which are permissible (refer to RFP pps III-106-112). Additional impacts may occur which are associated with inadvertent, unauthorized or planned events such as human caused fire, forest insect and disease due to fire exclusion, or violations of vehicular travel regulations. Also,

impacts associated with natural processes such as natural levels of wildfire, forest insects and disease, and erosion will continue regardless of alternative implemented

Under any of the alternatives, there are at least 545 stream crossings and 157 miles of road and motorized trail within AIZ's occupied by cutthroat trout. These roads, motorized trails, and stream crossings will continue to degrade cutthroat trout habitat as long as they exist (unless completely decommissioned, e.g. removed). Roads, motorized trails, and their associated stream crossings tend to modify stream structure and function (Furniss et al. 1991, King 1989). Roads located within stream floodplains effectively reduce the size and shape of the floodplain. When a stream no longer has access to its floodplain, stream energy is adjusted (equalized) by increasing stream velocity, resulting in downcutting or lateral scour of the stream channel. When roads impinge on stream floodplains, stream sinuosity is reduced. Pool quality and quantity are reduced when stream courses are straightened. Sediment is increased through road construction and maintenance and through stream erosion caused when roadbeds cause stream confinement. When sediment is increased beyond what the stream can transport, it can alter the productivity and character of the stream. As pool size is reduced due to sediment deposition, the number of large age class fish that the stream can support is also reduced (McIntyre 1991). Unnaturally high amounts of sediment deposited in streams can settle in spawning gravel and kill cutthroat eggs and embryos and reduce fry development (Thurrow 1991, Hausle and Coble 1976, and Furniss et al. 1991). Sediment also reduces the productivity of aquatic invertebrates used as forage by cutthroat trout (Cordone and Kelly 1960). When trees and shrubs are removed within road rights-of-way, woody debris is removed from the stream ecosystem. This reduces the amount of woody substrate in the stream and reduces many aquatic invertebrates. Woody debris also forms pools and creates areas of spawning gravel deposition. Pools provide necessary hiding and resting cover for cutthroat trout.

2 Number of Stream Crossings Within Cutthroat Trout Streams - Same as above

For further details of other potential consequences, refer to RFP-FEIS, page IV-19

Consequences Which Vary by Alternative

1 Miles of Open and Closed Road and Motorized Trail - Table IV-3 displays the number of stream crossings, miles of open/closed road and motorized trail, and miles of decommissioned road within AIZ's occupied by cutthroat trout that would be allowed under each alternative. Alternative 1M would allow the most total miles of road and motorized trail at 203. Alternative 3M+ would allow 179 total miles. Alternative 3M would allow 170 total miles. Alternative 3M- would allow the fewest at 157 total miles. Conversely, under Alternative 1M, no roads would be decommissioned, while under Alternative 3M+, 10 miles would be decommissioned, and under Alternatives 3M and 3M-, 13 miles would be decommissioned. Approximately one mile of road along Ching Creek would be open under Alternatives 1M and 3M+ but closed under Alternatives 3M and 3M-. Nearby Moose Creek would have 0.7 mile of open road in Alternative 3M+ that would be closed in all other alternatives.

There is a difference between alternatives in the amount of motorized trail access in cutthroat trout habitat. No motorized trail would be decommissioned under any alternative. Motorized trails in cutthroat trout habitat, which vary by alternative, affect primarily Calamity, Rainey, North Indian, and South Indian Creeks as described in Table IV-4. Rainey Creek is a very high priority stream for protection because it is one of four main spawning tributaries supporting the cutthroat trout fisheries on the South Fork Snake River. The specific type and amount of impact of increased motorized access to the streams listed above would depend upon the specific road or trail surface, road or trail location, type of stream crossing(s), amount and type of use, season of use, level of user compliance, watershed health and stability, and fish population health on each site.

Up to 13 miles of road would be decommissioned within cutthroat AIZ (Table IV-3). This would include culvert and culvert fill removal and seeding of bare soil adjacent to streams, but not road fill removal within the stream floodplain (Appendix B - Road Decommissioning Process Guidelines). Where road fill would remain in the stream floodplain, stream structure and function would continue to be impaired. Where this is extensive, the rate of recovery of stream structure and function would be very slow and total recovery of the area may not occur (would remain nearly the same). Where roads occur primarily at stream crossings, (as opposed to paralleling the stream), recovery of decommissioned road segments would be relatively rapid (3-5 years) and complete. It is expected that trees and

shrubs would become established within the abandoned rights-of way within approximately 7-10 years. These trees and shrubs would provide shade within 20-30 years and provide woody material to the stream environment within 100-400 years. Recruitment of large wood to the stream would improve stream structure and function.

Table IV-3 Number of Stream Crossings and Miles of Open/closed Road, and Motorized Trail Within AIZ's Occupied by Cutthroat Trout by Alternative

Alternative	1M	3M(+)	3M	3M(-)
Number of stream crossings	618	610	595	545
Open & closed road miles	122	109	104	106
Open motorized trail miles	81	70	66	51
Decommissioned road miles	0	10	13	13

Table IV-4 Miles of Motorized Trail Within AIZs Occupied by Cutthroat Trout Streams Showing the Greatest Differences Between Alternatives

Alternative	1M	3M(+)	3M	3M(-)
STREAM -				
Calamity	2	2	2	1
Rainey	16	16	12	9
North Indian	11	11	11	0
South Indian	9	9	9	0

2 Number of Stream Crossings Within Cutthroat Trout Streams - The number of stream crossings existing under each alternative is displayed in Table IV-3. The number of stream crossings increases as the miles of open and closed road increases. The general impacts of stream crossings are similar to that of roads and motorized trails within the AIZ and are described above. Specifically, stream crossings are of three general types: ford, culvert, and bridge.

Stream fords tend to generate sediment at the crossing site, and if not properly designed or constructed, can channel streamflow down the road or trail. Culverts may halt fish movements during low water conditions and during spawning migrations (Furniss et al 1991). Culverts may become clogged and cause the stream to scour out portions of roads which causes excessive sediment delivery to streams. Culvert crossings tend to impinge upon the stream floodplain and may alter the stream gradient. Culverts occasionally wash out due to inadequate size or inadequate maintenance. Culvert failures usually result in increased sediment input to the stream. The effects of excessive sediment input are described above. Properly designed and maintained bridges tend to produce the least impact to stream structure and function and fisheries.

For further details of potential consequences, refer to RFP-EIS IV, pages 19-21.

Cumulative Effects (for Indicators 1 and 2) - The difference in cumulative effects between alternatives is not great. However, cumulative adverse impacts to cutthroat trout habitat and populations would increase as the miles of road and stream crossings increase. Most of the healthy cutthroat trout populations occur within unroaded or slightly roaded drainages.

Cutthroat trout are also affected by roads outside the AIZ, livestock grazing, fishing, streambank trampling by fishermen, OHV use, logging, firewood cutting, past logging within AIZs, and so on.

Although it is unlikely that any of the proposed alternatives would threaten the population viability of native cutthroat trout over the next 10-15 years, differences in rate of recovery of degraded habitats and overall habitat quality would result from implementation of the various alternatives (see Appendix D of this DEIS). Fisheries habitat quality, including that for native cutthroat trout, would be the lowest

under Alternative 1M Alternative 1M would result in a slow rate of recovery of degraded habitats Alternatives 3M(+), 3M, and 3M(-) would result in a moderate rate of recovery of degraded habitats and slightly higher levels of fish habitat quality

Wildlife Associated with Aquatic and Riparian Ecosystems

Process Paper D and the FEIS for the Revised Forest Plan are incorporated by reference and present additional information about wildlife populations and habitat which will not be repeated in this EIS, because it is not pertinent to the issues of this analysis

Bald Eagle Habitat

Consequences Common to A//Alternatives - All of the bald eagle nesting territories on the Targhee National Forest, except for a couple of territories along Palisades Reservoir, contain roads and trails either within their primary use areas (Zones I and II) or their total foraging areas Most of these roads and trails were present prior to the time when the bald eagles established their territories (most of the bald eagle territories became established on the Forest from the mid-1970's to the present) For the four alternatives being considered in this EIS, there is no difference in the miles of roads and trails within bald eagle territories

Forest-wide standards and guidelines for bald eagles provide management direction for roads and trails in bald eagle habitat, and this management direction is the same in all Alternatives The following management prescriptions also provide suitable habitat for bald eagles 2 9 1, 2 9 2, 2 3, 2 4, 2 5, and 2 8 3 All existing bald eagle nesting territories will be maintained in all alternatives

Vehicular traffic (including watercraft) traveling along prescribed routes or within strict spatial limits and at relatively predictable frequencies is least disturbing to bald eagles (Greater Yellowstone Bald Eagle Working Group, 1996).

In a study along the Snake River in Wyoming (reported in Greater Yellowstone Bald Eagle Working Group, 1996), some bald eagle pairs' primary use areas were on the most heavily impacted section of the River Despite continuous and often highly intensive human use, eagles shifted their activity patterns in apparent response to periods when their presence would be least obvious to humans - very early morning and evening Eagles used perches on the shoreline of the Snake River with much greater frequency and duration than those on the opposite shore, where a heavily used state highway and associated boat ramps, campgrounds, and vehicle pullouts were situated

Some bald eagles are more tolerant of human activity in the Greater Yellowstone area than others. There are apparently "urban" and "rural" eagles Mean distance at which resident eagles flushed from human activity was greater when relative exposure to human activity was less Thus, eagles in the vicinity of continuously inhabited areas of high human density may become habituated to human presence and tolerant of certain human activities more than their rural counterparts Urban eagles may be exposed to more human activity at gradually increasing levels, usually within clearly defined limits (towns, villages, roads) while human activity to which rural eagles are exposed is distributed and moving randomly (campgrounds, hikers, boats) at varying intensities and often seasonal and abrupt Whether individual eagles become progressively more tolerant to human activity over time or if areas subjected to excessive human activity are occupied by more tolerant eagles is unknown (Greater Yellowstone Bald Eagle Working Group, 1996)

Cumulative Effects- The Forest-wide standards and guidelines for bald eagle nest zones and primary use areas apply to human activities which the Forest Service has authority to manage Bald eagle nest zones and primary use areas occur on adjacent National Forests, BLM lands, state and private lands Along the South Fork of the Snake River, a "Snake River Activity/Operations Plan" was approved by the BLM and the Forest Service in 1991 Bald eagle habitat management was a key component of that Plan

Management actions of other agencies, such as management of fishing and fish populations by the State Fish and Game agencies, and management of river flows by the Bureau of Reclamation and the SE Idaho irrigators, may have positive or negative effects on the bald eagle population In some places, such as where summer homes have been built or are being built on private lands, additional roads and trails have been or are being built in bald eagle habitat However, at this time, we have no

indication that this additional access has been or will be detrimental to maintaining a recovered bald eagle population in SE Idaho

According to records which we have been able to compile from 1972 to the present, the bald eagle population has increased in SE Idaho and currently exceeds recovery plan goals

Trumpeter Swan Habitat

Consequences Common to A// Alternatives - The response of trumpeter swans to roads and trails varies greatly. Some swans are more tolerant of human activity than others. Swans in the vicinity of continuously inhabited areas of high human density may become habituated to human presence and tolerant of certain human activities, such as the swans which have historically nested along U S Highway 20 in Island Park. Vehicular traffic along prescribed routes or within strict spatial limits and at relatively predictable frequencies is least disturbing to swans. Whether individual swans become progressively more tolerant to human activity over time or if areas subjected to excessive human activity are occupied by more tolerant swans is unknown.

For the four alternatives being considered in this EIS, there is no difference in the miles of open roads and motorized trails which would have an effect on trumpeter swan habitat. Forest-wide goals, standards and guidelines provide the same management direction and protection for trumpeter swans in all alternatives. All trumpeter swan habitat is also within the aquatic influence zone management prescription. This management prescription has eight guidelines specifically dealing with roads and trails. Suitable habitat will be maintained in all alternatives.

Cumulative Effects - Cumulative effects are the same as discussed in the FEIS (page IV-22) for the Revised Forest Plan which indicates many of the lakes and ponds historically used by trumpeter swans are naturally filling in with sediment and are becoming too shallow for swan use.

Spotted Frog Habitat

Consequences Common to A// Alternatives - The aquatic influence zone management prescription provides the same management direction for spotted frog habitat in all alternatives. This management prescription has eight guidelines specifically dealing with roads and trails. This management direction provides suitable habitat conditions for spotted frogs. With our existing knowledge of habitat and populations, we expect the existing known distribution and abundance of spotted frogs on National Forest lands will be maintained in all alternatives.

Cumulative Effects - In some places, such as on private lands, additional roads and trails have been or could be built in wetland and riparian habitats which could adversely affect spotted frog habitat and populations. Other cumulative effects are the same as discussed in the FEIS (page 1\1-2223) for the Revised Forest Plan.

Common Loon Habitat

Consequences Common to A// Alternatives - All alternatives are the same in respect to roads and trails in the proximity of potential common loon habitat on the Forest. The aquatic influence zone management prescription provides the same management direction for common loon habitat in all alternatives. This management prescription has eight guidelines specifically dealing with roads and trails. The Revised Forest Plan has an objective to evaluate the potential to provide and maintain suitable breeding habitat for common loons at specific sites on the Forest. If this evaluation proves that these sites are suitable breeding habitat for common loons, the Forest is to develop common loon management plans for these sites. Current habitat conditions will be perpetuated at these sites in all alternatives.

Cumulative Effects - Recreational fishing activity is encouraged by the State Fish and Game Departments at some of the lakes which have had documented common loon observations. Recreational activity during the loon nesting and brood rearing seasons can be detrimental, especially on small lakes and ponds where birds would not be able to find seclusion away from human activity.

Harlequin Duck Habitat

Consequences Common to All Alternatives - There are four creeks on the Forest which have had documented harlequin duck observations, including the rearing of broods. Portions of these four creeks have existing roads and trails adjacent to them. All of the alternatives maintain the presence of existing roads and trails along these four creeks. A Forest-wide guideline, which applies to all alternatives, establishes management direction to avoid establishing new trails, new roads, or new recreation facilities within 300 feet of any stream reach with documented harlequin duck breeding activity. Also, the aquatic influence zone management prescription provides the same management direction for harlequin duck habitat in all alternatives. This management prescription has eight guidelines specifically dealing with roads and trails. Existing habitat conditions for harlequin ducks will be maintained in all alternatives.

Cumulative Effects - Portions of the four creeks with harlequin duck activity have livestock grazing, existing recreational facilities, are open to fishing and other dispersed recreation activity. The effects of these activities is unknown. However, harlequin duck presence has existed with these existing activities.

TERRESTRIAL ECOSYSTEMS

Upland Forested Ecosystems

These ecosystems were addressed by the RFP-FEIS (page IV-24-25) and these alternatives will have little or no effects.

TES and Biodiversity

Consequences Common to All Alternatives - Site-specific activities such as culvert or fill material removal along roads to be decommissioned will be evaluated prior to disturbance to insure compliance with direction and policy of no loss to the threatened Ute ladies'-tresses (*Spiranthes diluvialis*) or sensitive species and protection of habitats of high plant biodiversity, e.g. peatlands. With our existing knowledge of Ute ladies'-tresses occurrence on the Forest (floodplain of the South Fork of the Snake River), we expect that the existing known distribution and abundance of the species will be maintained in all alternatives.

Cumulative Effects - Forest-wide, implementation of all alternatives is not likely to significantly or adversely affect the protection of TES or biodiversity indicator plant species. However, the potential of cumulative adverse impacts to these species and their habitat would increase as the miles of road increase. These species can also be affected by livestock grazing, natural forest or riparian habitat succession, OHV use, vegetation manipulation (e.g. logging, prescribed fires), exotic plant introduction not associated with roads, wildfires and so on.

Impacts to Ute ladies'-tresses known populations along the South Fork of the Snake River such as livestock grazing, management of river flows and recreation have been addressed in a joint Forest/BLM Biological Assessment, separate from the DEIS.

Upland Nonforested Ecosystems

Consequences Common to All Alternatives - Implementation of all four alternatives is not likely to significantly or adversely affect the management of the upland nonforested vegetation.

Consequences *Which Vary by* Alternative - None.

Cumulative Effects - Forest-wide, implementation of all alternatives is not likely to significantly or adversely affect the management of upland nonforested vegetation.

Noxious Weeds

Consequences Common to All Alternatives - The effects of noxious weed management are disclosed in the 1987 Targhee National Forest Noxious Weed EA and Decision Notice and are incorporated by reference into this analysis and the 1997 FEIS for the Revised Forest Plan (RFP-FEIS page IV-27). Regardless of which alternative is selected, management of noxious weeds does not change.

Consequences Which Vary by Alternative - Obviously, motorized vehicles on roads and trails that are open for travel contribute to the spread of noxious plants. On the Targhee National Forest, most of the infestations of noxious weeds are along roads open to motorized vehicles, rather than trails. Therefore, Alternative 1M would tend to have more potential for noxious weed infestations than the three 3M alternatives which have less open, motorized roads. Decommissioned roads will be monitored for new infestations and appropriate control measures will be taken.

Cumulative Effects - Forest-wide, implementation of any of the alternatives is not likely to significantly or adversely affect noxious weed management activities.

Wildlife Associated with Terrestrial Ecosystems

Process Paper D and the FEIS for the Revised Forest Plan are incorporated by reference and present additional information about wildlife populations and habitat which will not be repeated in this EIS, because it is not pertinent to the issues of this analysis.

Elk Vulnerability (EV)

Elk vulnerability (EV) is defined as a measure of elk susceptibility to being killed during the hunting season (Lyon and Christensen 1992, IDFG letter May 12, 1995). EV models (Unsworth et al. 1993) have been proposed as a predictive tool that managers can use to predict mortality rates and monitor elk vulnerability (IDFG letter May 12, 1995). There are two primary variables in this EV analysis: 1) the density of open motorized roads, open motorized trails, and motorized cross-country travel, 2) the density of hunters, expressed in terms of hunter-day densities.

For the Idaho portion of the Forest, this EV analysis is used to predict percent mortality of bull elk during the general antlered elk rifle hunting season. For the Wyoming portion of the Forest, this EV analysis is used to predict percent mortality of bull elk during the general license any elk rifle hunting season. State Fish and Game Departments have goals or thresholds for percent bull elk mortality. For the Idaho portion of the Forest, these goals or thresholds are 50 percent or 60 percent depending on the particular Game Management Unit. For the Wyoming portion of the Forest, these goals or thresholds are 50 percent. The State Fish and Game Departments also have goals pertaining to the number of branch antlered bulls in the harvest and the population (which is explained in Process Paper D).

The primary effect over which the Forest Service has control in this EV analysis is the density of open motorized roads, open motorized trails, and motorized cross-country travel. (Motorized cross-country travel was previously decided in the Revised Forest Plan, and is not under consideration in this EIS. The amount of motorized cross-country travel allowed in the Revised Forest Plan is included in this EV analysis.) The combined density of open motorized roads, open motorized trails, and motorized cross-country travel is referred to as 'motorized access density' (MAD). Process Paper D of the RFP-FEIS describes the details of EV analysis.

Consequences Which Vary by Alternative - Table IV-5 displays the hunter-day densities, the MAD, and the estimated percent bull elk mortality for each principal watershed (Figure IV-1) on the Forest for each alternative. In Alternative 1, five watersheds exceed the goals/thresholds of the State Fish and Game Departments for EV, this is about 15 percent of the Forest not meeting the State EV goals or thresholds. In Alternative 3M+, three watersheds exceed the goals/thresholds of the State Fish and Game Departments for EV, this is about 10 percent of the Forest not meeting the State EV goals or thresholds. In Alternatives 3M and 3M-, two watersheds exceed the goals/thresholds of the State Fish and Game Departments for EV, this is about 9 percent of the Forest not meeting the State EV goals or thresholds.

Cumulative Effects - This analysis does not include bull elk mortality associated with archery seasons, controlled hunt seasons, black powder hunt seasons, or other special seasons which the State Fish and Game Departments may authorize. Watersheds which are at or near the threshold level in this analysis may actually exceed the thresholds when mortality from other seasons is considered.

Hunter-day densities were provided by the State Fish and Game Departments. If hunter-day densities change in the future, due to changes in hunting seasons, motorized access restrictions, or human populations, then this analysis will need to be updated.

The degree of public compliance with, and/or enforcement of the Forest Travel Plan is also an important factor related to EV Noncompliance will result in higher EV

Elk Habitat Effectiveness (EHE)

EHE is defined as the percentage of available habitat that is usable by elk outside the hunting season (Lyon and Christensen 1992) For this EHE analysis, it is the spring, summer, and early fall habitat that is usable by elk outside the general elk rifle hunting seasons EHE is not a measure of elk populations and it is not a measure of habitat carrying capacity (Lyon and Christensen 1992)

There are two primary variables in this EHE analysis 1) the density of open motorized roads and open motorized trails, 2) elk hiding cover (measured as a percentage of an area in cover) (The amount of elk hiding cover was previously decided in the Revised Forest Plan, and is not under consideration in this EIS) Process Paper D describes the details of EHE analysis

Consequences Which *Vary by Alternative* - Table IV-6 displays cover values and motorized access values (based on the density of open roads and open motorized trails), and EHE for each principal watershed on the Forest for each alternative In Alternative 1, EHE ranges from 0.45 to 0.60 in the watersheds, with a Forest-wide average of 0.59 In Alternative 3M+, EHE ranges from 0.50 to 0.60 in the watersheds, with a Forest-wide average of 0.62 In Alternatives 3M and 3M-, EHE ranges from 0.50 to 0.60 in the watersheds, with a Forest-wide average of 0.63

Cumulative Effects - All roads and trails receiving motorized use are incorporated in this EHE analysis All previous timber harvesting, plus all future proposed timber harvesting are incorporated in this EHE analysis The effects of planned and unplanned fires is not incorporated into this EHE analysis, as it was not possible to predict where, when, and how many acres would potentially burn

The degree of public compliance with, and/or enforcement of the Forest Travel Plan is also an important factor related to EHE Noncompliance will result in lower EHE

Effects of Motorized Use on Trails

During the Revised Forest Plan, there was considerable debate about whether the effects of motorized use on trails was equal in magnitude to the effects of motorized use on roads We are not aware of any new research which would shed new light on this debate The discussion and analysis about this debate presented in the FEIS for the Revised Forest Plan, and in Process Paper D, is still valid in our opinion Therefore, this analysis also considers motorized roads and trails having equal effects on wildlife as indicated in the RFP-FEIS No additional discussion on this debate is presented in this EIS

Table IV-5 Hunter-day Density, Motorized Access Route Density, and Estimated Percent Bull Elk Mortality for Each Principal Watershed for Each Alternative

Water-shed 1/	Hunter-Day den-sity 2/	Alt 1 MAD 3/	Alt 1 Esti-mated percent Bull Elk Mortal-ity	Alt 3M+ MAD	Alt 3M+ Esti-mated percent Bull Elk Mortal-ity	Alt 3M MAD	Alt 3M Esti-mated percent Bull Elk Mortal-ity	Alt 3M- MAD	Alt 3M- Esti-mated percent Bull Elk Mortal-ity
2 ld	8.5	1.37	36	1.21	33	1.21	33	1.13	32
3 ld	8.5	0.65	26	0.48	24	0.48	24	0.48	24
4 ld	8.5	0.38	23	0.23	21	0.23	21	0.23	21
5	8.5	0.9	29	0.59	25	0.43	23	0.23	21
6	8.5	1.28	34	0.79	28	0.77	27	0.75	27
7/33	8.5	1.5	37	1.23	34	1.23	34	1.23	34
8	13.69	1.23	42	1.24	42	1.23	42	1.24	42
9a	13.69	0.6	32	0.57	32	0.57	32	0.57	32
9b	37.1	2.83	90**	2.55	89**	2.56	89**	2.56	89**
10	13.69	2.45	61**	2.38	60	2.38	60	2.31	59
11	19.95	2.85	75**	2.65	73**	2364	73**	2.64	73**
12	7.81	1.19	32	1.08	30	1.08	30	1.08	30
13	8.59	0.75	27	0.76	27	0.75	27	0.75	27
14/34	30.66	0.72	62**	0.65	61**	0.6	60	0.6	60
15 ld	13.68	0.7	34	0.72	34	0.69	34	0.69	34
16 ld	13.68	0.69	34	0.69	34	0.69	34	0.69	34
17 ld	8.5	1.32	35	0.77	27	0.77	27	0.77	27
21 ld	13.68	0.82	35	0.83	36	0.82	35	0.82	35
22	8.01	1.56	38	1.33	34	1.3	34	1.16	32
23/24	10.53	2.33	54	1.61	42	1.48	40	1.41	39
25	13.69	1.38	44	0.83	36	0.76	35	0.76	35
26a	9.51	2.12	49	1.59	40	1.55	40	1.54	40
26b	13.69	2.57	63**	1.71	49	1.46	45	1.41	44
27/28	9.51	0.99	32	0.86	30	0.72	28	0.72	28
29	9.51	1.18	34	1.00	32	0.86	30	0.86	30
30a	2.56	0.96	22	0.75	20	0.75	20	0.75	20
30b	2.56	1.8	33	1.47	28	1.46	28	1.46	28
31a	2.56	0.46	17	0.47	17	0.47	17	0.46	17
31b	2.56	1.82	33	1.13	24	0.99	23	0.99	23
36	19.99	1.18	51	0.9	47	0.9	47	0.9	47
37	19.99	0.98	48	0.82	46	0.82	46	0.82	46
38	19.99	1.61	58	1.36	54	1.36	54	1.36	54
39	19.59	1.38	54	1.28	52	1.28	52	1.28	52
40	19	1.35	52	1.05	48	1.05	48	1.05	48
16 Wy	4.97	0.36	19	0.38	19	0.36	19	0.36	19
15 Wy	4.97	0.57	21	0.57	21	0.57	21	0.57	21
21 Wy	4.97	0.38	19	0.34	18	0.35	19	0.34	18
20 Wy	4.97	0.66	22	0.51	20	0.51	20	0.51	20
19 Wy	4.97	0.99	25	0.76	23	0.82	23	0.76	23
18 Wy	4.97	0.82	23	0.76	23	0.78	23	0.76	23
17 Wy	5.65	0.45	20	0.23	18	0.23	18	0.23	18
4 Wy	9.86	0.38	24	0.23	23	0.23	23	0.23	23
3 Wy	9.86	0.22	23	0.1	21	0.1	21	0.1	21
2 Wy	9.86	1.76	44	1.32	37	1.32	37	0.65	28

1/ Refer to Figure IV-4 for locations of watersheds

2/ Hunter-Days per square mile Hunter-Day densities were provided by the State Fish and Game Agencies They are the same for all alternatives Details are presented in Process Paper D

3/ MAD = motorized access route density per square mile MAD includes the density of open roads, open motorized trails, and cross-country travel in each watershed Details are presented in Process Paper D

**Watersheds which exceed State Fish and Game agency goals/thresholds for elk vulnerability

Table IV-6 Cover Value, Motorized Access Value, and Estimated Elk Habitat Effectiveness for Each Principal Watershed for Each Alternative

Watershed 1/	Cover Value 2/	Alt 1 MAV 3/	Alt 1 Esti- mated EHE	Alt 3M+ MAV	Alt 3M+ Estimated EHE	Alt 3M MAV	Alt 3M Estimated EHE	Alt 3M- MAV	Alt 3M- Estimated EHE
2 Id	0.44	0.58	0.54	0.59	0.55	0.59	0.55	0.61	0.56
2 Wy	0.38	0.55	0.50	0.60	0.53	0.60	0.53	0.86	0.70
3 Id	0.37	0.76	0.63	0.83	0.68	0.83	0.68	0.83	0.68
3 Wy	0.42	0.91	0.75	0.96	0.78	0.96	0.78	0.96	0.78
4 Id & Wy	0.38	0.85	0.70	0.91	0.73	0.91	0.73	0.91	0.73
5	0.43	0.64	0.58	0.76	0.66	0.83	0.70	0.91	0.75
6	0.39	0.57	0.52	0.68	0.59	0.70	0.60	0.70	0.61
7/33	0.35	0.55	0.49	0.58	0.51	0.58	0.51	0.58	0.51
8	0.63	0.59	0.60	0.59	0.60	0.59	0.60	0.59	0.60
9a	0.54	0.8	0.73	0.81	0.73	0.81	0.73	0.81	0.73
9b	0.61	0.54	0.56	0.57	0.58	0.57	0.58	0.57	0.58
10	0.71	0.54	0.58	0.55	0.58	0.55	0.58	0.56	0.59
11	0.65	0.55	0.57	0.57	0.59	0.57	0.59	0.57	0.59
12	0.68	0.66	0.66	0.70	0.70	0.70	0.70	0.70	0.70
13	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
14/34	0.63	0.68	0.67	0.75	0.72	0.77	0.73	0.77	0.73
15 Id	0.65	0.74	0.71	0.73	0.71	0.74	0.72	0.74	0.72
15 Wy	0.57	0.82	0.75	0.82	0.75	0.82	0.75	0.82	0.75
16 Id	0.57	0.73	0.69	0.73	0.69	0.73	0.69	0.73	0.69
16 Wy	0.65	0.86	0.80	0.85	0.80	0.86	0.80	0.86	0.80
17 Id	0.52	0.57	0.56	0.72	0.66	0.72	0.66	0.72	0.66
17 Wy	0.42	0.84	0.70	0.92	0.76	0.92	0.76	0.92	0.76
18 Wy	0.32	0.85	0.66	0.87	0.68	0.86	0.67	0.87	0.68
19 Wy	0.33	0.78	0.63	0.88	0.69	0.86	0.67	0.88	0.69
20 Wy	0.39	0.77	0.65	0.83	0.69	0.83	0.69	0.83	0.69
21 Id	0.62	0.67	0.66	0.67	0.66	0.67	0.66	0.67	0.66
21 Wy	0.57	0.85	0.77	0.86	0.79	0.86	0.78	0.86	0.78
22	0.47	0.55	0.53	0.55	0.53	0.56	0.54	0.57	0.55
23/24	0.51	0.46	0.47	0.54	0.53	0.55	0.54	0.56	0.55
25	0.46	0.58	0.55	0.72	0.65	0.72	0.64	0.72	0.64
26a	0.3	0.54	0.46	0.59	0.50	0.60	0.50	0.60	0.50
26b	0.32	0.51	0.45	0.59	0.51	0.70	0.58	0.69	0.57
27/28	0.27	0.63	0.51	0.68	0.54	0.74	0.57	0.74	0.57
29	0.23	0.62	0.48	0.69	0.52	0.74	0.55	0.74	0.55
30a	0.32	0.68	0.56	0.76	0.61	0.76	0.61	0.76	0.61
30b	0.36	0.65	0.56	0.78	0.64	0.78	0.65	0.78	0.65
31a	0.3	0.82	0.64	0.81	0.63	0.81	0.63	0.82	0.64
31b	0.31	0.56	0.48	0.72	0.58	0.77	0.61	0.77	0.61
35	0.34	0.67	0.57	0.70	0.58	0.70	0.58	0.70	0.58
36	0.48	0.59	0.56	0.69	0.63	0.69	0.63	0.69	0.63
37	0.39	0.61	0.54	0.67	0.59	0.67	0.59	0.67	0.59
38	0.32	0.56	0.48	0.58	0.50	0.58	0.50	0.58	0.50
39	0.33	0.56	0.49	0.57	0.50	0.57	0.50	0.57	0.50
40	0.32	0.58	0.50	0.64	0.54	0.64	0.54	0.64	0.54

1/ Refer to Figure IV-1 for locations of watersheds

2/ Cover Value is based on the amount of elk hiding cover provided by vegetation in each watershed. If 50 to 60 percent of the watershed vegetation provides elk hiding cover, the cover value is 1.0, the cover value declines from 1.0 when there is more than 60 percent or less than 50 percent of the watershed vegetation providing elk hiding cover. Details are presented in Process Paper D.

3/ MAV = motorized access value. MAV is based on the density of open roads and open motorized trails in the watershed. An MAV of 1.0 would mean no open roads and open motorized trails in a watershed. As the density of open roads and open motorized trails increases, the MAV value declines. Details are presented in Process Paper D.

Figure IV-1 Targhee National Forest Principal Watersheds

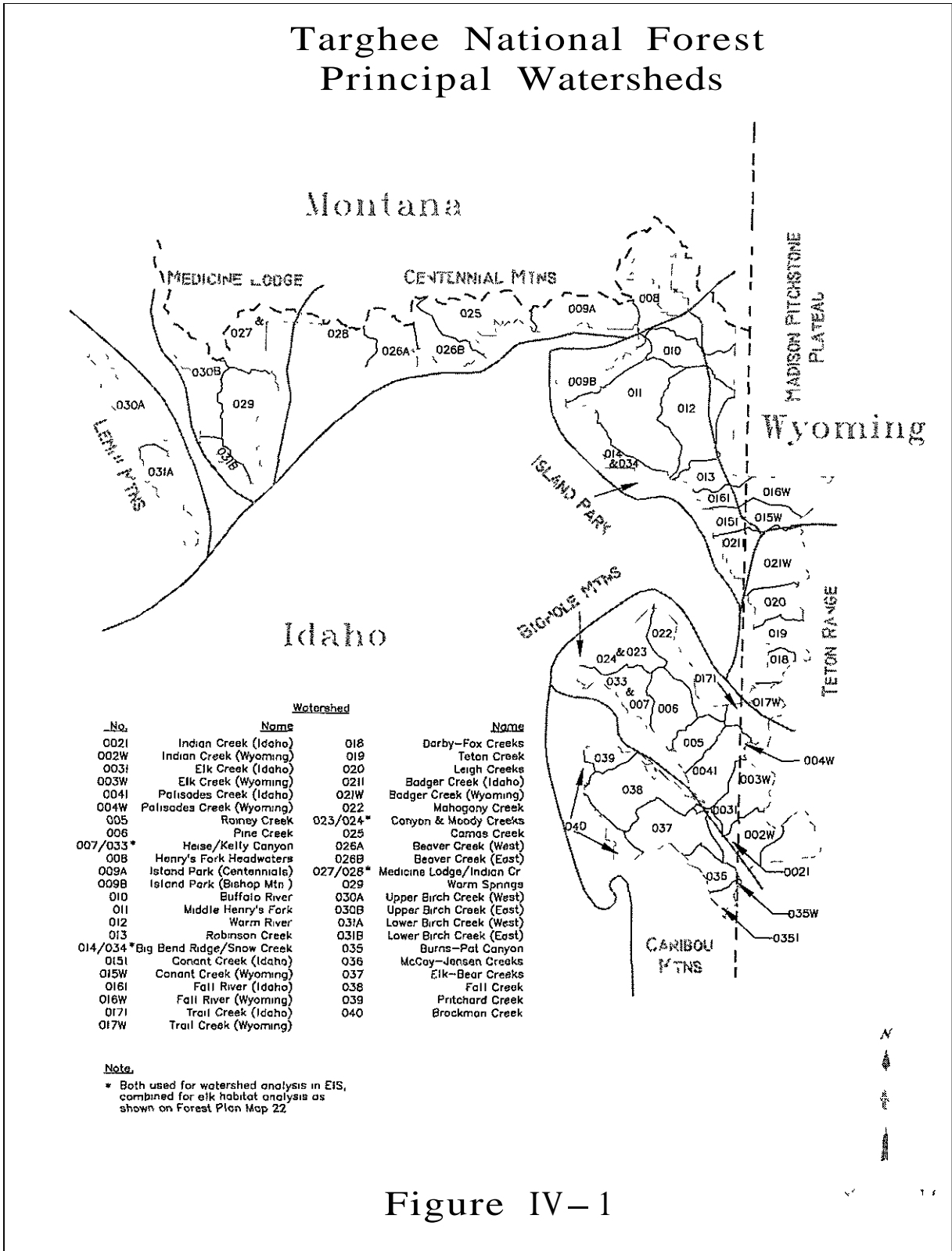


Figure IV-1

Elk and Deer Winter Ranges

Motorized access during the winter period on elk and deer winter ranges was decided in the Revised Forest Plan. Those decisions are not changed in any of these alternatives. The effects on elk and deer winter ranges are the same as described in the Revised Forest Plan (page IV-30). As stated in the Revised Forest Plan, improvements in the number of acres meeting DVC's and increased restrictions on cross-country snowmachine use will result in improved winter range conditions for deer and elk, but populations may not increase over existing levels.

Grizzly Bear Habitat

The following overview on the effects of motorized access is summarized from the Interagency Grizzly Bear Committee Task Force Report, 1994 and 1998.

"History has demonstrated that grizzly bear populations survived where frequencies of contact with humans were very low. Populations of grizzly bears and other large carnivores persisted in those areas where large expanses of relatively secure habitat were retained and where human induced mortality was low. In the lower 48 conterminous states, this is primarily associated with National Parks, Wilderness areas and large blocks of public lands.

By managing motorized access on the landscape, the following grizzly bear management objectives can be met:

- Minimize human interaction and potential grizzly bear mortality
- Minimize displacement from important habitats
- Minimize habituation to humans
- Provide relatively secure habitat where energetic requirements can be met

Historically, management of motorized use has been primarily accomplished through restriction of certain types of motorized use on established access routes. Restrictions on vehicle use through timing and type of vehicle have been commonplace. Evaluation of the effects of motorized access have been based primarily on the density of open roads.

Recent research has indicated that evaluation of open road density alone is not a complete measure of the effects of motorized access on use of habitat by grizzly bears. In addition to open road density, total motorized access route density along with the presence of core areas, are important elements in the management of human access within grizzly bear recovery zones. Core areas are free of motorized traffic and high levels of human use. (Designated core areas were established in the Revised Forest Plan by specific management prescriptions, and are not changed by any alternative in this EIS.)

The management of human use levels through access route management is one of the most powerful tools available to balance the needs of grizzly bears and many species of wildlife with the needs and activities of humans. It has been documented in several research projects, both completed and ongoing, that unregulated human access and development within grizzly bear habitat can contribute to increased bear mortality and affect bear use of existing habitat. It is also documented that human use of grizzly bear habitat within many recovery zones continues to increase.

Habitat security conditions cannot be defined entirely by motorized access route density. Other factors such as vegetation (food, cover), concentrated human use locations (e.g. town sites, campgrounds), heavily used non-motorized trails and areas of high levels of dispersed human use will also influence the effectiveness of area in regards to habitat security. However, motorized access routes and the human use associated with these routes are one of the most easily defined and measurable factors that we can evaluate. Motorized access is also one of the more influential parameters affecting habitat security."

In January 1996 a study was completed on the relationships among grizzly bears, roads, and habitat in the Swan Mountains, Montana (Mace et al 1996, in press) The following is quoted from the summary of that study

"Seasonal use by grizzly bears of areas within a 0.5 km buffer surrounding roads was evaluated. Most grizzly bears exhibited either neutral or positive selection for buffers surrounding closed roads and roads receiving <10 vehicles/day, but avoided buffers surrounding roads having >10 vehicles/day "

Consequences Common to All *Alternatives* - Motorized access in the grizzly bear management units was a key issue in the Revised Forest Plan. The Revised Forest Plan established motorized access standards for each bear management unit on the Forest. These motorized access standards were reviewed by the U.S. Fish and Wildlife Service during consultation, and were addressed in their Biological Opinion. All of the alternatives in this EIS meet these standards (**see** Biological Assessment Update - Appendix D). There are some small differences between the alternatives, which **are** displayed in Table IV-7(a-e), however, all alternatives would comply with grizzly bear recovery objectives.

Cumulative Effects- Cumulative effects is the same as presented and discussed in the Revised Forest Plan, Process Paper D, and the Biological Opinion from the U.S. Fish and Wildlife Service, and will not be repeated here.

Table IV-7a Motorized Access for the Targhee Portion of Henry's Lake BMU, Subunit 1

	Alt 1M	Alt 3M+	Alt 3M	Alt 3M-
Motorized Road and Trail Miles				
Open Road Miles	6213			
Restricted Road Miles	2617	2592	25 92	25 92
Decommissioned Road Miles	5254	5254	5254	52 54
Open Motorized Trail Miles	7 0	7 0	7 0	7 0
Restricted Motorized Trail Miles		0 00	0 00	0 00
Total Motorized Access Route Miles	95 3	95 55	96 91	95 55
Open Road and Open Motorized Trail Route Miles	6913	6963	7099	69-63
Motorized Road and Trail Access Density (mi/sq mi)				
Open Road Density	053	054	0 55	0 54
Restricted Road Density	022	022	0.22	0 22
Open Motorized Trail Density	006	006	0 06	0 06
Restricted Motorized Trail Density	0 00	0 00	0 00	0 00
Total Motorized Access Route Density	0 82	082	0 83	0 82
Open Road and Open Motorized Trail Route Density	059	060	0 61	0 60
1/ Information in this table does not include the MS3 portion and non-National Forest portion of Henry's Lake Flat				

Table IV-7b Motorized Access for the Targhee Portion of Henry's Lake BMU, Subunit 2

	Alt 1M	Alt 3M+	Alt 3M	Alt 3M-
Motorized Road and Trail Miles				
Open Road Miles	23 92	2416	23 92	23 92
Restricted Road Miles	0 75	075	0.75	0 75
Decommissioned Road Miles	20 03	2003	20 03	20 03
Open Motorized Trail Miles	6 39	638	6 39	6 40
Restricted Motorized Trail Miles	0 00		0 00	0 00
Total Motorized Access Route Miles	31 06	31 29	31 06	31 07
Open Road and Open Motorized Trail Route Miles	30 31	3054	30 31	30 32
Motorized Road and Trail Access Density (mi/sq mi)				
Open Road Density	0 41	041	0.41	0 41
Restricted Road Density	0 01	0 01	0.01	0 01
Open Motorized Trail Density	0 11	0 11	0.11	0 11
Restricted Motorized Trail Density	0 00	0 00	0 00	0 00
Total Motorized Access Route Density	0 53	054	0 53	0 53
		052	0 52	0 52

Table IV-7c Motorized Access for the Targhee Portion of Plateau BMU, Subunit I

	Alt 1M	Alt 3M+	Alt 3M	Alt 3M-
Motorized Road and Trail Miles				
Open Road Miles	80 11	80 03	80 03	80 03
Restricted Road Miles	4847	4844	4847	48 48
Decommissioned Road Miles	96 53	96 53	96 53	96 53
Open Motorized Trail Miles	3 4	3 39	3 39	3 39
Restricted Motorized Trail Miles	0 00	0 00	0 00	0 00
Total Motorized Access Route Miles	131 98	131 86	131 89	131 9
Open Road and Open Motorized Trail Route Miles	83 51	83 42	83 42	83 42
Motorized Road and Trail Access Density (mi /sq mi)				
Open Road Density	0 59	0 59	0 59	0 59
Restricted Road Density	0 36	0 36	0 36	0 36
Open Motorized Trail Density	0 02	0 02	0 02	0 02
Restricted Motorized Trail Density	0 00	0 00	0 00	0 00
Total Motorized Access Route Density	0 97	0 97	0 97	0 97

Table IV-7d Motorized Access for the Targhee Portion of Plateau BMU, Subunit 2

	Alt 1M	Alt 3M+	Alt 3M	Alt 3M-
Motorized Road and Trail Miles				
Open Road Miles	65 18	65 36	65 07	65 07
Restricted Road Miles	2272	2272	2272	22 72
Decommissioned Road Miles	11855	11855	11855	11855
Open Motorized Trail Miles	0 2	0 2	0 2	0 2
Restricted Motorized Trail Miles	0 00	0 00	0 00	0 00
Total Motorized Access Route Miles	881	8828	8799	87 99
Open Road and Open Motorized Trail Route Miles	65 38	65 56	65 27	65 27
Motorized Road and Trail Access Density (mi /sq mi)				
Open Road Density	0 55	0 55	0 55	0 55
Restricted Road Density	0 19	0 19	0 19	0 19
Open Motorized Trail Density	0 00	0 00	0 00	0 00
Restricted Motorized Trail Density	0 00	0 00	0 00	0 00
Total Motorized Access Route Density	0 74	0 74	0 74	0 74
Open Road and Open Motorized Trail Route Density	0 55	0 55	0 55	0 55

Table IV-7e Motorized Access for the Targhee Portion of Bechler-Teton BMU

	Alt I M	Alt 3M+	Alt 3M	Alt 3M-
Motorized Road and Trail Miles				
Open Road Miles	13856	131 54	129 58	129 61
Restricted Road Miles	4671	4907	5907	4905
Decommissioned Road Miles	14524	14524	14524	14524
Open Motorized Trail Miles	2 75	264	264	2 64
Restricted Motorized Trail Miles	0 00	0 00	0 00	0 00
Total Motorized Access Route Miles	18802	18325	191 29	181 3
Open Road and Open Motorized Trail Route Miles	141 34	134 18	132 22	13225
Motorized Road and Trail Access Density (mi /sq mi)				
Open Road Density	0 46	0 44	0 43	0 43
Restricted Road Density	0 16	0 16	0 20	0 16
Open Motorized Trail Densitv	0 01	0 01	0 01	0 01
Restricted Motorized Trail Densitv	0 00	0 00	0 00	0 00
Total Motorized Access Route Density	0 63	0 61	0 64	0 61
Open Road and Open Motorized Trail Route Densitv	0 47	0 45	0 44	0 44
1/ Only includes acres within the Targhee National Forest				

Gray Wolf Habitat

Consequences Common to All *Alternatives* - The Revised Forest Plan established Forest-wide standards and guidelines implementing the nonessential experimental population rules established by the U S Fish and Wildlife Service This management direction is not changed by any of these alternatives The U S Fish and Wildlife Service stated the following concerning roads (U S Fish and Wildlife Service 1994a and 1994b)

"Based upon (1) current open road information, (2) the success of wolf packs in highly roaded habitats in Montana, and (3) that these roaded areas of public land being proposed for wolf recovery are adjacent to large (about 4-5 million acres) roadless areas, it appears unlikely that road density guidelines must be employed as a wide-spread land management strategy to support wolf recovery

This gray wolf reintroduction does not conflict with existing or anticipated Federal agency actions or traditional public uses of park lands, wilderness areas, or surrounding lands (USDI Fish and Wildlife Service 1994b) The intent of the experimental rule is that land-use restrictions not be routinely used solely to enhance wolf recovery However, land-use restrictions may be temporarily used by land or resource managers to control intrusive human disturbance, primarily around active den sites between April 1 and June 30, when there are 5 or fewer breeding pairs of wolves in a recovery area After 6 or more breeding pairs become established in a recovery area, land-use restrictions would not be needed (USDI Fish and Wildlife Service 1994a) "

Cumulative Effects - Cumulative effects is the same as presented and discussed in the Revised Forest Plan, Process Paper D, and the Biological Opinion from the U S Fish and Wildlife Service, and will not be repeated here Application of the Forest-wide standards and guidelines is expected to allow wolf pairs to receive the protection of the nonessential experimental population rule (RFP-FEIS, page IV-34)

Primary Cavity Nesting Habitat

The management direction established in the Revised Forest Plan for primary cavity nesting species is not changed by any of the alternatives in this EIS The effects presented in the Revised Forest Plan FEIS (pages IV-39-40) and Process Paper D for Alternative 3M are the same effects for all of the alternatives in this EIS This management proposal is expected to have little effect on cavity nesting habitat

Forest Owl Habitat

The management direction established in the Revised Forest Plan for forest owl species is not changed by any of the alternatives in this EIS The effects presented in the Revised Forest Plan FEIS (page IV-40) and Process Paper D for Alternative 3M are the same effects for all of the alternatives in this EIS

Furbearer Habitat

Road access concerns were discussed for American marten, fisher, lynx and wolverine in the publication titled "The Scientific Basis for Conserving Forest Carnivores American Marten, Fisher, Lynx and Wolverine in the Western United States (USDA U S Forest Service 1994) However, no specific recommendations for road density standards or guidelines for these species were presented

At this time, the analysis of furbearer habitat presented in the Revised Forest Plan FEIS (page IV-40) and Process Paper D is not changed by any of the alternatives in this EIS The effects presented in the Revised Forest Plan and Process Paper D for Alternative 3M are the same effects for all of the alternatives in this EIS

Road access concerns relating to Canada lynx have recently been summarized by the U S Fish and Wildlife Service in their proposal to list the lynx as threatened in 16 States (U S Fish and Wildlife Service 1998) However, no specific recommendations for road density standards or guidelines for Canada lynx were presented

Goshawk Habitat

All known goshawk territories on the Forest have open motorized roads and trails within portions of their territories. At this time, we do not know of any studies which document the effects of roads and trails on goshawks (Process Paper D)

The management direction established in the Revised Forest Plan for goshawk habitat is not changed by any of the alternatives in this EIS. The effects presented in the Revised Forest Plan FEIS and Process Paper D for Alternative 3M are the same effects for all of the alternatives in this EIS. The proposed management activity would maintain effective habitat and viable populations are expected to be sustained (RFP-FEIS, page IV-41)

Red Squirrel Habitat

The effects presented in the Revised Forest Plan FEIS (page IV-41) and Process Paper D for Alternative 3M are the same effects for all of the alternatives in this EIS.

Peregrine Falcon Habitat

All of the peregrine falcon nesting territories on the Forest have roads and trails within them. The presence of these roads and trails has not adversely affected the growth of the peregrine falcon population. The U. S. Fish and Wildlife Service (1994) has provided the following overview:

Other known negative factors, such as illegal shooting and collisions with wires, fences, cars, and buildings, are much **less** significant to the western American peregrine falcon at the population level. On an individual nest-site basis, human-caused disturbance or habitat alterations close to an active peregrine falcon nest can be a problem. For example, in some areas, rock-climbing is a growing sport and has resulted in nest failure. Breeding-season closure of rock-climbing cliff areas also in close proximity to nesting American peregrine falcons has recently prevented adverse effects. Power lines, especially distribution lines, cause peregrine falcon mortality, but the rate must be low, because many peregrine falcons nest successfully each year near power lines, especially in urban areas. Land-use practices adjacent to American peregrine falcon eyries that do not result in extensive habitat changes or excessive disturbance sometimes appear to have little adverse effect on nesting success. Generally, the recent apparent increase in the number of pairs of American peregrine falcons in the West provides evidence that significant adverse factors affecting the western subspecies at the population level are being alleviated or have been reduced.

The management direction established in the Revised Forest Plan for peregrine falcon habitat is not changed by any of the alternatives in this EIS. The effects presented in the Revised Forest Plan FEIS and Process Paper D for Alternative 3M are the same effects for all of the alternatives in this EIS. Suitable habitat will be maintained for all existing nesting pairs plus any new nesting pairs which may become established.

Bighorn Sheep Habitat

The management direction established in the Revised Forest Plan for bighorn sheep habitat is not changed by any of the alternatives in this EIS. The effects presented in the Revised Forest Plan FEIS (page IV-41-42) and Process Paper D for Alternative 3M are the same effects for all of the alternatives in this EIS.

Neotropical Migratory Birds

The effects presented in the Revised Forest Plan FEIS (page IV-43) and Process Paper D for Alternative 3M are the same effects for all of the alternatives in this EIS.

Predator Control

Consequences Common to All Alternatives - Implementation of any of the four alternatives is not likely to significantly or adversely affect predator management activities. The effects of predator management activities on the Targhee National Forest are incorporated by reference in this analysis from the FEIS for the 1997 Revised Forest Plan (page IV-43). Predator control activities that will occur in travel restricted areas will be coordinated and approved by the District Ranger prior to the activity and

authorized by a "travel permit" This process was initiated in the spring of 1998 and is not expected to adversely affect the open road and trail densities for any management prescription area

Consequences Which Vary *by* Alternative - None

Cumulative Effects - Forest-wide, implementation of any of the alternatives is not likely to significantly or adversely affect predator control management activities

Unique Ecosystems - Research Natural Areas

Consequences Common *to all* Alternatives - Forest-wide standards and guidelines (RFP-FEIS page III-4) apply equally with all four alternatives Also, site-specific direction is identified in the Establishment Records for existing Research Natural Areas (RNAs) Proposed RNAs will have a site specific analysis conducted at a later date to determine their suitability for RNA status Regardless of which alternative is selected the number of proposed and existing **RNA's** and their management does not change by alternative

Consequences Which Vary *by* Alternative - None

Cumulative Effects - Forest-wide, implementation of any of the alternatives is not likely to significantly or adversely affect Research Natural Area management activities

FOREST USE AND OCCUPATION

Access Management

Road and Trail System and Motorized Access

Consequences are presented for summer motorized road and trail travel only The range of alternative consequences has been found to be very similar to the consequences found in the Revised Forest Plan for those alternatives The following indicator data, when compared to the data in the RFP-FEIS, shows that RFP Alternative 1 and 2 closely resemble Alternative 1M, Alternative 3 (RFP) is close to Alternative 3M(+), and Alternative 3M (RFP) closely resembles Alternative 3M and 3M(-) in this analysis

Indicators

- 1 Miles of open, motorized roads
- 2 Miles of seasonally restricted roads
- 3 Miles of yearlong restricted roads
- 4 Miles of road decommissioned inside and outside the BMU's
- 5 Miles of open, motorized trails
- 6 Miles of seasonally restricted trails
- 7 Miles of yearlong restricted trails

Consequences Common *to All* Alternatives -There will be some reduction from current levels in miles of open, motorized roads and trails in all alternatives This would result in increased needs and costs for law enforcement and signing to manage the system of restricted roads and trails (RFP-FEIS page IV-44) The decommissioning work necessary to close the roads in each alternative will also result in some reduction in hiking, horseback riding and winter snowmachine use on roads where large amounts of rock or tree placement and ripping or trenching occur These adverse impacts will occur mostly in the grizzly bear unit road closure areas which are currently used for snowmachining and hunting

Consequences Which Vary *by* Alternative -Table IV-8 shows the comparison of alternatives in terms of the indicators listed above Alternative 1M has the most open roads and trails and the least decommissioned roads The three 3M alternative variations show only minor differences between them in

open roads or trails and decommissioned roads, but have significantly fewer open roads and trails and significantly more decommissioned roads than Alternative 1

Table IV - 8 Road and Trail Access by Alternative (Miles)

Alternative	Alt 1(M)	Alt 3M(+)	Alt 3M	Alt 3M(-)
ROADS				
Open	2,077	1,672	1,617	1,613
Seasonal Restrict	51	70	62	62
Yearlong Restrict	399	289	303	303
Decom in BMU's	467	466	463	465
Decom outside BMU's	0	473	521	524
Total Miles	2,994	2,970	2,966	2,967
TRAILS				
Open	725	536	511	454
Seasonal Restrict	0	0	0	0
Yearlong Restrict	651	862	879	933
Total Miles	1,376	1,398	1,390	1,387
Total Rds/Trs.	4,370	4,368	4,356	4,354

Costs for signing designated routes; decommissioning of roads, and providing law enforcement will increase significantly from Alternative 1M through Alternative 3M(-). This effect and others mentioned in the RFP-FEE, page IV-45-46 will be similar for these four alternatives in the same order as the range of alternatives discussed in the Plan Revision

Appendix C(M) shows the specific resource or administrative reasons why each road is open, restricted, or closed for each alternative. This information was considered throughout the analysis for each resource in this EIS.

The RS 2477 assertions by the Counties were mapped and compared to the preferred alternative (3M+) as displayed in Map #1 in the map packet. The majority of the assertions would be open to motorized travel as shown on this map. Alternative 1M would have slightly more open routes that would match assertions and Alternatives 3M and 3M(-) would have slightly less. Many of the assertions not covered by open, motorized routes on Map #1 are trails rather than roads and many of these are not open in the current travel plan. Out of 910 miles of RS 2477 assertions, 72 miles are not shown as open in 3M+ (the preferred alternative). Twenty-seven miles of these are trails and 45 miles are roads. Madison County has the most assertions that are not covered by open roads or trails in Alternative 3M+. Many of these Madison County assertions are on logging roads that have been built and decommissioned in the last 40 years in accordance with the NEPA decision for timber sales in these areas. We do not propose to reopen these roads because alternate routes are available.

Cumulative Effects - As acres and roads/trails open to summer motorized access decrease from Alternative 1M through Alternative 3M(-), the density of motorized users on designated routes will generally increase on the remaining open routes (RFP-FEIS, page IV-46). The increased interaction may result in increased user or resource conflicts and additional resource impacts. This could result in an overall effect of **loss** of enjoyment of the recreation activity for some people in some of the areas. A secondary effect of decreasing motorized access and decommissioning roads would be reduction of motorized hunting and fishing opportunities and increase in non-motorized opportunities. This might not be too significant a difference in Alternative 1M, but could be more significant as reductions toward Alternative 3M(-) are implemented.

There would also be adverse effects from closing roads and trails in terms of maintenance (including funding) and possible reductions in recreation opportunities as indicated on page IV-46 of the RFP-

FEIS In addition, emergency access for fire or rescue would be reduced. However, no groomed snowmachine trails would be impacted by decommissioning roads.

The potential effects of RS 2477 assertions in addition to those already open roads and trails in the existing transportation system (red routes on Map #1) have not been included in resource consequence discussions. If these routes were opened to motorized travel, there would be increased adverse effects on motorized route density, elk habitat, soils, vegetation, water quality, and fisheries habitat.

A Forest Travel Plan would be implemented as a result of the decision reached in the FEIS for this proposal. As a result of the analysis to date, the preferred alternative would be the proposed travel plan. That plan would include the Transportation Plan Map #4, the proposed Forest Plan amendments, the 1998 Travel Plan Addendum and Access Tables. The entire package would be combined and prepared similar to the 1997 Travel Plan Map with a legend and other information to help Forest users understand travel opportunities. If another alternative were selected in the FEIS-Record of Decision then that alternative would be implemented as described here.

WILDERNESS AND RECREATION RESOURCES

The following topics present the effects and consequences of the alternatives on the various wilderness and recreation resources. Key alternative comparison indicators for these resources are displayed in Table 11-1. Overall, total recreation use would not change much between alternatives, but the types of use probably would change slightly. The trend from Alternative 1 to 3M(-) would be away from semi-primitive motorized and roaded natural appearing (Recreation Opportunity Spectrum - ROS) to an increase in ROS of primitive and semi-primitive non-motorized, although some semi-primitive motorized opportunities would remain. This overall trend would be due to the reduction in motorized access. Such a trend would also support a shift from currently evolving tourism and rural development to a slower developing, eco-tourism type pattern.

Wilderness, Wilderness Study Areas (WSA), and Recommended Wilderness

Consequences Common to All Alternatives - Quality and character of designated wilderness, WSA, and recommended wilderness would not be degraded by any alternative. This is the same as indicated in the RFP-FEIS on page IV-47.

Consequences Which Vary by Alternative - The number of acres of recommended wilderness would vary by alternative as it did in the Forest Plan analysis (RFP-FEIS, page 11-20 and IV-47), but it does not significantly affect the miles of road or trail open to motorized use between alternatives.

Cumulative Effects - Since the Jedediah Smith Wilderness Plan would be in effect for all alternatives, there should be little cumulative impact or secondary effects on wilderness values.

Roadless Areas

Indicator: Miles of motorized road and trail in Roadless

Consequences Common to All Alternatives - Although roads and trails remain open to motorized use in roadless areas in all alternatives, this is not expected to have adverse effects on resources or on potential for wilderness designation. The motorized roads and trails are stable, and are not causing impacts to soils or vegetation.

Consequences Which Vary by Alternative - Miles of motorized road and trail in roadless vary as follows:

Alternative 1	776
Alternative 3M(+)	548
Alternative 3M	520
Alternative 3M(-)	469

This slight difference only effects the opportunity for recreation or other access, and as noted above, would have little effect on resources

Cumulative Effects • **Inventoried** roadless areas have essentially remained unchanged (total acres), even during the last Forest Plan (1985 - 1995) Projected roading and timber harvest never occurred in areas planned, and these road and trail management alternatives are not expected to have any significant affect on inventoried acres during the next decade

Wild, Scenic and Recreational Rivers

Consequences Common to All Alternatives - The eligibility of these rivers will not be affected by any of the alternatives, and all of the outstanding resource values will be protected by management prescriptions of the Revised Forest Plan until such time as suitability studies are completed (RFP-FEE, page IV-50)

Visual Resources

Consequences Which Vary *by* Alternative - There would be only slight differences in effects on visual resources between alternatives Alternative 1 would have the most chance for ground-disturbing activity from motorized vehicles, but it would only be slightly higher than Alternative 3M(+) or 3M Alternative 3M(-) would have the least chance of adverse visual effects from motorized travel on roads and trails

Developed Recreation

Consequences *Common* to All Alternatives - Consequences *will* basically be the same for all *alternatives* because developed recreation facility construction and reconstruction will be about the same in all *alternatives* (RFP-FEIS, page IV-51)

Cumulative Effects - As the alternatives become more restrictive in terms of motorized access and opportunity (i.e., Alternatives 3M and 3M-), there would likely be some displacement of recreation from areas now being used (RFP-FEIS, page IV-51) This could place a heavier burden on existing developed facilities and create a need for new ones in a more concentrated geographic area

Dispersed Recreation

Consequences *Common to* All Alternatives - Approximately the same number of road-accessed, dispersed campsites (293) would continue to be used in all alternatives (RFP-FEIS, page IV-51). The number of sites would probably stay the same, because existing sites that would become unavailable due to new management allocations would simply be relocated to sites in other adjacent areas

Cumulative Effects - It is possible in Alternatives 1 and 3M(+) that some existing, dispersed camping sites and trails would need to be moved or closed to resolve conflicts with wildlife or aquatic management standards and guidelines (RFP-FEIS, page IV-52) In Alternatives 3M and 3M(-), displacement or closure of such areas would be due to less access and because aquatic buffer restrictions are greater This could have an adverse impact on recreation experiences, due to having to add more facilities elsewhere or due to crowding or congestion in smaller geographic areas This could result in a need for increased **monitoring**, law enforcement and management costs to prevent unacceptable impacts to soil, vegetation, aquatic or wildlife resources

Outfitters and Guides

Consequences Which Vary *by* Alternative - The number of new outfitter and guide permits issued would probably be slightly less in Alternatives 3M and 3M(-) than in Alternatives 1 and 3M(+), (RFP-FEIS, page IV-52) Overall activity and amount of outfitted use would also be less in Alternatives 3M and 3M(-) This is due to the closure of access **routes** that could be used for snowmachine or other motorized tours Also, there is very little opportunity remaining in non-motorized, backcountry areas

The type of activities outfitted in Alternatives 3M and 3M(-) would be more related to backcountry, nonmotorized uses than in Alternative 1 and 3M(+), due to increased restrictions on motorized and mechanized equipment in roadless, recommended wilderness and designated wilderness

Special Uses (Recreation)

Consequences Common to All Alternatives - Requests for special use permits for activities such as special events (e.g., races, group activities, etc.) and outfitting and guiding will likely increase gradually for all alternatives. At some point of saturation, the permitted activities would reach a plateau and level off (RFP-FEIS, page IV-52)

Consequences Which Vary by Alternative - The trend for special uses in response to alternatives would be similar to that for developed sites. In Alternatives 1 and 3M(+), there would be more increase in demand for special events and motorized access permits. However, in Alternatives 3M and 3M(-), the trend would be more towards undeveloped, backcountry experiences such as mountain biking, backpacking, horsepacking, hunting and similar opportunities. The number of new special use permits would probably be less in the alternatives with less motorized access, and overall recreation use under permitted activities would also be less.

Cumulative Effects - Cumulative impacts of actual recreation use would likely be higher in alternatives 1 and 3M(+), but those impacts would tend to be in the more easily accessed areas and closer to existing developed areas or special interest roads, trails or attractions. In Alternative 3M and 3M(-), the additional cumulative impacts of recreation use would tend to be in more undeveloped, backcountry areas with a more primitive experience level. These too, could have a slight, measurable effect on wildlife, etc.

ECONOMIC AND SOCIAL EFFECTS

Consequences Common to All Alternatives

Population - The area is experiencing significant population increases (REIS 1996). The rate of increase (itself a function of birth, death and net-migration) is not expected to be significantly affected by any of the alternatives under consideration.

As the population of the area continues to grow, the percentage of the population that looks to the Forest for recreational use is expected to increase. Correspondingly the percentage of the population that looks to the Forest as a source of timber and livestock forage is expected to decline.

Many people see the National Forest as a good neighbor - literally. Real estate which borders the Forest is frequently advertised as such. It is a selling point. The increased level of development of private property located within or along the Forest's boundaries, and the associated contributions to local tax bases and demands for government services, are expected to continue regardless of which alternative is selected. Increasing development may jeopardize traditional uses of private land like livestock grazing. It may simply not make good sense financially for an individual to run livestock on land ripe for real estate development.

In and of itself, the permanence of the Forest does provide a certain attraction for those considering relocating a family or business. Private property can be managed many different ways while the Forest will "always" be managed as a National Forest.

Land Use Patterns - Lands adjacent to and within the Forest are increasingly passing from traditional uses like ranching to new uses like subdivisions. Forest management has to consider these new neighbors when deciding how best to manage Forest resources - with particular attention being devoted to fire protection, visual quality and recreation opportunity. This challenge can be expected to continue to increase under all alternatives as the human population of the area increases.

Some newcomers to the area have deviated from long-held local custom by closing off access through their property to Forest lands. Their focus on having a Forest in a more natural condition has also been at odds with those who see the Forest as being a resource to be used. These sorts of conflicts can be expected to continue, if not worsen, under all the alternatives due to continuing immigration.

American Indians - Input from the Shoshone-Bannock tribes indicates their strong concern for continuing the viability and abundance of plants, fish and wildlife on the Forest for the use of their members consistent with their treaty rights (Shoshone-Bannock 1992 a-b). Some of that input has focused on providing designated routes for motorized access during the tribes' hunting season. The tribes

have also commented on their need to have the public and the Forest Service respect their rights to practice their native religion. All the alternatives are structured so as to afford tribal members the rights guaranteed them by treaty.

Economics and Lifestyles - Jobs, personal income, and payments to local governments are not expected to be significantly affected by the selection of any given alternative. The alternatives do not vary significantly in terms of timber harvest, livestock grazing, or water available to downstream users. However, crowding is expected to occur on those trails which remain open to motorized use.

The overall level of recreational use is expected to continue to increase along with its associated income and employment opportunities. Increased recreation use means more people from outside the immediate local area visiting, spending money and in some cases investing in local property. The overall increase in recreation is expected to occur regardless of which alternative is selected. A certain percentage of the people visiting Yellowstone National Park can be expected to visit Forest attractions like Mesa Falls, for instance.

It is likely that there will be an increased level of summer motorized use on those roads and trails which remain open in each alternative. The increased use would change directly and in proportion to the amount of roads and trails closed to motorized use in each alternative. Surplus capacity exists for motorized use on Forest roads, but that is not the case with motorized trails.

As Yellowstone and Grand Teton National Parks become more crowded the Forest can expect to accommodate more of the resulting spillover traffic. For instance, because snowmachining in Yellowstone National Park is reaching saturation levels, the Forest is expected to receive more of that traffic - regardless of which alternative is selected.

The area also provides opportunities for further development of recreational activities. The recently opened Grizzly Bear/Wild Animal Park near Rigby is an example of the kind of development which might occur regardless of which alternative is selected.

Civil Rights - No civil rights effects associated with age, race, creed, color, national origin or sex have been identified.

Consequences *Which Vary By* Alternative

American Indians - Tribal members use the Forest in many ways. Some of these uses are identical to those of the general population and are described elsewhere herein. Other interests may be unique to tribal members. For instance, gathering Forest products is an important part of the culture of some tribal members. Those who rely on open roads or motorized trails to access favorite spots may have to find alternative sites if motorized access is restricted in a given alternative. It is also possible that closing some motorized access routes may effectively deny access to some areas for some users.

Discussions with the tribes to-date have not revealed a preference for more or less roading per se. Concerns have been voiced about closing roads during the tribes' hunting season - something that needs to be addressed on a continuing, site-specific basis. In general though, as the alternatives reduce the amount of roads and trails available for motorized use, the time and effort involved in hunting is expected to increase. That also applies to other tribal activities which require access to the land. Reducing motorized use may improve the suitability of the land for vision quest and various other cultural activities.

Attitudes, Beliefs, Values - Many people believe that the Forest should remain open to motorized access at previous levels. They point out that considerable money has been spent building and maintaining Forest travel routes and want them to remain open for a variety of reasons associated with use and enjoyment of the Forest resource. Because Alternative 1 maintains the highest degree of motorized access, it would best address their values. The other alternatives are less responsive to their needs in direct proportion to the amount of motorized access eliminated.

Conversely, those who enjoy the Forest for nonmotorized uses are likely to benefit more from those alternatives which restrict motorized use. Thus, closing a motorized route may deny one family access to a traditional firewood-gathering site, but create an enjoyable mountain bike trail for another.

Conflicts associated with enforcement efforts needed to ensure that roads and trails closed to motorized use are not used by motorized vehicles are likely to vary directly and proportionally to the amount of roads and trails closed to motorized use

Big game hunting and in particular elk hunting, is a major event on the Forest. Participants eagerly await the season's arrival. Elk Vulnerability models indicate that the greater the degree of motorized access, and the higher the hunter densities, then a higher percentage of the elk population is harvested. On the Targhee, the major concern has been the high percentage of elk bulls harvested during the general rifle season. Land management agencies control the amount of motorized access, and State Fish and Game agencies control the hunter densities. In the past, high motorized access has resulted in the IDF&G using spike only hunting season regulations and shorter hunting seasons in some areas of the Forest to reduce the percentage of bulls being harvested. IDF&G goals include lengthening the general rifle season for bulls, and allowing any bull elk to be harvested. In order for these goals to be achieved, motorized access needs to be reduced.

Sense of Control, Sense of Self-sufficiency - To the extent that any individual's or group's sense of control or sense of self-sufficiency is associated with motorized access, that sense will be affected directly proportional to the extent of motorized access permitted in each alternative. Thus, those who find their motorized access to traditional hunting or recreation areas cut off, would likely feel their sense of control reduced. Those who enjoy a more physically demanding hunt or recreation opportunity, without the chance of a motorized unit disrupting the experience, might appreciate the reduction in motorized access.

Social Organization, Community Cohesion and Community Stability - Selecting any alternative as opposed to any other alternative would not likely affect community cohesion or community stability. Economic effects associated with these alternatives are minimal, if not unnoticeable. It's not a case of certain individual's or group's losing their jobs or a substantial portion of their personal income. It's more a case of whether the Forest is being managed along the lines of an individual's or group's preferences - which they hold to be very important.

Civil Rights - Those who require motorized access due to disability will find their access to the Forest affected directly and proportionally by the amount of roads and motorized trails restricted or decommissioned. This adverse effect would be the lowest with Alternative 1M and the highest with Alternative 3M(-). This may be mitigated to an extent by a special program administered by the Forest with the assistance of the Idaho Department of Fish and Game to provide increased access for the disabled. As indicated in the Revised Forest Plan (page III-24), "During the big game hunting season, persons with disabilities may be permitted to use motorized vehicles, if needed for mobility, on restricted roads and trails which are designated for such use, with an authorized motor vehicle hunting permit issued by the District Ranger. These persons must have a Disabled Hunting Permit issued from the State Fish and Game Departments."

PRODUCTION OF COMMODITY RESOURCES

Timber

Consequences Common to All *Alternatives* - Access for timber management would be approximately the same for all alternatives because the open road system is almost the same in the areas of marketable timber. In alternatives with less access, additional roads could be decommissioned so that alternate access could be established (within road density) to reach desired timber areas.

Livestock Grazing

Indicators-none

Consequences Common to All *Alternatives* - For all alternatives, livestock permittees will be required to obtain a "travel permit" to have motorized access in travel restricted areas. This direction is identified on page III-30 of the Revised Forest Plan (Process Paper M, RFP-FEIS). As per their grazing permit, livestock permittees are required to maintain their assigned improvements and to properly manage their allotment. Doing so requires motorized access off designated routes. Depending on specific management prescriptions, all permittees will be required to comply with the road density

standards on their allotments. Most grazing allotments have more than one management prescription area within their allotments.

Permitted livestock numbers, seasons of use, and AUM's as well as the number of permittees, allotments, and grazing permits will not be affected by any of the four alternatives. However, the RFP-FEIS (page IV-71) did show a reduction in number of permits, but this was due to grizzly bear and bighorn sheep concerns and not motorized access.

All maintenance and reconstruction of existing and proposed range improvements will be needed equally with all four alternatives as outlined in the Revised Forest Plan.

Consequences Which Vary by Alternative - None

Cumulative Effects - Forest-wide, implementation of any of the alternatives is not likely to significantly or adversely affect livestock grazing or permittee management of grazing allotments.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Adverse Environmental Effects that Cannot be Avoided - There would be some irretrievable losses to soil hydrologic function and site productivity in areas of roads or road or trail maintenance or reconstruction (RFP-FEIS page IV-74). There would also be irretrievable loss of motorized access and recreation opportunities on closed and non-motorized roads and trails due to road restrictions and decommissioning. Irreversible commitments include soil losses caused by erosion and sedimentation from roads and trails. Intermittent and localized decrease in air quality may result due to dust from road construction, road maintenance and use, and due to smoke from wildfires, and campfires (RFP-FEIS page IV-74). Potential for additional conflicts between recreation use and other land use activities would increase in some alternatives (RFP-FEIS page IV-75) where proposed management would restrict recreation use such as motorized travel. Also, temporary disturbance of wildlife and their habitat conditions in localized areas may result from increased human activity or changed vegetation conditions. Increased soil compaction may occur on activity sites such as recreation or OHV use areas.

Short-term Uses of the Human Environment and the Maintenance of Long-term Productivity - Short-term uses include providing access for motorized and non-motorized recreation or hunting and fishing opportunity, seasonally. Short term uses would also include access for permittee, contractor or administrative uses. Long term productivity would be recovered from decommissioned roads as vegetation becomes established and disturbed sites become stabilized over time.

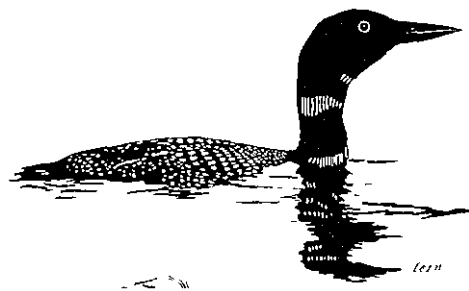
Appendix

Appendix A. Addendums to 1997 Travel Plan
Maps, March 24, 1998

Appendix B. Road Decommissioning
Process Guidelines

Appendix C. Appendix C(M) Access Status
Tables and Appendix C (1998
Update) Access Status Tables

Appendix D. Biological Evaluation and
Biological Assessment Process



APPENDIX A

This Appendix contains the cross-country matrices which remain unchanged from the **1997** Travel Plan Map for the Dubois, Palisades, and Teton Basin District maps. The **1997** Travel Plan Map (summer and winter) displays the location of the Area Reference letters (A, B, C, etc.) for each area designation in the matrices. These **1997** Travel Plan Maps are available at the Targhee National Forest Supervisor's Office and District offices. This Appendix A also contains the following Addendum to the **1997** Travel Plan Maps.

ADDENDUM TO 1997 TRAVEL PLAN MAPS - March 24, 1998

For purposes of clarification, the following changes/corrections now apply to the Winter and Summer Travel Plans for the **PALISADES** and **TETON BASIN** Ranger Districts until further notice.

WINTER TRAVEL PLAN - (the new 1997 plan/map)

1 The following new introductory statement replaces the first and second paragraphs under "**TARGHEE NATIONAL FOREST WINTER TRAVEL PLAN**":

This map describes winter travel opportunities on the Targhee National Forest from THANKSGIVING DAY UNTIL SOMETIME IN THE SPRING as local conditions become suitable to support wheeled vehicle traffic on roads and trails without damage.

SEE THE ATTACHED NEW "**WINTER CROSS-COUNTRY USE AND WINTER DESIGNATED ROUTES**" MATRICES. THESE REPLACE THOSE AT THE BOTTOM OF THIS MAP AND GIVE DETAILED DIRECTIONS ABOUT OPPORTUNITIES AND RESTRICTIONS FOR WINTER TRAVEL.

Additional closures or restrictions may be made at any time for resource protection or public safety. To avoid inconvenience, Forest visitors are encouraged to contact local District Ranger Offices for current travel information.

For information regarding summer travel opportunities, see the reverse side of this map and the attached addendum information.

2 For the "**CROSS-COUNTRY USE**" Matrix, the following changes have been made:

- a DELETE the entire "**Wheeled Motorized Vehicles**" column and the associated footnote below the Matrix.
- b For "**Area Reference Letter B**" in the "**Non-motorized Uses**" column, the wording has been changed to read, "**Open April 15 to Dec 15 on the Palisades Ranger District and April 15 to Thanksgiving Day on the Teton Basin Ranger District**".
- c For "**Reference Area Letter C**" in the "**Over-snow Motorized Vehicles**" column, the wording has been changed to read "**Open Thanksgiving Day to June 1 on the Teton Basin Ranger District and Dec. 15 to June 1 on the Palisades Ranger District**".

3 For the "**WINTER DESIGNATED ROUTES**" Matrix, the following change has been made:

- a ADD the **ATV SYMBOL** to the "**Over-snow Motorized Vehicles**" column.

SUMMER TRAVEL PLAN - (the new 1997 plan/map)

1 The following new introductory statement replaces the first and second paragraphs under "**TARGHEE NATIONAL FOREST SUMMER TRAVEL PLAN**":

Welcome to the **Palisades** and **Teton Basin Districts** of the Targhee National Forest, yours to enjoy and use for a variety of purposes. In order to protect forest values, safeguard users, and minimize conflicts between users, it has become necessary to establish certain regulations for the use -- both non-motorized and motorized -- of areas off designated routes and the use of designated roads and trails. This map identifies these opportunities and restrictions. Please study the map carefully. Your understanding and observance of these travel opportunities and restrictions will minimize the need for enforcement action.

This map is intended to help the summer recreationist enjoy the Targhee National Forest safely while protecting the natural resources. Additional closures or restrictions may be made at any time for resource protection or public safety. To avoid inconvenience, Forest visitors are encouraged to contact local District Ranger Offices for current travel information.

For information regarding winter travel opportunities, see the reverse side of this map and the attached addendum information.

2 The "**CROSS-COUNTRY USE MATRIX**" shown on this map **is in force.** (This matrix is also shown on the old 5/1/94 Travel Plan maps - revised March 24, 1998)

PLEASE NOTE THE FOLLOWING:





1 Delete in their entirety the last paragraph under HOW TO USE THIS MAP and the paragraph under NOTICE -CLOSURE AREAS. Substitute the following paragraph:









UNLESS OTHERWISE POSTED, DIRECT MOTORIZED ACCESS IS ALLOWED FOR PARKING AND CAMPING WITHIN 300 FEET OF ROADS AND TRAILS WHICH ARE OPEN FOR MOTORIZED USE. PLEASE SELECT YOUR ACCESS ROUTES CAREFULLY SO AS TO AVOID DAMAGING VEGETATION AND OTHER FOREST RESOURCES. DO NOT CROSS MEADOWS AND AVOID CROSSING STREAMS.

REMEMBER. NO MOTORIZED USE IS PERMITTED WITHIN DESIGNATED WILDERNESS.

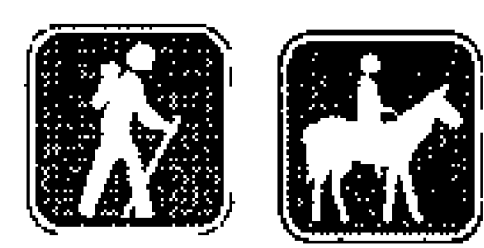





2 If you have any questions about any aspect of the Travel Maps and regulations, please contact any Ranger District Office.

PALISADES AND TETON BASIN RANGER DISTRICTS TRAVEL PLAN

WINTER (Opportunities and Restrictions) USE MATRIX Designated Routes			
	  		
AREA REFERENCE LETTER	NON-MOTORIZED USES	OVER-SNOW MOTORIZED VEHICLES	PURPOSE OF REGULATION
A	OPEN	CLOSED - except on designated routes	To protect wilderness or wildlife ranges and cross-country ski areas
B	Open April 15 to Dec 15 on the Palisades RD and April 15 to Thanksgiving Day on the Teton Basin RD	CLOSED - except on designated routes	To protect wildlife in winter range areas
C	OPEN	OPEN Thanksgiving Day to June 1 on the Teton Basin RD and Dec 15 to June 1 on the Palisades RD	To protect wildlife going to and from winter ranges
D	OPEN except in designated ski resorts during the ski season	CLOSED except for administrative purposes	For user safety

WINTER DESIGNATED ROUTES (Opportunities and Restrictions)			
	  	 	
DESIGNATED ROUTE	NON-MOTORIZED USES	OVER-SNOW MOTORIZED VEHICLES	PURPOSE OF REGULATION
	OPEN to cross-country skiing only	CLOSED	Cross-country ski routes
	OPEN	OPEN	Designated winter travel route (frequently groomed for snowmobiles)
	OPEN	OPEN	Designated winter travel route (may or may not be groomed for snowmobiles)

PALISADES AND TETON BASIN RANGER DISTRICTS TRAVEL PLAN

SUMMER CROSS-COUNTRY USE MATRIX (Opportunities and Restrictions off Designated Routes)							
							
AREA REFERENCE LETTER	NON-MOTORIZED USES	BICYCLES	TWO-WHEEL MOTORIZED VEHICLES	ALL TERRAIN VEHICLES (ATV's) <50" in width	HIGH CLEARANCE VEHICLES (4x4 & pickups) >50" in width	SEDANS <50" in width	PURPOSE OF REGULATION
A	OPEN	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	To protect wilderness and other special management area resource values
B	OPEN	OPEN	CLOSED	CLOSED	CLOSED	CLOSED	To protect grizzly bear and other wildlife habitat and provide a variety of recreation experiences
C	OPEN	OPEN	OPEN June 1 to Sept 30	OPEN June 1 to Sept 30	CLOSED	CLOSED	To provide a semi-primitive motorized recreation experience
E (see the footnote below)	Generally open HOWEVER , special use permits may restrict some of these uses	Forest sites are closed Areas under special use permits may restrict this type of use	CLOSED	CLOSED	CLOSED	CLOSED	To protect developed recreation site facilities and offer a variety of developed recreation uses

FOOTNOTE These areas are generally too small to show on this map They include all Developed Recreation Sites such as **campgrounds**, picnic areas, boating sites/ramps, trailheads, snowparks, scenic and wildlife viewing areas and fishing access points

It also applies to Special Use Permit Recreation Sites such as ski areas, resorts, **summer** home sites and organization camps

ADDENDUM TO 1997 TRAVEL PLAN MAPS - March 24, 1998

For purposes of clarification, the following changes/corrections now apply to the Winter and Summer Travel Plans for the **ISLAND PARK** and **ASHTON** Ranger Districts until further notice

WINTER TRAVEL PLAN- (the new 1997 plan/map)

1 The following new introductory statement replaces the first and second paragraphs under "**TARGHEE NATIONAL FOREST WINTER TRAVEL PLAN**":

This map describes winter travel opportunities on the Targhee National Forest from THANKSGIVING DAY UNTIL SOMETIME IN THE SPRING as local conditions become suitable to support wheeled vehicle traffic on roads and trails without damage

SEE THE ATTACHED NEW "**WINTER CROSS-COUNTRY USE AND WINTER DESIGNATED ROUTES**" MATRICES THESE REPLACE THOSE AT THE BOTTOM OF THIS MAP AND GIVE DETAILED DIRECTIONS ABOUT OPPORTUNITIES AND RESTRICTIONS FOR WINTER TRAVEL

Additional closures or restrictions may be made at any time for resource protection or public safety To avoid inconvenience, Forest visitors are encouraged to contact local District Ranger Offices for current travel information

For information regarding summer travel opportunities, see the reverse side of this map and the attached addendum information

2 For the "**CROSS-COUNTRY USE**" Matrix, the following changes have been made

- a DELETE the entire "**Wheeled Motorized Vehicles**" column and the associated footnote below the Matrix
- b For "**Reference Area Letter C**" in the "**Over-snow Motorized Vehicles**" column, the wording has been changed to read, "**OPEN Thanksgiving Day to June 1 on the Teton Basin, Ashton, and Island Park Ranger Districts.**"

3 For the "**WINTER DESIGNATED ROUTES**" Matrix, the following change has been made

- a ADD the **ATV SYMBOL** to the "**Over-snow Motorized Vehicles**" column

SUMMER TRAVEL PLAN (the new 1997 plan/map)

1. The following new introductory statement replaces the first and second paragraphs under "**TARGHEE NATIONAL FOREST SUMMER TRAVEL PLAN**":

Welcome to the **Island Park** and **Ashton** Districts of the Targhee National Forest, yours to enjoy and use for a variety of purposes In order to protect forest values, safeguard users, and minimize conflicts between users, it has become necessary to establish certain regulations for the use -- both non-motorized and motorized-- of areas off designated routes and the use of designated roads and trails This map identifies these opportunities and restrictions Please study the map carefully Your understanding and observance of these travel opportunities and restrictions will minimize the need for enforcement action

This map is intended to help the summer recreationist enjoy the Targhee National Forest safely while protecting the natural resources Additional closures or restrictions may be made at any time for resource protection or public safety To avoid inconvenience, Forest visitors are encouraged to contact local District Ranger Offices for current travel information

For information regarding winter travel opportunities, see the reverse side of this map and the attached addendum information

2 For the "**CROSS-COUNTRY USE MATRIX**" shown on this new 1997 map, the following changes have been made **This revised "Matrix" is in force.** (This revised matrix is also shown on the old 5/1/94 District Travel Plan map - revised March 24, 1998)

- a. For "Area Reference Letter F" in the "All Terrain Vehicles (ATV's) <50" in width" column, the wording has been changed to read "OPEN".
- b. For "Area Reference Letter G" in the "Two-Wheeled Motorized Vehicles" column, the wording has been changed to read "Open Jun 15 to Sept 30".
- c. For "Area Reference Letter G" in the "All Terrain Vehicles (ATV's) <50" width column, the wording has been changed to read "Open Jun 15 to Sept 30".



PLEASE NOTE THE FOLLOWING:




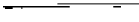


- 1 Delete in their entirety the last paragraph under HOW TO USE THIS MAP and the paragraph under NOTICE - CLOSURE AREAS. Substitute the following paragraph







UNLESS OTHERWISE POSTED, DIRECT MOTORIZED ACCESS IS ALLOWED FOR PARKING AND CAMPING WITHIN 300 FEET OF ROADS AND TRAILS WHICH ARE OPEN FOR MOTORIZED USE PLEASE SELECT YOUR ACCESS ROUTES CAREFULLY SO AS TO AVOID DAMAGING VEGETATION AND OTHER FOREST RESOURCES DO NOT CROSS MEADOWS AND AVOID CROSSING STREAMS REMEMBER. NO MOTORIZED USE IS PERMITTED WITHIN DESIGNATED WILDERNESS.

- 2 If you have any questions about any aspect of the Travel Maps and regulations, please contact any Ranger District Office

ISLAND PARK AND ASHTON RANGER DISTRICTS TRAVEL PLAN

WINTER CROSS-COUNTRY USE MATRIX (Opportunities and Restrictions off Designated Routes)			
AREA REFERENCE LETTER	 NON-MOTORIZED USES	 OVER-SNOW MOTORIZED VEHICLES	PURPOSE OF REGULATION
A	OPEN	CLOSED- except on designated routes	To protect wilderness or wildlife ranges and cross-country ski areas
C	OPEN	OPEN - Thanksgiving Day to June 1 on the Teton Basin, Ashton and Island Park RDs	To protect wildlife going to and from winter ranges
E	OPEN	OPEN January 1 to April 1	To protect wildlife going to and from winter ranges

WINTER DESIGNATED ROUTES (Opportunities and Restrictions)			
DESIGNATED ROUTE	 NON-MOTORIZED USES	 OVER-SNOW MOTORIZED VEHICLES	PURPOSE OF REGULATION
	OPEN to cross-country skiing only	CLOSED	Cross-country ski routes
	OPEN	OPEN	Designated winter travel route (frequently groomed for snowmobiles)
	OPEN	OPEN	Designated winter travel route (may or may not be groomed for snowmobiles)
	OPEN	OPEN	Designated winter travel route (occasional use routes snow depths may not allow snowmachine use some years)

SUMMER CROSS-COUNTRY USE MATRIX (Opportunities and Restrictions off Designated Routes)							
							
AREA REFERENCE LETTER	NON-MOTORIZED USES	BICYCLES	TWO-WHEEL MOTORIZED VEHICLES	ALL TERRAIN VEHICLES (ATV's) <50" in width	HIGH CLEARANCE VEHICLES (4x4 & pickups) >50" in width	SEDANS <50" in width	PURPOSE OF REGULATION
A	OPEN	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	To protect wilderness and other special management area resource values
B	OPEN	OPEN	CLOSED	CLOSED	CLOSED	CLOSED	To protect grizzly bear and other wildlife habitat and provide a variety of recreation experiences
C	OPEN	OPEN	OPEN June 1 to Sept 30	OPEN June 1 to Sept 30	CLOSED	CLOSED	To provide a semi-primitive motorized recreation experience
D	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	To maintain or enhance the Scenic Visual Quality of areas
E (see the footnote below)	Generally open HOWEVER, special use permits may restrict some of these uses	forest sites are closed Areas under special use permits may restrict this type of use	CLOSED	CLOSED	CLOSED	CLOSED	To protect developed recreation site facilities and offer a variety of developed recreation uses
F	OPEN	OPEN	OPEN	OPEN	CLOSED	CLOSED	To enhance long-term forest health along urban interface areas
G	OPEN	OPEN	OPEN June 1 to sept 30	OPEN June 1 to Sept 30	CLOSED	CLOSED	To provide a semi-primitive motorized recreation experience

FOOTNOTE These areas are generally too small to show on this map They include all Developed Recreation Sites such as campgrounds, picnic areas, boating sites/ramps, trailheads, snowparks, scenic and wildlife viewing areas and fishing access points

It also applies to Special Use Permit Recreation Sites such as ski areas, resorts, summer home sites and organization camps

ADDENDUM TO 1997 TRAVEL PLAN MAPS - March 24, 1998

For purposes of clarification, the following changes/corrections now apply to the Winter and Summer Travel Plans for the **DUBOIS** Ranger District until further notice

WINTER TRAVEL PLAN- (the new 1997 plan/map)

1 The following new introductory statement replaces the first and second paragraphs under "**TARGHEE NATIONAL FOREST WINTER TRAVEL PLAN**":

This map describes winter travel opportunities on the Targhee National Forest from THANKSGIVING DAY UNTIL SOMETIME IN THE SPRING as local conditions become suitable to support wheeled vehicle traffic on roads and trails without damage

SEE THE ATTACHED NEW "**WINTER CROSS-COUNTRY USE AND WINTER DESIGNATED ROUTES**" MATRICES THESE REPLACE THOSE AT THE BOTTOM OF THIS MAP AND GIVE DETAILED DIRECTIONS ABOUT OPPORTUNITIES AND RESTRICTIONS FOR WINTER TRAVEL

Additional closures or restrictions may be made at any time for resource protection or public safety To avoid inconvenience, Forest visitors are encouraged to contact local District Ranger Offices for current travel information

For information regarding summer travel opportunities, see the reverse side of this map and the attached addendum information

2 For the "**CROSS-COUNTRY USE**" Matrix, the following change has been made

- a DELETE the entire "**Wheeled Motorized Vehicles**" column and the associated footnote below the Matrix

3 For the "**WINTER DESIGNATED ROUTES**" Matrix, the following change has been made

- a ADD the **ATV SYMBOL** to the "**Over-snow Motorized Vehicles**" column

SUMMER TRAVEL PLAN- (the new 1997 plan/map)

1 The following new introductory statement replaces the first and second paragraphs under "**TARGHEE NATIONAL FOREST SUMMER TRAVEL PLAN**":

Welcome to the **Dubois** District of the Targhee National Forest, yours to enjoy and use for a variety of purposes In order to protect forest values, safeguard users, and minimize conflicts between users, it has become necessary to establish certain regulations for non-motorized and motorized **use** of areas and designated routes (roads and trails) This map identifies these opportunities and restrictions Please study the map carefully Your understanding and observance of these travel opportunities and restrictions will minimize the need for enforcement action

This map is intended to help the summer recreationist enjoy the Targhee National Forest safely while protecting the natural resources Additional closures or restrictions may be made at any time for resource protection or public safety To avoid inconvenience, Forest visitors are encouraged to contact local District Ranger Offices for current travel information

For information regarding winter travel opportunities, see the reverse side of this map and the attached addendum information

2 The "**CROSS-COUNTRY USE MATRIX**" shown on this new 1997 map **is in force**. (This matrix is also shown on the old 5/1/96 District Travel Plan map - revised March 24, 1998)



3 Travel opportunities and restrictions for road and trail travel are the same as existed in 1997 as displayed in the individual 1996 District Travel Plan Map as revised March 24, 1998 **The statement: "If roads are open (not gated or otherwise closed), then travel is permitted on these routes" has been removed from the designated road and trail matrix on all maps.**





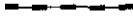


4 Delete in their entirety the last paragraph under HOW TO USE THIS MAP and the paragraph under NOTICE - CLOSURE AREAS Substitute the following paragraph

UNLESS OTHERWISE POSTED, DIRECT MOTORIZED ACCESS IS ALLOWED FOR PARKING AND CAMPING WITHIN 300 FEET OF ROADS AND TRAILS WHICH ARE OPEN FOR MOTORIZED USE PLEASE SELECT YOUR ACCESS ROUTES CAREFULLY SO AS TO AVOID DAMAGING VEGETATION AND OTHER FOREST RESOURCES DO NOT CROSS MEADOWS AND AVOID CROSSING STREAMS REMEMBER, NO MOTORIZED USE IS PERMITTED WITHIN DESIGNATED WILDERNESS







5 If you have any questions about any aspect of the Travel Maps and regulations, please contact any Ranger District Office

DUBOIS RANGER DISTRICT TRAVEL PLAN

WINTER CROSS-COUNTRY USE MATRIX (Opportunities and Restrictions of Designated Routes)			
			
AREA REFERENCE LETTER	NON-MOTORIZED USES	OVER-SNOW MOTORIZED VEHICLES	PURPOSE OF REGULATION
A	OPEN	CLOSED - except on designated routes	To protect wilderness or wildlife ranges and cross-country ski areas
C	OPEN	OPEN - Thanksgiving Day to June 1 on the Dubois RD	To protect wildlife going to and from winter ranges

WINTER DESIGNATED ROUTES (Opportunities and Restrictions)			
			
DESIGNATED ROUTE	NON-MOTORIZED USES	OVER-SNOW MOTORIZED VEHICLES	PURPOSE OF REGULATION
	OPEN to cross-country Skiing only	CLOSED	Cross-country ski routes
	OPEN	OPEN	Designated winter travel route (frequently groomed for snowmobiles)
	OPEN	OPEN	Designated winter travel route (may or may not be groomed for snowmobiles)
	OPEN	OPEN	Designated winter travel route (occasional use routes snow depths may not allow snowmachine use some years)
	OPEN		

DUBOIS RANGER DISTRICT TRAVEL PLAN

SUMMER CROSS-COUNTRY USE MATRIX (Opportunities and Restrictions off Designated Routes)							
							
AREA REFERENCE LETTER	NON-MOTORIZED USES	BICYCLES	TWO-WHEEL MOTORIZED VEHICLES	ALL TERRAIN VEHICLES (ATV's) <50" in width	HIGH CLEARANCE VEHICLES (4x4 & pickups) >50" in width	SEDANS <50" in width	PURPOSE OF REGULATION
A	OPEN	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	To protect wilderness and other special management area resource values
B	OPEN	OPEN	CLOSED	CLOSED	CLOSED	CLOSED	To protect grizzly bear and other wildlife habitat and provide a variety of recreation experiences
E (see the footnote below)	Generally open HOWEVER, special use permits may restrict some of these uses	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	To protect developed recreation site facilities and offer a variety of developed recreation uses

FOOTNOTE These areas are generally too small to show on this map They include all Developed Recreation Sites such as campgrounds, picnic areas, boating sites/ramps, trailheads, snowparks, scenic and wildlife viewing areas and fishing access points

It also applies to Special Use Permit Recreation Sites such as ski areas, resorts, summer home sites and organization camps

APPENDIX B

ROAD DECOMMISSIONING PROCESS GUIDELINES

The following is a description of the procedures to be followed during road reclamation and decommissioning as directed by the Revised Forest Plan

Culverts - On perennial streams, culverts will be pulled and the edges of the fill slopes for bedding will be pulled back until the fill slopes are rounded off, but not all of the bedding, fill will be removed from the trench. On intermittent streams, the majority of the pipes will be pulled and treated as on perennial streams—especially where it is evident the culvert has carried water repeatedly. Dry culverts with no water flow evident will remain in place. These culverts generally have heavy vegetation growth of trees, grass, and bushes in the stream channel above the pipe. Where culverts are removed, dig to grade of natural stream channel and to a width that the stream will not undercut remaining fill.

Surface Ripping - This will be done on a case by case basis where needed to remove visual evidence of a road or access to it or adjacent areas. These are generally areas with long straight Right-of-Ways where there is little adjacent vegetation, or other barricade along wide open road surfaces. Ripping will also be done in areas where it would be important to expose additional soils to allow vegetation to reestablish.

Trenching/Surface Debris Placement - This will be done as needed, and mostly at the start of decommissioned segments to prevent travel behind closure gates.

Fill Slopes - These will not be reclaimed or pulled back into the road cut - even when in AIZ or adjacent to a stream, unless significant stream impacts are occurring or are anticipated.

Seeding - The seed mix developed by Rose Lehman and Duane Monte will be used on all disturbed soils in or near perennial stream channels or water bodies, on disturbed soils that occur within watersheds identified as WQL streams, and along road segments that have slopes that are over **10%** grade. The contract inspectors will mark these areas needing seeding on forest maps, so that crews can easily locate the areas and apply the seed as soon after disturbance as possible. In areas away from water, and where natural seed sources are available, we will depend on natural seeding.

Location Direction - Roads inside the BMUs that have been or will be decommissioned are shown on Map #4 - Alternative 3M(+). These roads will be decommissioned according to the guidelines in this Appendix. Roads to be decommissioned outside the BMUs in the next few years will be decommissioned in a similar way to those inside the BMUs with treatments varying from complete obliteration in some cases to less intensive treatments as necessary to deter summer motorized use. Those routes outside the BMUs do not need to meet the Interagency Grizzly Bear Committee access management guidelines, so there will be more flexibility to use less intensive closure methods on these roads.

APPENDIX C

APPENDIX C (1998 Update) AND C(M) ACCESS STATUS TABLES

This appendix contains the following, two, access status tables. Appendix C (1998 Update) is the same as Appendix C for the 1997 Travel Plan ROD, except that the 1997 tabular forms (Update of Appendix C - Summer and Winter Access - Final Environmental Impact Statement for the Revised Forest Plan - August, 1997) have been further updated by deleting the rows with "strikeovers" and by adding ratings in the blanks to show reasons why every road was left open, or closed. Appendix C (1998 Update) has been provided as a bridge between the 1997 Update version and the new Appendix C(M). Appendix C(M) was developed by using ratings from Alternative 3M from the 1998 Update and by adding ratings for the three new alternatives considered. Roads and trails have been rated in these forms according to the letters (segments open) or numbers (segments closed) on the status criteria cover sheets for each table.

This access analysis is based on the same process outlined in the RFP-FEIS, pages C-1 through C-5. Page C-5 of the RFP-FEIS states:

"Determinations for leaving a road open were made using a priority system. First priority was given to Federal Highway system roads, State and county roads, existing roads needed to access private property, Yellowstone National Park, State Parks and State lands, and existing roads that access administrative sites, electronic sites, communication sites (under permit) or high **use** recreation sites such as ski areas, boat ramps, etc. In some areas, the application of management prescriptions and the road density standard resulted in these "first priority" roads being the only roads designated "open" for the area. The Forest incorporated guidelines from the Eastside Ecosystem Management Project (EEMP) to establish a rule set to insure consistency as each District prepared their access maps. District personnel and Forest planning specialists met over several months to fine tune and coordinate motorized access between Districts. Roads and trails were selected for restriction or closure depending on the need to maintain wildlife habitat, prevent resource damage, and to balance the level of use to recreation opportunity. Cost of maintaining the road or trail was also a factor. A set of Road Decision Criteria Tables have been developed, showing the decision in keeping roads and trails open in each alternative."

It should be noted that roads which are not open in any alternative have been removed from table C(M) because they have been or will be decommissioned (due to road density limits needed to meet objectives for Forest Plan management prescriptions) and are not available for motorized travel. Roads inside the BMUs that have been or will be decommissioned are shown on Map #4 - Alternative 3M(+). These roads will be decommissioned according to the guidelines in Appendix B. Roads to be decommissioned outside the BMUs in the next few years will be decommissioned in a similar way to those inside the BMUs with treatments varying from complete obliteration in some cases to **less** intensive treatments as necessary to deter motorized use. Those routes outside the BMUs do not need to meet the Interagency Grizzly Bear Committee access management guidelines, so there will be more flexibility to **use** less intensive closure methods on these roads. These routes are also displayed on map #4 in the map packet. These decommissioned roads have been fully considered in the consequences analysis in this EIS (see the Soils and Access consequences sections for specific details).

APPENDIX C(M)

OPEN ROAD AND MOTORIZED TRAIL ROUTE (OROMTRD) DECISION CRITERIA TABLES

CRITERIA DEFINITIONS

Open to Motorized Use:

- A Core Access Needed to access private property, adjoining State and Federal Parks or State Lands and roads that access administrative sites, campgrounds and picnic areas, electronic sites, permitted communication sites, ski areas, boat ramps and special recreation sites such as Mesa Falls and Big Springs
 - B First Priority These roads were selected to remain open or be seasonally restricted because they are one of the only roads left on the system in the area
 - C Eastside Ecosystem Management Project (EEMP) Guidelines EEMP guidelines used to establish a rule set to insure consistency as each District prepared their access maps
 - D Coordinated Access Roads/trails that provide inter-District and intra-District access for administrative use
 - E Maintenance of Wildlife Habitat Road/trail selected causes less impact
 - F Resource Damage Road/trail selected caused less impact
 - G Cost Lower cost to maintain road/trail
 - H District-specific criteria (e.g. historical, etc.)
 - I District-specific criteria (e.g. berry picking, etc.)
 - J RS 2477 assertions by county
 - K Additions within the Open Road Open Motorized Trail and Route Density (OROMTRD) in response to a specific road and trail comment
- * Roads that are seasonally restricted

Closed to Motorized Use (year-round closure):

- 1 No longer needed for re-occurring resource activities
 - 2 For the protection of wildlife and reduced road maintenance costs
 - 3 To avoid soil erosion and protect water quality
 - 4 To meet Open Road Open Motorized Trail and Route Density (OROMTRD)
 - 5 To respond to specific road and trail comments
 - 6 No longer accessible
- Roads not on the ground

Note Roads and trails shown with letter(s)/number(s) are multiple segment routes, part of which are open and part closed Refer to the Transportation Map for details

NUMBER	ROAD NAME	ALTERNATIVE			
		1(M)	3M+	3M	3M-
ROADS					
80001	Modoc-West	0	BJ	B	BJ
80002	Stoddard Creek	AB	ABJ	A0	ABJ
80003	Stoddard Creek CG	A	A	A	A
80004	Idaho Creek	B	BJ	B	BJ
80005	Modoc	AB	AB3	AB	ABJ
80006	West Camas-Miners Creek	ABD	ABDJ	ABD	ABDJ
80007	Alex Draw East	AB*	B*	AB*	B*
80008	Van Noy Canyon	AB	A8J	AB	ABJ
80010	Pete Creek	AB/2,4	ABJ	AB/2,4	AB3
80011	Alex Draw	AB *	ABJ*	AB*	ABJ*
80015	Allan Canyon	B	BJ	B	BJ
80016	McGarry Canyon	AB	ABJ	AB	ABJ
80017	Dairy Creek	AB	ABJ	AB	ABJ
80019	Bear Gulch	AB/2,4	ABJ	AB/2,4	ABJ
80020	Lung Cr	AB	ABJ	AB	ABJ
80021	Three Mile	AB	ABJ	A6	ABS
80022	Left Fork Middle Creek	B	J	3	J
80023	Coalmine	B	BJ	B	BJ
80026	Cottonwood Loop	A0	ABJ	AB	ABJ
80027	Ching Creek	AB	ABJ	AB	ABJ
80029	Trail Creek	A0	AB	A5	AB
80080	Alex Draw Spur 3	B	B	B	0
80087	Dairy Cr Spur	AB	ABJ	AB	ABJ
80171	Fritz Cabin	A0	ABJ	AB	ABJ
80173	Eightmile Canyon	AB	ABJ	A6	ABJ
80174	Italian Canyon	AB	AB	AB	A5
80176	Long Canyon	AB	ABJ	AB	ABJ
80177	Coral Creek	B	BJ	B	BJ
80178	Crooked Creek	AB	ABJ	AB	ABJ
80179	Crooked Creek Bench	B	BJ	B	BJ
80180	Slate Basin	B	BJ	B	BJ
80181	McGarry Spur 1	B	0	B	B
80182	Rocky Canyon	B	BJ	B	BJ
80183	Mammoth Canyon	B	B	B	B
80184	Kelly Canyon	B	BJ	B	BJ
80185	Big Springs Creek	B	BJ	3	BJ
80187	Irving Creek	ASE	BJ	ABE	BJ
80188	Charcoal Kiln	AB	A0	A0	AB
80189	willow Creek	ABD	AB	ABD	A5
80190	Scott Canyon	AB	AB	AB	A0
80191	Myers Creek	AB	ABJ	AB	ABJ
80192	Emigrant Trail	ABD	ABJ	ABD	ABJ
80193	East Fork Irving Creek	B	BJ	B	BJ
80195	Medicine Lodge Bench	ABD	ABJ	ABD	ABJ
80196	Webber Creek CG	AB	ABJ	A0	A53
80198	Grouse Canyon	AB	ABJ	AB	ABJ
80199	Fritz Creek	ABD	ABJ	ABD	ABJ
80200	West Dry-Huntley	B	BJ	B	BJ
80201	Gallagher Canyon	B	BJ	B	BJ
80202	Chandler Canyon	B	BJ	0	BJ
80203	Blue Canyon	B	BJ	B	BJ
80204	Middle Creek	AB	ABS	AB	ABJ
80205	West Indian Creek	B	BJ	B	BJ
80240	Kaufman Springs	B	B	B	B
80272	Viola Gulch	ABD	AB	ABD	AB
80275	Buckhorn	B	BJ	B	BJ
80278	Nichols	B	BJ	B	BJ

NUMBER	ROAD NAME	ALTERNATIVE			
		1(M)	3M+	3M	3M-
80279	Snaky Canyon	B	BJ	B	BJ
80280	Bannock Pass	AB	ABJ	AB	ABJ
80296	Spnng Mountain	AB	A0	A5	AB
80297	Kite Canyon	B	BJ	B	BJ
80298	Skull-Timber	ABD	ABJ	ABD	ABJ
80300	Caw Camp	AB	ABJ	AB	ABJ
80323	Pleasant Valley	ABD	ABJ	ABD	ABJ
80325	Sheep Greek	AB	ABJ	AB	AOJ
80477	Middle Threemile	DE/24	ABJ	DE/2,4	ABJ
80478	Steel Creek	AB	ABJ	AB	ABJ
80479	Upper Corral Creek	B	BJ	B	BJ
80483	School Section	B	BJ	B	BJ
80530	Bartel Canyon	BE	BE	BE	BE
80531	Cedar Canyon	B	B	B	B
80532	Cliff Canyon	B	B	B	B
80533	Daws Canyon	BD	B	BD	B
80534	Deer Canyon	BE	BE	BE	BE
80537	Pierce Canyon	BD	BJ	BD	BJ
80538	South Fork Worthing	BD	B	BD	B
80539	Surrett Canyon	B	BJ	B	BJ
80540	Tyler Canyon	BE	BEJ	BE	BEJ
80551	Camas Greek	B	2,4	2,4	2,4
80564	Scalp Creek	B	BJ	B	BJ
80566	Prospect Main	BE/2,4	BEJ	BE/2,4	BEJ
80671	Bear Gulch Spur 4	B	B	2,4	B
80672	West Cottonwood East	B	2,4	2,4	2,4
80673	Lower East Cottonwood	B	2,4	2,4	2,4
80674	Bear Gulch Spur 8	B	2,4	2,4	2,4
80675	Bear Gulch Spur 9	B	2,4	2,4	2,4
80676	Lower Hersh	B	2,4	2,4	2,4
80678	Cow Creek	B	BJ	2,4	BJ
80679	Berry Creek	B	BJ	B	BJ
80680	West Cottonwood E Spur	B	2,4	2,4	2,4
80682	Lava Creek	B	2,4	2,4	2,4
80684	Hann site	B	5	8	B
80002	Unnamed Spur 4	B	2,4	2,4	2,4
80002	Unnamed Spur 7	B	2,4	2,4	2,4
80006	Unnamed Spur	B	2,4	2,4	2,4
80006	Unnamed Road	B	2,4	2,4	2,4
80811	Clay Creek	B	2,4	B	2,4
80006	Unnamed Spur 4	B	2,4	2,4	2,4
80006	Unnamed Spur 10	A0	2,4	2,4	2,4
80824	Castle Creek	B	B	B	B
80836	McGarry Whip	B	B	B	€
80011	Unnamed Spur 3	B	2,4	2,4	2,4
80823	Alex Draw Spur 1	AB	AB	A0	AB
80017	Unnamed Spur 1	B	2,4	2,4	2,4
80017	Unnamed Spur 2	B	2,4	2,4	2,4
80020	Long Creek Extension	B	BJ	B	BJ
80812	Electronic Site	AB	AB	AB	AB
80810	Boatman Spring	B	B	B	B
80820	Long Creek Spur A	B	B	B	B
80021	Unnamed Spur 7	B	2,4	2,4	2,4
80021	Unnamed Spur 10	2,4	2,4	2,4	2,4
80021	Unnamed Spur 8	2,4	2,4	2,4	2,4
80814	Rattlesnake Loop	B	BJ	B	BJ
80818	Waters Flat	AB	AB	AB	AB
80817	Saw Creek	AB	AB	AB	AB
80026	Unnamed Spur 8	B	2,4	2,4	2,4

NUMBER	ROAD NAME	ALTERNATIVE			
		1(M)	3M+	3M	3M-
80798	Kyle Canyon	B	B	B	B
80799	Kyle Canyon South Fork	B	B	B	B
80176	Unnamed Spur 1	B	2,4	2,4	2,4
80176	Unnamed Spur 5	B	2,4	2,4	2,4
80177	Unnamed Spur 1	0	2,4	2,4	2,4
80177	Unnamed Spur 4	B	2,4	2,4	2,4
80177	Unnamed Spur 5	B	2,4	2,4	2,4
80177	Unnamed Spur 6	B	2,4	2,4	2,4
80177	Unnamed Spur 8	B	2,4	2,4	2,4
80178	Unnamed Spur 2	B	2,4	2,4	2,4
80699	Mammoth Canyon	B	B	B	0
80183	Unnamed Spur 2	B	2,4	2,4	2,4
80708	Bell Mountain Canyon	B	B	B	B
80709	McCoy Canyon	B	B	B	B
80710	willow Canyon	B	B	B	B
80711	UC Gulch	B	B	B	B
80712	willow Spring	B	B	B	B
80713	Magpie Spring	B	B	B	B
80714	Meadow Canyon A	B	B	B	B
80715	Meadow Canyon Spur 1	B	B	B	B
80188	Unnamed Spur 2	B	2,4	2,4	2,4
80189	Unnamed Spur 2	B	2,4	2,4	2,4
80834	Hunting Camp	AB	AB	AB	AB
80831	Porky Spring	B	B	B	B
80195	Unnamed Spur 3	B	2,4	2,4	2,4
80195	Unnamed Spur 4	B	2,4	2,4	2,4
80851	Webber Spur	A	A	A	A
80198	Unnamed Spur 2	B	2,4	2,4	2,4
80198	Unnamed Spur 3	B	2,4	2,4	2,4
80198	Unnamed Spur 6	B	2,4	2,4	2,4
80198	Unnamed Spur 7	B	2,4	2,4	2,4
80801	Skyline Road	B	BD	BD	BD
80855	Left Fork Indian Creek	B	BJ	B	BJ
80751	Diamond Peak #1	B	B	B	B
80835	Kaufman Springs Spur	B	B	B	B
80753	Diamond Peak #2	B	B	B	B
80754	Diamond Peak #3	B	5	B	B
80795	Diamond Peak #4	B	2,4	2,4	2,4
80796	Diamond Peak #5	B	B	B	B
80275	Buckhorn Extension	BJ	BJ	B	BJ
80279	Unnamed Spur 2	0	2,4	2,4	2,4
80280	Unnamed Spur 1	B	2,4	2,4	2,4
80280	Unnamed Spur 2	B	2,4	2,4	2,4
80280	Unnamed Spur 3	B	2,4	2,4	2,4
80832	Limestone	B	BJ	B	BJ
80833	Round Top	B	B	B	B
80280	Unnamed Spur 7	B	2,4	2,4	2,4
80280	Unnamed Spur 8	B	2,4	2,4	2,4
80280	Unnamed Spur 9	B	2,4	2,4	2,4
80296	Unnamed Spur 1	6	2,4	2,4	2,4
80683	Horseshoe Gulch	AB	AB	AB	AB
80837	Skull Mine	AB	ABJ	AB	ABJ
80323	Unnamed Spur 1	B	2,4	2,4	2,4
80808	Swampy Draw	AB	AB	AB	AB
80323	Unnamed Spur 3	B	2,3,4	2,3,4	2,3,4
80323	Unnamed Spur 4	B	2,3,4	2,3,4	2,3,4
80801	Skyline Extension	B	B	B	B
80821	Owens Creek	B	BJ	B	BJ
80325	Unnamed Spur 5	AB	A0	2,4	AB

NUMBER	ROAD NAME	ALTERNATIVE			
		1(M)	3M+	3M	3M-
80815	Steel Creek North	B	B	B	B
80856	School Section Creek	AB	AB	AB	AB
80483	Unnamed Spur 3	B	B	2,4	B
80670	Coal Kiln Spring	B	B	B	6
80698	Coal Kiln Canyon	B	B	B	B
80533	Unnamed Spur 5	⊗	B	2,4	B
80538	So Fork Worthing Extension	BD	BDJ	BD	BDJ
80789	Hilt Road	B	BJ	B	BJ
80793	Tyler D	B	BJ	0	BJ
80790	Tyler C	B	BJ	B	BJ
80794	Tyler Guzzler	AB	ABJ	AB	ABJ
80551	Unnamed Spur 1	B	2,4	2,4	2,4
81034	Unnamed Spur 1	0	2,4	2,4	2,4
80838	Timber	B	BJ	B	BJ
80839	Long Canyon Spur	B	BJ	B	BJ
81035	Unnamed Spur 7	B	2,4	2,4	2,4
80763	Windfall Canyon	B	BJ	B	BJ
80780	Post Canyon	B	BJ	5	BJ
80787	Big Dry Canyon	B	BJ	B	BJ
81047	Unnamed Road	B	2,4	2,4	2,4
81047	Unnamed Spur 1	B	2,4	2,4	2,4
80825	Spring Canyon	B	BJ	B	BJ
81047	Unnamed Spur 5	B	2,4	2,4	2,4
81047	Unnamed Spur 6	B	2,4	2,4	2,4
80827	Deadman Canyon	B	BJ	B	BJ
81047	Unnamed Spur 8	B	2,4	2,4	2,4
80826	Bloom Canyon	B	BJ	B	BJ
81047	Unnamed Spur 11	B	2,4	2,4	2,4
80828	Peterson Canyon	B	BJ	B	BJ
81047	Unnamed Spur 13	B	2,4	2,4	2,4
81130	Unnamed Road 1	B	2,4	2,4	2,4
81130	Unnamed Road 2	B	2,4	2,4	2,4
81130	Unnamed Road 3	B	2,4	2,4	2,4
81130	Unnamed Road 4	B	2,4	2,4	2,4
80857	Opal Mine	B	B	B	B
80857	Opal Mine	AB	A8	AB	AB
80857	Opal Mine	B	0	8	B
80857	Opal Mine	B	B	B	B
80857	Opal Mine	B	B	B	B
81173	Unnamed Spur 5	B	2,4	2,4	2,4
80797	Meadow Canyon	B	B	B	B
80716	Sagebrush Flat	⊗	B	B	B
81173	Unnamed Spur 2	B	2,4	2,4	2,4
81173	Unnamed Spur 6	B	2,4	2,4	2,4
81184	Unnamed Spur 3	2,4	2,4	2,4	2,4
81201	Unnamed Spur 4	B	2,4	2,4	2,4
80718	Keg Springs	B	B	0	B
81332	Unnamed Spur 1	B	2,4	2,4	2,4
80717	Keg Gulch	B	B	B	B
80858	Little Elk Spring	B	B	B	B
80719	Rocky Canyon	B	B	B	B
80720	Wagnor Canyon	⊗	B	B	B
80667	Sawmill	B	B	B	B
80722	Big Sawmill	B	B	B	B
80732	Kaufman Spring	B	B	B	B
81332	Unnamed Spur 9	B	2,4	2,4	2,4
80723	Big Horn Canyon	B	B	B	B
80761	South Fork Bald Mt Spring	B	B	B	B
80829	Reynolds Crossing	B	B	B	B

NUMBER	ROAD NAME	ALTERNATIVE			
		1(M)		3M	3M-
80830	Deep Creek	B	B	B	B
80661	Upper Antelope	B	B	B	0
80643	Middle Threemile Spur	B	BJ	B	BJ
80791	Tyler Canyon C	B	BJ	B	BJ
80635	Camp Creek	AB	AB	AO	AB
80636	Picnic Hollow	AB	ABJ	AO	ABJ
80840	Sagebrush	AB	AB	AB	AB
80638	Beacon Hill	AB	AO	AB	AO
80863	Kitty Springs	B	BJK	B	BJK
80864	North Fork Snaky Canyon	B	BJ	B	BJ
80865	Crystal Gulch	B	BJ	5	BJ
80866	Sage Hen	8	BJ	B	BJ
80868	Sullivan Ridge	B	BJ	B	BJ
80869	Black Mountain	B	BJ	B	BJ
80873	Heart Canyon	B	BJ	B	BJ
80874	Cole Canyon	0	BJK	B	BJK
80875	Buckboard Gulch	B	BJK	B	BJK
80876	South Fork Fritz	B	BJ	0	BJ
80877	Horse Creek	B	BJK	B	BJK
80878	Limestone	0	BJ	B	BJ
80879	Lake Creek	B	BJK	B	BJK
80880	Telephone Creek	B	BJK	B	BJK
80888	Sweet Springs	0	BJ	B	BJ
80889	Spring Creek	8	BJ	B	BJ
80890	Scalp Creek	B	BJ	B	BJ
80891	Moose Creek	8	BJ	B	BJ
80892	Cross Country	B	BJ	8	BJ
80012	West Pete Creek	B*	BJ*	B*	BJ*
80050	Alex Draw Spur 2	B*	BJ	B*	BJ*
80081	Alex Draw Spur 4	B*	B*	B*	B*
80249	Stump Creek	B*	B*	B*	B*
80308	Jug Creek	B*	2,4	2,4	2,4
80346	Lower Stump	B*	2,4	2,4	2,4
80356	West Camas A Spur	B*	2,4	2,4	2,4
80473	West Camas Spur	B*	BJ*	B*	BJ*
80481	West Camas 'A'	B*	B*	B*	B*
80641	Beaver Ponds	B*	B*	B*	B*
80542	corral Creek Spur 3	B*	B*	B*	B*
80028	West Rattlesnake	2,4	2,4	2,4	2,4
80091	Warror	2,4	2,4	2,4	2,4
80245	Steel Creek Spur 1	2,4	2,4	2,4	2,4
80668	Bear Gulch Spur 1	2,4	2,4	2,4	2,4
80669	Bear Gulch Spur 2	2,4	2,4	2,4	2,4
80175	Mandingo	2,4	2,4	2,4	2,4
80172	Pete Creek Breaks	2,4	2,4	2,4	2,4
80566	Prospect Main	2,4	2,4	2,4	2,4

NUMBER	TRAIL NAME	ALTERNATIVE			
		1(M)	3M+	3M	3M-
TRAILS					
18002	Stoddard Creek	AB	ABJ	AB	ABJ
18003	West Camas creek	2,4	2,4	2,4	2,4
18004	Continental Divide	2,4	2,4	2,4	2,4
18005	Signal Peak/Lookout Point	AB	ABJ	AB	ABJ
18008	Bear Gulch/Table Mountain	2,4	2,4	2,4	2,4
18025	North Fork Eight-Mile	B	B	B	B
18026	Pass Creek Lake	ABD	AB	ABD	AB
18034	Webber Creek Lakes	B	BJ	B	BJ
18045	South Fork Pass Creek	B	B	B	B
18047	Rocky Canyon	2,4	2,4	2,4	2,4
18081	Crooked Creek-Willow Creek	B	BJ	B	BJ
18110	Corral Canyon	B	BJ	BD	BJ
18111	Webber Creek-Divide Creek	AB	ABJ	AB	ABJ
18113	Myers Creek	B	BJ	B	BJ
18175	Lone Pine Pass	5	BJ	B	BJ
18177	Van Noy Canyon	B	BJ	B	BJ
18179	Stoddard-Huntley Cutoff	B	BJ	B	BJ
13180	Allan Canyon	2,4	2,4	2,4	2,4
18013	Coal Kiln	2,4	2,4	2,4	2,4
18022	South Fork Eight-Mile	B	B	B	B
18024	Teepee Draw	B	BJ	B	BJ
18323	Unnamed Trait	B	2,4	2,4	2,4
18174	Scott Canyon Right Fork	5	B	B	B
18132	Goldmine	B	B	B	B
18001	Huntley	B	BJ	B	BJ
18135	West Fork Indian	B	BJ	2,4	BJ
18136	West Modoc	B	BJ	2,4	BJ
18137	Little Table	B	BJ	2,4	BJ
18184	Long Gulch	B	BJ	2,4	BJ
18190	Pete Creek	B	BJ	2,4	BJ
18191	West Threemile Creek	B	BJ	2,4	BJ
18130	Nicholia Trail	B	BJ	2,4	BJ
18134	Buckhorn Trail	B	BJ	2,4	BJ

NUMBER	NAME	ROAD	ALTERNATIVE			
			1(M)	3M+	3M	3M-
DISTRICT ISLANDPARK						
ROADS						
80024	Sawtell Peak		A	A	A	A
80030	Kilgore-Yale		ABD	ABD	ABD	ABD
80033	West Fork Dry Creek		B	B	B	B
80034	Schneider Creek East		B	B	B	B
80035	Howard Creek		AB/2,4	AB/2,4	AB/2,4	AB/2,4
80036	Schneider Creek West		A	A	A	A
80037	Taylor Creek		2,3,4	2,3,4	2,3,4	2,3,4
80039	willow Creek Pit		A	A	A	A
80042	Keg Springs		AB	J	AB	AB
80043	Upper Coffee Pot Campground		A	A	A	A
80044	Howard Spring		AB	AB	AB	AB
80045	willow Creek Cutoff		AB	AB	AB	AB
80046	Willow Creek		AB/3,4	AB/3,4	AB/3,4	AB/3,4
80047	Dry Canyon		B	2,4	2,4	2,4
80048	Blue Creek		B	B	B	B
80049	Icehouse		A	A	A	A
80051	Bootjack		A	A	A	A
80052	Stamp Meadows		ABD	ABD	ABD	ABD
80053	Red Rock		ABD	ABD	ABD	ABD
80055	Henrys Lake		ABD	ABD	ABD	ABD
80056	Divide		ABD	ABD	ABD	ABD
80057	Targhee Creek		AB	AB	AB	AB
80058	West Fork Mill Creek		A	A	A	A
80059	Big Springs Loop		ABD	ACD	ABD	ABD
80060	Meadow Creek		ABD	ACD	ABD	ABD
80061	Two Top Canyon		AB	AB	AB	AB
80062	North Fork Club		A	A	A	A
80064	Toms Creek Pole		A	A	A	A
80066	Black Canyon		AB/2,4	AB/2,4	AB/2,4	AB/2,4
80082	Fish Creek		ABD	ABD	ABD	ABD
80089	Black Canyon BPA Line		AB/2,4	AB/2,4	AB/2,4	AB/2,4
80100	IPS		B/2	B/2	B/2	B/2
80104	Hope Creek		B/2,4	B/2,4	B/2,4	B/2,4
80112	Eccles		BD	BD	BD	BD
80117	Old Chick Creek		ABD	ABD	ABD	ABD
80119	Trude Siding		ABD	ABD	ABD	ABD
80126	Buttermilk Loop		AD	AD	AD	AD
80127	McCrea Bridge CG		AB	AB	AB	AB
80128	Jackson Landing		AB	AB	AB	AB
80129	Mill Creek Landing		A	A	A	A
80130	Flatrock		BD	BD	BD	BD
80131	Flatrock C G		A	A	A	A
80134	Old Highway No 3		AD	AD	AD	AD
80135	McCrea Timber		B	B	B	B
80136	Buffalo SH South		A	A	A	A
80137	Island Park R S		A	A	A	A
80138	Buffalo C G		A	A	A	A
80139	Island Park Dam		A	A	A	A
80141	Big Springs SH 2		A	A	A	A
80142	Thurmon Ridge		A	A	A	A
80143	Moose Creek SH Area		A	A	A	A
80144	Big Springs Boat Landing		A	A	A	A
80145	Bishop Well		BD	BD	BD	BD
80146	Big Springs Summer Home 1		A	A	A	A
80147	Big Springs C G		A	A	A	A
80148	North Fork SH Area		A	A	A	A
80149	IP Sanitary Landfill		A	A	A	A

NUMBER	ROAD NAME	ALTERNATIVE			
		1(M)	3Mt	3M	3M-
80150	Warm River Road	ABD	ABD	ABD	ABD
80167	Green Canyon	ABD	ABD	ABD	ABD
80223	Box Canyon Boat Launch	A	A	A	A
80284	Box Canyon C G	A	A	A	A
80287	Davis Lake	ABD	ABD	ABD	ABD
80291	Chick Creek	ABD	ABD	ABD	ABD
80292	Chick Creek Flat	ABD	ABD	ABD	ABD
80293	Ridge Road	B	B	B	B
80294	Mesa Falls Scenic Drive D-2	ABD	ABD	ABD	ABD
80301	Island Park Boat Landing	A	A	A	A
80311	Coffeepot	ABD	ABD	ABD	ABD
80327	East Dry Creek	AB/2,4	AB/2,4	AB/2,4	AB/2,4
80333	Toms Creek Spur	A	A	A	A
80334	Big Bay C G	AB	AB	AB	AB
80335	Rocky Point	A	A	A	A
80336	Island Approach	A	A	A	A
80337	Buttermilk C G	AD	AD	AD	AD
80338	Lagoon Access	A	A	A	A
80339	Lakeside	A	A	A	A
80357	Orme SH	A	A	A	A
80409	Weeks SH	A	A	A	A
80412	Reservoir North	A	A	A	A
80413	Dike	A	A	A	A
80414	BOR Site	A	A	A	A
80419	Elk Creek	A	A	A	A
80420	Elk Creek Estates-North	A	A	A	A
80421	Macks Substation	A	A	A	A
80422	Outlet No 1	A	A	A	A
80423	Outlet No 2	A	A	A	A
80424	Kocch Ranch	A	A	A	A
80426	Buffalo River	A	A	A	A
80437	Fransen Mill	A	A	A	A
80451	Crow Creek	A	A	A	A
80455	East Sawtelle	AD	AD	AD	AD
80456	West End A	A	A	A	A
80457	West End B	A	A	A	A
80458	West End C	A	A	A	A
80459	West End D	A	A	A	A
80463	Kenny Creek	A	A	A	A
80465	West End C G	A	A	A	A
80472	Kick Creek	A/2,4	A/2,4	A/2,4	N2,4
80474	Big Bend	A	A	A	A
80552	Bishop Burn	BD	BD	BD	BD
80560	Pit	A	A	A	A
80563	Buffalo North	A	A	A	A
80843	Ripley Butte East	2	D	D	D
80870	Randy's Box Canyon Access	A	A	A	A
80871	Last Chance Fisherman Access	A	A	A	A
80872	Big Springs Snow Park	A	A	A	A
81211	Meadow Cr Cutoff	BD	BD	ED	BD
81213	Orme Ranch	A	A	A	A
81214	Mickelsen Ranch	A	A	A	A
81217	Buffalo River Spur 1	A	A	A	A
81219	Head of Buffalo	A	A	A	A
81221	Coffee Pot Lodge	A	A	A	A
80628	State Shed Road	A	A	A	A
80371	Mill Creek	1	B	B	B
80372	Mill Creek North	A	A	A	A
81216	Ice House East	A	A	A	A

NUMBER	ROAD NAME	ALTERNATIVE			
		1(M)	3M+	3M	3M-
80373	Trude North	A	A	A	A
80375	Trude Cut-across	A	A	A	A
80376	Macks Substation East	A	A	A	A
80378	Stamp Meadows South	A	A	A	A
80631	BPA Powerline	B	B	B	B
80395	Reynolds Pass	B	B	B	B
80126	McCrea Pit	A	4	A	A
80626	Powerline Road (Kilgore)	A	A	A	A
80126	Unnamed Spur 5	B	1	1	1
80134	Old Hwy - Last Chance	A	A	A	A
80639	Bishop Well Cutoff	A	A	A	A
80147	Big Springs Campground -Well	A	A	A	A
80431	Island Park Siding Pit	A	A	A	A
80432	Trude South	A	A	A	A
80445	Coffeepot Spur	A	A	A	A
80446	Outlet 1A	B	B	B	B
80482	Outlet Spur 1B	B	B	B	B
80486	Outlet 2A	0	B	B	8
80632	Lagoon Access-West	A	A	A	A
80633	Fransen Mill South	A	A	A	A
80465	West End South	B	B	B	B
80465	West End East	A	A	A	A
80465	West End North	A	A	A	A
80465	West End Spur 6	A	A	A	A
80465	West End Loop	A	A	A	A
80465	West End Spur	A	A	A	A
80465	West End	B	A	B	0
80611	Coffeepot Lodge B	A	A	A	A
80557	Unnamed Road	B	1,2	1,2	1,2
80536	Coffeepot Lodge Spur	A	A	A	A
80559	Coffeepot Lodge Loop	A	A	A	A
80629	Reynolds Rock Pit	AB	AB	AB	AB
80630	Preussner Road	A	A	A	A
80627	coffeepot Well	A	A	A	A
80484	Fish Creek A	A	A	A	A
80557	Fir	BD	BD	BD	BD
80509	Defasus Mine	A	A	A	A
80637	Lagoon Access West	A	A	A	A
80614	Coffeepot Lodge Spur C	A	A	A	A
80589	Coffeepot Lodge A	A	A	A	A
80040	White Elephant	4	4	4	4
80063	Gamer Canyon	AB/2,4	AB/2,4	AB/2,4	AB/2,4
80067	West Road	2,4	2,4	2,4	2,4
80068	East Road	2,4	2,4	2,4	2,4
80072	Black Canyon Break	2,4	2,4	2,4	2,4
80083	North Fork	2,4	2,4	2,4	2,4
80098	Tie 1	2,4	2,4	2,4	2,4
80099	Dynamite Springs	2	2	2	2
80116	Log Haul No 7	2,4	2,4	2,4	2,4
80118	Kick Creek Spur	2,4	2,4	2,4	2,4
80340	Bear Canyon	2,4	2,4	2,4	2,4
80394	Reynolds Pass Pit	2,4	2,4	2,4	2,4
80415	Smead Well	2	2	2	2
80417	Ripley Butte South	2	2	2	2
80418	Ripley Butte North	2	2	2	2
80443	Blind willow South	2,4	2,4	2,4	2,4
80447	Log Haul 4 Spur 2	2,4	2,4	2,4	2,4
80448	Log Haul 4 Spur 3	2,4	2,4	2,4	2,4
80449	Blind Willow Spur 4	2,4	2,4	2,4	2,4

NUMBER	ROAD NAME	ALTERNATIVE			
		1(M)	3M+	3M	3M-
80450	Eccles Spur 2	2	2	2	2
80496	Eccles Spur 1	2	2	2	2
80570	Smead Canyon	2	2	2	2
80845	East Fork Sheridan Cr	3	3	3	3
80846	East Fork Sheridan Cr Sp 1	3	3	3	3
80850	Bear Canyon Spur 1	2,4	2,4	2,4	2,4
80852	West Cooney Canyon	2,4	2,4	2,4	2,4
80853	East Cooney Canyon	2,4	2,4	2,4	2,4
80861	Moonshine	2,4	2,4	2,4	2,4
80862	White Lightnin	2,4	2,4	2,4	2,4
81215	Twin Creek	2,4	2,4	2,4	2,4
80369	Ripley North Spur A	2	2	2	2
80396	Dynamite Springs A	2	2	2	2
80397	Eccles Spur 1 West	2	2	2	2
80398	Dynamite Springs Loop	2	2	2	2
80416	Chick Creek West	2	2	2	2
80425	Chick Creek East	2	2	2	2
80495	Eccles Spur 2A	2	2	2	2
80513	Eccles Spur 1A	2	2	2	2
80436	Chick Creek Flat Spur 3	2	2	2	2
80452	Eccles Spur 4	2	2	2	2
80104	Hope Creek	2	2	2	2
80121	Dugway Fork-Split Creek	2,4	2,4	2,4	2,4
80514	Eccles Spur 1B	2	2	2	2
80105	Log Haul No 4	2,4	2,4	2,4	2,4
80634	Eccles Spur 1C	2	2	2	2
80640	White Lightnin Spur	2,4	2,4	2,4	2,4
80393	Targhee Pass BPA	A*	A"	A*	A*
80327	East Dry Creek	AB*	AB'	AB"	AB'
80465	West End	A"	A'	A'	A*

TRAIL		ALTERNATIVE			
DISTRICT ISLAND PARK					
TRAILS					
28001	Railroad R-O-W	A	A	A	A
28004	Continental Divide Trail(See Travel Plan)Section of Road #066 - Seasonally Restricted	A	A	A	A

NUMBER	NAME	ROAD	ALTERNATIVE			
			1(M)	3M+	3M	3M-
DISTRICT ASHTON						
ROADS						
20006	Cave Falls CG		A	A	A	A
20027	Camp Loll		A	A	A	A
20032	Squirrel Meadows Spur 1		A	A	A	A
20043	Tillery Lake		A	A	A	A
20047	Fish Lake		A	A	A	A
20048	Loon Lake		A	A	A	A
20064	Hominy Peak Trailhead		A	A	A	A
20261	Ashton Flagg Ranch		ABD	ABD	ABD	ABD
20264	Jackass Loop Road		ABD	ABD	ABD	ABD
20265	Coyote Meadows		AB	AB	AB	AB
20582	Cave Falls		AB	AB	AB	AB
80582	Unnamed Spur 2		1	A	1	1
80582	Unnamed Spur3		1	A	1	1
20589	Bergman Reservoir		A	A	A	A
80082	Fish Creek		ABD	ABD	ABD	ABD
80082	Unnamed Spur 200		1	1	1	1
80092	Snow Creek		BD	BD	BD	BD
80094	Snow Creek Butte		AB	AB	AB	AB
80097	Warm River C G		A	A	A	A
80110	Warm River Lookout		AB	AB	AB	AB
80112	Eccles		BD	AB	BD	AB
80120	Bishop Mtn		AB	AB	AB	AB
80124	Wyoming Cr		AB	AB	AB	AB
80150	Warm River		ABD	ABD	ABD	ABD
80150	Unnamed Spur 300		1	1	1	1
80151	Wood Road 6		B	B	B	B
80153	Flat Canyon		AB	AB	AB	AB
80154	Warm River Springs		A	A	A	A
80156	Grave Yard Flats		B	B	B	B
80158	Warm River Butte		BD	BD	BD	BD
80159	Gulch		A	A	A	A
80160	Pole Bridge C G		A	A	A	A
80161	Baker Draw		BD	BD	BD	BD
80162	Elk Butte		B	B	B	B
80163	Sheep Falls		AB	AB	AB	AB
80164	Anderson Mill Canyon		B	D	D	D
80168	N Antelope Flat		BD	BD	BD	BD
80169	Sadorus Hill		B	B	B	B
80170	Lyle Springs		ABD	ABD	ABD	ABD
80241	Robinson Cr		BD	BD	BD	BD
80242	PorcupineGS		A	A	A	A
80243	Fall River Ridge		AB	AB	AB	AB
80246	Horseshoe Lake		AB	AB	AB	AB
80261	Ashton-Flagg Ranch		ABD	ABD	ABD	ABD
80263	Conant-Fall River		BD	BD	BD	BD
80264	Jackass Loop		ABD	ABD	ABD	ABD
80265	Coyote Meadows		AB	AB	AB	AB
80286	S Hatchery Butte		B	B	B	B
80289	Marysville Hill		ABD	ABDJ	ABD	ABD
80294	Mesa Falls-Scenic Dnva		ABD	,	ABD	A
80295	Upper Mesa Falls		A	,	A	A
80299	Middle Rock Creek C G		A	A	A	A
80303	July Creek		B	B	B	B
80304	Riverside CG		A	A	A	A
80305	Lower Rock Creek C G		A	A	A	A
80307	Porcupine C G		A	A	A	A
80313	Wood Road 16		A	A	A	A

NUMBER	ROAD NAME	ALTERNATIVE			
		1(M)	3M+	3M	3M-
80314	Wood Road 12	B	B	B	B
80315	N Hatchery Butte	BD	BD	BD	BD
80317	Little Butte	BD	BD	BD	BD
80319	Highpoint	BD	BD	BD	BD
80331	Wood Road 11	B	B	B	B
80341	Lyle Springs Stock Driveway	ABD	ABD	ABD	ABD
80343	Free Use Canyon	B	B	B	B
80344	Rattlesnake	B/1,2	B/2,4	B/2,4	B/2,4
80348	Grandview C G	A	A	A	A
80349	Hale Canyon	ABD	ABD	ABD	ABD
80351	East Hatchery Ford	AB	AB	AB	AB
80352	Griffel	AB	AB	AB	AB
80352	Black Mountain Spring Pit	B	B	B	B
80367	Wood Road 1	ABD	ABD	ABD	ABD
80374	IYTC Camp	A	A	A	A
80380	North Antelope Springs	BD	BD	BD	BD
80470	Shaeffer Creek	B	B	B	B
80501	Fall River Hollow	D	DK	D	D
80502	Porcupine Spur	D	DK	D	D
80518	Snow Creek Butte Spur 5	B	B	B	B
80527	Snow Cr Cutoff	BD	BD	BD	BD
80552	Bishop Burn	BD	BD	BD	BD
80553	South Antelope Flat	ABD	ABD	ABD	ABD
80555	Stock	BD	BD	BD	BD
80556	Parallel	BD	BD	BD	BD
80557	Fir	BD	BD	BD	BD
80558	Mt Bell	A	A	A	A
80561	Sheep Ridge	B	B	B	B
80562	Fogg Butte	BD	BD	BD	BD
80572	Big Grassy	AB	AB	AB	AB
80582	Cave Falls	AB	A0	A6	AB
80584	County Cutoff	AD	AD	AD	AD
80590	REA Power Line	AD	AD	AD	AD
80606	Cold Springs	B	B	B	B
80607	Pioneer	BD	BD	BD	BD
80610	Wood Road 14	A	A	A	A
80621	Cinder Butte	A	A	A	A
80700	State Section Access	A	A	A	A
80701	West Hatchery Ford	AB	AB	AB	AB
80724	N Hatchery Butte Spur 7	BD	BD	BD	BD
80735	Sheep Falls Spur I	A	A	A	A
80736	South Hatchery Butte Spur 1A	B	2,4	2,4	2,4
80760	Sheep Falls Trailhead	A	A	A	A
80764	Power Line Spur 1	A	A	A	A
80767	North Antelope Flat Spur 1	AB	AB	AB	AB
80768	North Antelope Flat Spur 3	5	1,2	1,2	1,2
80771	Antelope Cutoff	BD	BD	BD	BD
80773	Flat Canyon Spur 1	B	B	B	B
80776	Flat Canyon Spur 3	B	B	B	B
80779	Hidden Res	BD	BD	BD	BD
20030	Squirrel Meadows Ranch	A	A	A	A
80765	Wood Road 14A	A	4	4	4
80361	Thompson Hole	A	A	A	A
80150	Unnamed Spur 1	A	1,2	1,2	1,2
80167	Unnamed Spur 1	B	1,2	1,2	1,2
80167	Unnamed Spur 2	B	1,2	1,2	1,2
80649	Bird Man	B	B	B	B
80362	Osborne Pit	A	A	A	A
80313	Unnamed Spur 1	AB	1,2	1,2	1,2

ROAD		ALTERNATIVE			
NUMBER	NAME	1(M)	3M+	3M	3M-
80313	Unnamed Spur 3	AB	1,2	1,2	1,2
80315	Unnamed Spur 1	AB	1,2	1,2	1,2
80317	Unnamed Spur 1	AB	1,2	1,2	1,2
80363	Little Butte Pit	A	A	A	A
80319	Unnamed Spur 1	B	1,2	1,2	1,2
80346	To Blue Creek Res	A	D	D	D
80348	Unnamed Spur 1	AB	1,2	1,2	1,2
80352	Unnamed Road	B	1,2	1,2	1,2
80352	Unnamed Spur 400	B	1,2	1,2	1,2
80352	Unnamed Spur 500	B	1,2	1,2	1,2
80367	Unnamed Spur 1	AB	1,2	1,2	1,2
80380	Unnamed Spur 1	B	1,2	1,2	1,2
80553	Unnamed Spur 3	B	1,2	1,2	1,2
80557	Unnamed Spur 1	A	1,2	1,2	1,2
80610	Unnamed Spur 2	B	1,2	1,2	1,2
80724	Unnamed Spur 1	B	1,2	1,2	1,2
80901	Robinson Ridge	A	AK	1,2	1,2
80345	Rattlesnake Spur 5	AB	2,4	2,4	2,4
80612	Elk Butte Pit	2,4	AB	2,4	2,4
80647	Conant West	2,4	AB	2,4	2,4
80648	Conant East	2,4	AB	2,4	2,4
20642	Moose Lake	2,4	AB	2,4	2,4
20644	South Boone	2,4	AB	2,4	2,4
20645	Boone Bridge	2,4	AB	2,4	2,4
80285	Warm River Power Line	A	AK*	A*	A*
80900	Search/Mesa Falls	2	AK*	2,4	2,4
20034	Hominy Creek	2,4	2,4	2,4	2,4
80488	Cow Camp	2,4	2,4	2,4	2,4
80123	Anderson Mill Spur 4	2,4	2,4	2,4	2,4
80516	Anderson Mill Spur 2	2,4	2,4	2,4	2,4
80554	Snow Creek Spur 1	2,4	2,4	2,4	2,4
80571	North Baker Draw	2,4	2,4	2,4	2,4
80578	Long Meadows	2,4	2,4	2,4	2,4
80702	Fish Creek Spur	2,4	2,4	2,4	2,4
80744	Fish Creek Spur 20A	2,4	2,4	2,4	2,4
80368	Yellowstone Ditch	2,4	2,4	2,4	2,4
80344	Rattlesnake	2,4	2,4	2,4	2,4
80345	Rattlesnake Spur 5	2,4	2,4	2,4	2,4
80512	East/West Road	2,4	2,4	2,4	2,4
80491	Huckleberry Ridge	2,4	2,4	2,4	2,4
80749	Fish Creek Spur 3	2,4	2,4	2,4	2,4
80781	Twisted Drain	2,4	2,4	2,4	2,4

TRAIL		ALTERNATIVE			
NUMBER	NAME	1(M)	3Mt	3M	3M-
32002	Bitch Creek	A	A	A	A
38001	Railroad/ORV Trail	A	A	A	A

NUMBER	ROAD NAME	ALTERNATIVE			
		1(M)	3Mt	3M	3M-
ROADS					
20017	4th of July Commissary	ABHI	ABHI	ABHI	ABHI
20020	Long Springs-Alpine4H	A	AI	AI	AI
20021	Alpine Summer Home	AF	AF	AF	AF
20024	Jordan Canyon	AF	AF	AF	AF
20037	Antelope Creek	AH	AH	AH	AH
20056	Gibson Creek	I	I	I	I
20057	Bally's Hole	AH	AH	AH	AH
20058	Bear Creek-Elk Jensen	ABI	ABI	ABI	ABI
20055	Bear Creek-Corral Road	AI	AI	AI	AI
20059	Long Gulch	AI	AI	AI	AI
20065	Fisher Road	A	A	A	A
20066	Blacktail Can-Pt Lookout	ABI	ABI	ABI	ABI
20070	Nelson Creek	AHI	AHI	AHI	AHI
20074	McNeel Creek	A	A	A	A
20076	Snake River-Calamity	AI	AI	AI	AI
20077	Fall Creek-Skyline	ADHI	ADHI	ADHI	ADHI
80203	Fleming Road	A	A	A	A
20081	Garden Canyon	AI	A	A	A
20082	Pritchard Creek	AI	A	A	A
20083	South Fork Bear Creek	I	I	I	I
20084	Lava Creek	AI	AI	AI	AI
20085	South Fork Fall Creek	I	AI	AI	AI
20086	Brockman Creek	AFHI	AFHI	AFHI	AFHI
20087	Salt River-McCoy	ABFHI	ABFHI	ABFHI	ABFHI
20138	Trout Creek	AI	AI	AI	AI
20143	Corral Ridge	AI	4	4	4
20151	Sawmill Creek	ABI	ABI	ABI	ABI
20157	Indian Fork	AI	AI	AI	AI
20158	Brockman Ridge	ADI	2,3,4	2,3,4	2,3,4
20159	Lombard Corral	DI	DI	DI	DI
20161	Indian Creek	AI	AI	AI	AI
20170	Rash Canyon	AI	AI	AI	AI
20060	Bagley	A/6	A/6	A/6	A/6
20173	South Fork Lava Creek	I	I	I	
20067	McCoy Creek Campground	A	A	A	
20182	Bates Canyon	AI	AI	AI	
20211	Lone Pine Ridge	ABI	ABI	ABI	ABI
20247	Bear Creek Trailhead	A	A	A	A
20248	Brockman GS	AH	AH	AH	AH
20274	Hell Creek	A	A	A	A
20277	Gravel Flats	A	A	A	A
20278	Calamity Shortcut	I	1,3,6	1,3,6	1,3,6
20162	Mike Spencer Spur	I	I	I	I
20279	Tag Alder	AI	AI	AI	AI
20283	Brockman Basin	I	I		
20286	Pat Canyon	ABDHI	ABDHI	ABDHI	ABDHI
20288	Hawthorne Hollow	ABI	ABI	ABI	ABI
20376	June Creek	ABI	ABI	ABI	ABI
20863	West Fork Elk Creek	AB	AB	AB	AB
80206	South Fork Snake	ABHI	ABHI	ABHI	ABHI
80206	South Fork Snake Spur 1	I	1,3,4	1,3,4	1,3,4
80210	Big Burns	AH	AH	AH	AH
80212	Fullmer/Cottonwood Landing	A	AI	AI	AI
80213	Hinckley Creek	ABI	ABI	ABI	ABI
80217	Table Rock Canyon	AHI	AHI	AHI	AHI
80218	Kelly Canyon	AHI	AHI	AHI	AHI
80222	Browning Creek		A	A	A
80227	Cold Spring		I	I	I

NUMBER	ROAD NAME	ALTERNATIVE			
		1(M)	3M+	3M	3M-
80229	Fleming Canyon	AB	AB	AB	AB
80230	West Pine Creek	A	A	A	A
80232	Graham Hollow	ABHI	ABHI	ABHI	ABHI
80238	Table Rock C G	A	A	A	A
80248	Pine Basin Ski Area	ABH	ABH	ABH	ABH
80250	Mike Spencer	ABI	ABJK	ABI	ABI
80252	Tie Canyon	AI	AI	AI	AI
80253	Upper Rainey Creek	ABDI	ABDI	ABDI	ABDI
80255	Palisades Campground	A	A	A	A
80257	Lower Rainey Creek	AB	AB	AB	AB
80258	North Moody Road	ABI	ABI	ABI	ABI
80259	Sawmill Canyon	A	A	A	A
80260	Sheep Creek	ABI	ABI	ABI	ABI
80260	Sheep Creek200 Spur	ABI	2,3	2,3	2,3
80262	Big Elk Creek	ABF	ABF	ABF	ABF
80268	Little Elk Creek	AI	AI	AI	AI
80270	Big Elk Creek Campground	A	A	A	A
80271	Blowout Canyon	ABI	ABI	ABI	ABI
80281	South Indian	ABI	ABI	ABI	ABI
80282	North Indian	AI	AI	AI	AI
80318	Windy Ridge	AI	AI	AI	AI
80399	Spaulding's Road-Table Rock	A	A	A	A
80401	Adams Homestead	AH	AH	AH	AH
80404	Spring Run	I	I	I	I
80464	Fish Cr Sp 1-South Moody	AI	2,3,4	2,3,4	2,3,4
80466	Fish Cr Sp 2-South Moody	AI	2,3,4	2,3,4	2,3,4
80467	Big Elk Creek Boat Landing	A	A	A	A
80651	Moody Swamp	ABFI	ABFI	ABFI	ABFI
80883	Wolverine	AI	AI	AI	AI
80887	Buckskin Morgan	ABI	ABI	ABI	ABI
20017	Commissary Ridge Extension	AI	2,4	2,4	2,4
20017	Commissary Ridge Spur 3	I	2,4	2,4	2,4
20038	Alpine Cemetary Road	A	A	A	A
20019	Haul Road	A	A	A	A
20014	Pond Road	A	AI	AI	AI
20059	Long Gulch E Spur	AI	2,4	2,4	2,4
20001	Fisher A Spur	A	A	A	A
20002	Fisher B Spur	A	A	A	A
20066	Blacktail-Point Lookout A Spur	I	2,4	2,4	2,4
20066	Blacktail-Point Lookout B Spur	I	2,4	2,4	2,4
20066	Blacktail-Point Lookout C Spur	I	2,4	2,4	2,4
20066	Blacktail-Point Lookout D Spur	AI	2,4	2,4	2,4
20072	Hawthorne Hollow County Road	AI	AI	AI	AI
20040	Spring Creek Boat landing	AI	AI	AI	AI
20041	River Access	A	1,4	1,4	1,4
20004	Bed Ground Road	I	I	I	I
20077	Fall Creek-Skyline Spur 3	A	2,4	2,4	2,4
20077	Fall Creek-Skyline Spur9	I	2,4	2,4	2,4
20077	Fall Creek-Skyline Spur 10	I	2,4	2,4	2,4
20077	Fall Creek-Skyline Spur 20	I	2,4	2,4	2,4
20077	Fall Creek-Skyline Spur 33	I	2,4	2,4	2,4
20077	Fall Creek-Skyline Spur 444	I	2,4	2,4	2,4
20077	Fall Creek-Skyline Spur 200	I	2,4	2,4	2,4
20003	Phosphate Canyon	I	I	I	I
20084	Lava Creek Spur 1	A	3,4	3,4	3,4
20005	Little Box	A	A	A	A
20102	Fish and Game A Spur	AI	AI	AI	AI
20143	Corral Ridge Spur 143A	A	2,4	2	2
20157	Indian Fork Spur 1	I	4	4	4
20157	Indian Fork Spur 2	I	4	4	4

NUMBER	ROAD NAME	ALTERNATIVE			
		1(M)	3Mt	3M	3M-
20157	Indian Fork Spur 4	I	4	4	4
20161	Indian CreekA Spur	A	4	4	4
20170	Rash Canyon willow Spring Sp	I	2,3	2,3	2,3
20170	Rash Canyon Extension	I	2,3	2,3	2,3
20242	Calamity C G Water System	A	A	A	A
20023	Gravel Flats Spur	AI	AI	AI	AI
20022	Antelope Creek, Head	AH	AH	AH	AH
20042	Little Box Canyon	AI	AI	AI	AI
20281	Tissue Point	AI	AI	AI	AI
20278	Calamity Shortcut Spur 1	AI	1,2,3	1,2,3	1,2,3
20278	Calamity Shortcut Spur 2	AI	1,2,3	1,2,3	1,2,3
20376	June Creek Spur	I	2,3	2,3	2,3
20004	Alpine Boat Landing Spur 2	A	1,3	1,3	1,3
20004	Alpine Boat Landing Spur 3	A	1,3	1,3	1,3
20004	Alpine Boat Landing Spur 4	A	1,3	1,3	1,3
80254	Roller Canyon	AI	AI	AI	AI
80277	Shurtliff Canyon	A	A	A	A
80283	Oakden Canyon	A	A	A	A
80302	Holland Canyon	A	A	A	A
80228	Unnamed Road	A	1,2,3	1,2,3	1,2,3
80353	Mud Springs	A	A	A	A
80218	Kelly Canyon Spur 1	I	3,4	3,4	3,4
80218	Kelly Canyon Spur 2	I	3,4	3,4	3,4
80343	Kelly Sheep Corrals	A	A	A	A
80218	Kelly Canyon Spur 4	I	3,4	3,4	3,4
80218	Kelly Canyon Spur 5	I	3,4	3,4	3,4
80342	Morning Glory Mine	AI	AI	AI	AI
80218	Kelly Canyon Spur 8	I	3,4	3,4	3,4
80218	Kelly Canyon Spur 10	I	3,4	3,4	3,4
80218	Kelly Canyon Spur 11	I	3,4	3,4	3,4
80222	Browning Creek Spur 1	I	3,4	3,4	3,4
80222	Browning Creek Spur 2	I	3,4	3,4	3,4
80222	Browning Creek Spur 3	I	3,4	3,4	3,4
80229	Fleming Canyon Spur 1	I	3,4	3,4	3,4
80232	Graham Hollow Spur 1	I	3,4	3,4	3,4
80232	Graham Hollow Spur 2	I	3,4	3,4	3,4
80234	Lower Rainey Diversion	AI	AI	AI	AI
80258	North Moody Spur 1	I	3,4	3,4	3,4
80258	North Moody Spur 2	I	3,4	3,4	3,4
80258	North Moody Spur 3	I	3,4	3,4	3,4
80258	North Moody Spur 5	I	3,4	3,4	3,4
80258	North Moody Spur 6	I	3,4	3,4	3,4
80231	Butler Canyon Road	AI	AI	AI	AI
80318	Windy Ridge Spur 1	AI	3,4	3,4	3,4
80318	Windy Ridge Spur 2	I	3,4	3,4	3,4
80400	Byrnes Homestead	AH	AH	AH	AH
80464	Fish Creek South Moody Spur A	I	3,4	3,4	3,4
80651	Moody Swamp Spur 1	AI	3,4	3,4	3,4
80651	Moody Swamp Spur 2	AI	3,4	3,4	3,4
80651	Moody Swamp Spur 3	AI	3,4	3,4	3,4
80651	Moody Swamp Spur 4	AI	3,4	3,4	3,4
80883	Wolverine Spur 1	I	3,4	3,4	3,4
80903	3PA Powerline B Spur	A	4	4	4
80903	3PA Powerline C Spur	A	4	4	4
81085	Stateland	A	3,4	3,4	3,4
81085	Private A	A	3,4	3,4	3,4
81085	Private B	F	3,4	3,4	3,4
20035	Jordan Canyon Access	A	AF	AF	AF
80233	Little Sheep Road	A	A	A	A
80211	Table Rock Pit Road	A	A	A	A

NUMBER	ROAD NAME	ALTERNATIVE			
		1(M)	3M+	3M	3M-
80004	Alpine Boat Landing	A	A	A	A
20009	Papoose Creek (private)	A	A	A	A
20868	Hoffman Summer Home Loop	AD	AD	AD	AD
80329	Blowout Boat Ramp	A	A	A	A
20181	Hoffman Summer Home Area	A	A	A	A
20061	Calamity Summer Home Road	A	A	A	A
20062	Palisades Summer Homes	A	A	A	A
80269	Sheep Creek Summer Home Loop	A	A	A	A
80402	Mennonite Camp Road	A	A	A	A
20078	Boy Scout Camp Little Lemhi	A	A	A	A
20241	Calamity Campground	A	A	A	A
80322	Dry Canyon	A	4	4	4
80220	Timber	A	4	4	4
80221	Upper Timber Drive	A	4	4	4
80251	Lower Farnes	AI	K	2,4	K
80273	Garner Ponds	A	2,4	2,4	2,4
80274	Upper Browning Creek	A	2,4	2,4	2,4
80659	Argument Ridge	A	2,4	4	2,4
80882	Kelly Mtn Spur	A	4	4	4
20386	Travertine Mine Spur	AI	4	4	4
20406	Deer Creek	A	2,4	2,4	2,4
20166	Hoffman Water User	A	4	4	4
20167	Hoffman CG Water	A	4	4	4
80320	BPA Power Line	A	4	4	4
20320	BPA Power Line	A	4	4	4
80321	BPA Power Line	A	4	4	4
20069	Hoffman Campground	A	4	4	4
20280	Snake River Boat Club	A	HI	HI	HI
80256	Upper Farnes	AI*	AI'	AI'	AI*
80881	Kelly Mtn Road	A'	AI'	A'	AI*
80251	Lower Farnes Spur 1	A'	4	4	A
80256	Upper Farnes Spur 3	A'	4	4	4
80256	Upper Farnes Spur 4	A'	4	4	4
80256	Upper Farnes Spur 5	A'	4	4	4
80273	Upper Browning Creek Spur 2	A*	4	4	4
80274	Garner Ponds Spur 1	A*	4	4	4
80659	Argument Ridge A Spur	A*	4	4	4
80256	Upper Farnes Spur 1	A*	4	4	4
80885	Cold Springs Road	A*	A'	A'	A'

NUMBER	TRAIL NAME	ALTERNATIVE			
		1(M)	3M+	3M	3M-
DISTRICT PALISADES TRAILS					
48196	Road Canyon Trail	A	K,J	2,4	2,4
42045	Indian Creek Loop	BI	BI	BI	5
42046	Big Basin	BI	BI	BI	5
42053	Green Knoll	I	2,3	2,3	2,3
42055	Long Springs	BI	BI	BI	5
42061	Driveway Canyon	BI	BI	BI	5
42056	Divide Trail	DI	DI	DI	DI
42057	Burnt Timber	DI	K	DI	5
42058	Deadhorse	BI	BI	BI	5
42059	Elk Creek Divide	BI	2,3,4	2,3,4	2,3,4
42122	North Indian	BI	BI	BI	5
45004	Black Mountain Trail	ADI	ADI	ADI	ADI
45026	Garden Creek	A	A	A	A
45027	Pritchard Creek	AI	AI	AI	AI
45028	Porcupine	AI	AI	AI	AI
45029	Bear Creek Sheep	AI	AI	AI	AI

NUMBER	TRAIL NAME	ALTEF TIVE			
		1(M)	3M+	3M	3M-
45030	South Fork of Fall Creek	AI	AI	AI	AI
45032	South Fork-Rash Canyon	AI	AI	AI	AI
42127	Oat Canyon	BI	BI	BI	5
45033	Fourth of July Ridge	AI	AI	AI	AI
45034	Fourth of July-Red Peak	AI	AI	AI	AI
45035	Red Ridge	AI	AI	AI	AI
45036	Yeaman Creek-Dry Gulch	I	2,3,4	2,3,4	2,3,4
45037	Russell Creek	AI	AI	AI	AI
45038	Deadhorse Ridge	AI	AI	AI	AI
45039	Indian Creek	AI	AI	AI	AI
45040	White Spring	A	A	A	A
45041	Little Elk Mtn	A	A	A	A
45042	Deadman Creek	I	I	I	I
45043	Currant Creek	I	I	I	I
45044	Muddy Cr	AI	AI	AI	AI
45047	Bear Creek	AI	AI	AI	AI
45048	South Fork of Bear Creek	I	I	I	I
45049	North Fork of Bear Creek	AI	AI	AI	AI
45055	Box Canyon	I	2,3,4	2,3,4	2,3,4
45130	Elk Mountain Ridge	I	I	I	I
45138	Garden-Pritchard	AI	AI	AI	AI
45140	Horse Creek	AI	AI	AI	AI
45142	Echo Canyon-Indian Creek	AI	AI	AI	AI
45144	Golden Gate	AI	AI	AI	AI
45148	Warm Springs Ridge	AI	AI	AI	AI
45157	Five Pine	I	AI	AI	AI
45158	Poker Peak Wells	I	1,2,3,4	1,2,3,4	1,2,3,4
45159	Elk Creek-Jensen Creek	I	1,2,3,4	1,2,3,4	1,2,3,4
48031	Hawley Gulch	AI	AI	AI	AI
48060	Carlton Cutoff	ADI	ADI	ADI	ADI
48063	Mike Spencer Loop	AI	AI	AI	AI
48064	Coalmine Canyon	AI	AI	AI	AI
48066	N Rainey-S Rainey	AI	AI	AI	5
48067	Prospect Peak	AI	AI	AI	AI
48068	Big Burns Creek	AI	AI	AI	AI
48070	Hell Hole	A	A	A	A
48071	Little Burns Creek	AI	AI	AI	AI
48073	Little Burns-Black Canyon	AI	AI	AI	AI
48073	Little Burns-Slide Rock	AI	AI	AI	AI
48074	Black Canyon	AI	AI	AI	AI
48076	Castle Lake	AI	AI	AI	AI
48077	Thousand Springs	ADI	ADI	ADI	ADI
48078	West Pine Creek	AI	2,3,4	2,3,4	2,3,4
48079	Fleming Canyon	AI	AI	AI	AI
48080	Dry Canyon	AI	AI	AI	AI
48082	Wolverine Creek	AI	AI	AI	AI
48089	North Fork Rainey	AI	AI	AI	5
48090	South Fork Rainey	AI	AI	AI	5
48092	Water Canyon	I	2,3,4	2,3,4	2,3,4
48094	Dry Elk	I	2,3,4	2,3,4	2,3,4
48120	Spring Run-Blowout	I	2,3	2,3	2,3
48155	South Fork	AI	AI	AI	AI
48161	Tie Canyon	I	2,3,4	2,3,4	2,3,4
48162	Spencer Mountain	AI	AI	AI	AI
48464	Trail Ext	I	2,3	2,3	2,3
42053	Green Knoll Hunter Trail	A	2,3	2,3	2,3
42153	Red Slide	I	3	3	3
45021	Basin	I	I	I	I
45022	Pritchard Cr Cutoff	A	A	A	A
45023	Jim Hill	AB	AB	AB	AB

NUMBER	TRAIL NAME	ALTEF		ATIVE	
		1(M)	3M+	3M	3M-
45024	Taa Alder	I	I	I	I
45026	Priichard-Nelson	I	2,3	2,3	2,3
45026	Garden-Nelson	AI	2,3	2,3	2,3
45027	Unnamed Spur 1	I	2,3	2,3	2,3
45028	PorcupineCreek	AI	2,3	AI	2,3
45035	Red Spring	I	2,3	2,3	2,3
45129	Red Ridge Repeater	A	A	A	A
45038	Little Currant Hollow	I	2,3	2,3	2,3
45042	DeadmanCreek1	I	2,3	2,3	2,3
45059	Long Gulch-Indian Creek	AI	AI	AI	AI
45013	Flatiron Pond	I	I	I	I
48051	Sheep Driveway	1/3,4	1/3,4	1/3,4	1/3,4
45077	Jim Hill 5	AI	1,2,3	1,2,3	1,2,3
45077	Jim Hill 6	I	1,2,3	1,2,3	1,2,3
45141	Flatiron	3	A	A	A
45146	Hunter	3	I	I	I
45130	Elk Mountain	A	I	I	I
48068	Big Burns Creek	I	I	I	I
48031	Hawley Gulch	AI	AI	AI	AI
48115	Rainey Creek	AI	AI	AI	AI
48119	Blowout/Quaker Flat	I	2,3	2,3	2,3
48131	Lookout Mountain	3	AI	AI	AI
48139	Morning Glory Mine	AI	AI	AI	AI
48219	Unnamed Trail	I	1,2,3	1,2,3	1,2,3
48169	Leaning Fir	ADI	ADI	ADI	ADI
48083	South State	I	I	I	I
45123	Blowout	I	2,3,4	2,3,4	2,3,4
48079	Fleming Canyon	A	A	A	A
48086	Corral	A	K/3	2,3,4	2,3,4
48087	Burnt Can-Dry Fork	A	K	2,4	2,4
48116	Spring Canyon	A	K	2,4	2,4

NUMBER	ROAD NAME	ALTERNATIVE			
		1(M)	3M+	3M	3M-
ROADS					
20007	North Leigh	ABI	ABI	ABI	ABI
20008	South Leigh	ABI	ABI	ABI	ABI
20009	Teton	ABHI	ABJI	ABHI	ABJI
20010	Raprd Creek	AH	AI	A	AI
20011	Teton Creek Spur	AI	AI	AI	AI
20012	Darby Canyon	ABHI	ABI	ABHI	ABI
20013	Dry Ridge	AI	AI	AI	AI
20016	Trail Creek C G	AI	AI	AI	AI
20025	Fred's Mountain	ABFI	ABFI	ABFI	ABFI
20049	Teton Campground	AI	AI	AI	AI
20050	Darby Girls Camp	AI	AI	AI	AI
20063	Fox Creek	ABH	ABI	AB	ABI
20098	Reunion Flat	A	AI	A	AI
20099	Horse Transfer Station	AI	AI	A	AI
20123	Tiehack Spur 4	1,2,4	1,2,4	1,2,4	1,2,4
20125	Swanner Cr	1,2,4	1,2,4	1,2,4	1,2,4
20254	South Jackpine	AI/1,2,4	AI/1,2,4	AI/1,2,4	AI/1,2,4
20255	Steep Creek	AI	AI	AI	AI
20266	Jackpine/Pinochle	ABI	ABI	ABI	ABI
20267	Rammell Mountain	AH	AJ	AH	AJ
20276	Moose Creek	ABI	ABI	ABI	ABI
20383	Pole Canyon North	ABJI	ABJI	ABIJ	AJI
20656	Indian Meadows	AI	AI	AI	AI
20809	Briggs Cabin	ABJI	ABJI	ABHI	ABJI
20813	Poachers Trail	AI	AI	AI	AI
20818	Commissary Ridge	1,2,4	A	A	A
80013	Dry Ridge	ABI	ABI	ABI	ABI
80207	Birch Spur	AI	AI	AI	AI
80219	Relay Ridge	ABI	ABI	ABI	ABI
80235	Horseshoe-Packsaddle	ABI	ABI	ABI	ABI
80236	Mahogany Creek	1,3	AB	AB	AB
80237	Patterson Creek	AB	AB	AB	AB
80239	Mike Harns	AI	AI	AI	AI
80253	Upper Rainey	ABDI	ABDI	ABDI	ABDI
80266	Jackpine-Pinochle Loop	ABI	ABI	ABI	ABI
80267	Rammell Mountain	AJ	AJ	AH	AJ
80276	Mwse Creek	ABI	ABI	ABI	ABI
80328	Kirkham Hollow	ABI/1,2,3	ABJ11.4	ABI/1,2,3	ABJI/1,4
80330	Mike Harris Campground	AI	AI	AI	AI
80381	Rammel Hollow Rd-Packsaddle	AJ	AJ	AH	AJ
80383	Pole Canyon North	ABJI	ABJI	AI	ABJI
80543	Henderson Creek	AB	AB	AB	AB
80544	Dry Fork Henderson	A	A	A	A
80546	rove Creek	AB	AB	AB	AB
80547	Pole Canyon South	ABI	ABI	ABI	ABI
80657	Grandview Guard Station	AJ	J	AH	J
80663	Grandview Main	ABI	ABJI	ABI	ABJI
80800	Carlton Creek	1,2	A	A	A
80802	Maytag	A	A	A	A
80806	Decoster	1,2,4	1,2,4	1,2,4	1,2,4
80809	Briggs Cabin	ABJI	ABJI	ABHI	ABJI
80175	Spur 18	AH	A	AH	A
80822	Legg Gwseneck	1,2,4	AJ/1,2,4	1,2,4	1,2,4,5
20009	Teton Canyon Spur 4	A	1,3	1,3	1,3
20009	Teton Canyon Spur 6	A	1,3	1,3	1,3
20009	Teton Canyon Spur 11	A	1,3	1,3	1,3
20019	Teton Pass	A	1,4	1,4	1,4

NUMBER	ROAD NAME	ACTIVE			
		1(M)	3M+	3M	3M-
20672	Baldy Knoll	AH	AJ	AH	AJ
20509	Baldy Knoll Sour 1	AH	1,3	AH	1,3
20912	Pinnical Road	AHI	AJI	AHI	AJI
80031	BPA Powerline	AI	AI	AI	AI
80088	Irene Creek (Spur 16)	AI	A	E	E
80219	Spur 1	A	1,2,4	1,2,4	1,2,4
80209	Graham Springs	AI	AI	AI	AI
80508	Packsaddle Dam	AI	AI	AI	AI
80235	Spur 2 (Idaho Mine)	A	A	A	A
80235	Spur 9	A	A	A	A
80235	Spur 11	A	A	A	A
80328	Spur 4	A	1,2,4	1,2,4	1,2,4
80328	Spur 5	A	1,2,4	1,2,4	1,2,4
80901	Spur 1	D	2,4	2,4	2,4
80901	Spur 2	D	2,4	2,4	2,4
80901	Spur 4	D	2,4	2,4	2,4
80901	Spur 6	D	2,4	2,4	2,4
20018	Coal Creek	AI	AI	AI	AI
20466	Mail Cabin	AI	AI	AI	AI
80309	Pine Creek C G	AI	AI	AI	AI
20044	Bustle Creek	AI	A	A	A
20045	Dry Creek Power Lne	AI	A	A	A
20046	Cold Spnngs	A	A	A	A
80194	235-D (Horseshoe/Packsaddle)	AI	2,4	E	2,4
20088	Kiln Creek	A'	A*	D*	A*
20090	Kiln Cr Spur 2	2	2,4	2,4	2,4
20122	Tiehack 3	1,2,4	1,2,4	1,2,4	1,2,3
20123	Tiehack 4	1,2,4	1,2,4	1,2,4	1,2,4
20384	Bitch Creek	1,2,4	1,2,4	1,2,4	1,2,4
20393	Tiehack Spur 1	1,2,4	1,2,4	1,2,4	1,2,4
20660	Cave	1,2,4	1,2,4	1,2,4	1,2,4
20661	Slow Elk	1,2,4	1,2,4	1,2,4	1,2,4
20801	Jackpine Boundary	1,2,4	1,2,4	1,2,4	1,2,4
20802	Jackpine Boundary S	1,2,4	1,2,4	1,2,4	1,2,4
20809	809 D	1,2,4	1,2,4	1,2,4	1,2,4
20810	Briggs Cabin Spur 1	1,2,4	1,2,4	1,2,4	1,2,4
20819	Wildcat	1,2,4	1,2,4	1,2,4	1,2,4
80031	BPA Powerline Trail	A'	1,2,4	1,2,4	1,2,4
80074	235-E Spur 4	AI'	E*	E*	E*
80070	235 J Spur 5	A'	E*	E*	E*
80075	235-L Spur 12	A'	E*	E*	E*
80076	235-M Spur 13	A'	E*	E*	E*
80155	235-N Spur 14	A'	E*	E*	E*
80073	235-O Spur 15	A'	E*	E*	E*
80140	253-B Spur 17	E'	E*	E*	E*
80383	Pole Canyon N	ABI*	A*	2	A*
80384	Bitch Cr N Jackpine	1,2,4	1,2,4	1,2,4	1,2,4
80547	Pole Canyon South	A'	A*	2	A*
80653	Twodraw	1,2,4	1,2,4	1,2,4	1,2,4
80662	Horse Creek	1,2,4	1,2,4	1,2,4	A
80804	Tiehack Spur 2	1,2,4	A*	1,2,4	A*
80805	Tiehack Spur 5	1,2,4	1,2,4	1,2,4	1,2,4
80806	Decoster	1,2,4	1,2,4	1,2,4	1,2,4
80807	Decoster Spur	1,2,4	1,2,4	1,2,4	1,2,4
80867	867A (Morris Creek)	1,2,4	1,2,4	1,2,4	1,2,4
20089	Kiln Creek Spur 1	1,2,4	1,2,4	1,2,4	1,2,4
20125	Swanner Cr	1,2,4	1,2,4	1,2,4	1,2,4
20816	Badger Springs Spur 1	AI/1,2,4	AI/1,2,4	1,2,4	AI/1,2,4
20385	Pole Canyon Spur	1,2,4	1,2,4	1,2,4	1,2,4

NUMBER	ROAD NAME	ALTERATIVE			
		1(M)	3M+	3M	3M-
20386	Juniper	1,2,4	1,2,4	1,2,4	1,2,4
20392	Tiehack	1,2,4	1,2,4	1,2,4	1,2,4
20538	Grouse Cr Spur	1,2,4	1,2,4	1,2,4	1,2,4
20539	Wiggleton Hollow	1,2,4	1,2,4	1,2,4	1,2,4
20540	Bear Walk	1,2,4	1,2,4	1,2,4	1,2,4
20541	Bear Walk Spur	1,2,4	1,2,4	1,2,4	1,2,4
20627	Yellow Cr	1,2,4	1,2,4	1,2,4	1,2,4
20651	Grouse Cr	1,2,4	1,2,4	1,2,4	1,2,4
20667	PolePatchA	1,2,4	1,2,4	1,2,4	1,2,4
20668	PolePatch B	1,2,4	1,2,4	1,2,4	1,2,4
20817	Little Dry Cr	1,2,4	1,2,4	1,2,4	1,2,4
20256	Steep Creek Spur	1,2,4	1,2,4	1,2,4	1,2,4
80033	BPA Powerline	2,4	2,4	1,2,4	1,2,4
80382	Teepee	1,2,4	1,2,4	1,2,4	1,2,4
80208	Klein Spur	1,2,4	1,2,4	1,2,4	1,2,4
80387	Pony Bench	1,2,4	1,2,4	1,2,4	1,2,4
80389	Tepee Ridge	1,2,4	1,2,4	1,2,4	1,2,4
80390	Packsaddle Ridge	A	1,2,4	1,2,4	1,2,4
80392	Tiehack	1,2,4	1,2,4	1,2,4	1,2,4
80654	Teepee Ridge	1,2,4	1,2,4	1,2,4	1,2,4
80655	Lower Teepee	1,2,4	1,2,4	1,2,4	1,2,4
80385	Pole Canyon Spur	1,2,4	1,2,4	1,2,4	1,2,4
80658	Reservoir	1,2,4	1,2,4	1,2,4	1,2,4
80652	Dry Creek	1,2,4	1,2,4	1,2,4	1,2,4
80664	Boundary Creek	1,2,4	1,2,4	1,2,4	1,2,4
80665	Crooked Creek	1,2,4	1,2,4	1,2,4	1,2,4
80666	Pony Creek	1,2,4	1,2,4	1,2,4	1,2,4
80803	Carlton Cr Spur	1,2,4	1,2,4	1,2,4	1,2,4
80816	Calamity	1,2,4	1,2,4	1,2,4	1,2,4
80822	Kirkham Hollow Spui	1,2,4	1,2,4	1,2,4	1,2,4
80922	Bleggi Gooseneck	1,2,4	1,2,4	1,2,4	1,2,4
80951	Milk Creek Ridge	1,2,4	1,2,4	1,2,4	1,2,4

NUMBER	TRAIL NAME	ALTEF		TIVE	
		1(M)	3Mt	3M	3M-
52077	Poly-Wog	A	3,4	3,4	3,4
58065	Blacktail	ADI	ADI	ADI	ADI
58069	Spur 1	A	AJ	3,4	AJ
58070	Henderson Cut Off Spur	A	A	3,4	3,5
58071	Dry Henderson	AI	AJ	AI	3,5
58051	Sheep Driveway (1000 SPR)	ADJI/1,3	ADJI/1,3	ADHI/1,3	ADJI/1,3
52032	Spring Creek	AI	A	AI	AI
52034	Aspen	AIJ	2,3	AI	2,3
52043	Subbank	A	3,4	3,4	3,4
58049	Mike Harris-Mail Cabin	A	3,4	3,4	3,4
58174	Pole Canyon	AIJ	AJI	AHI	3,5
58053	Big Hole Crest	AI	AI	AI	AI
58056	South Horseshoe	AI	AI	AI	AI
58057	N Mahogany-Elk Flat	AI	AIJ	AI	AIJ
58062	Elk Flat-Relay Ridge	AI	AIJ	AI	AIJ
58063	Canyon Creek-South Fork	AI	AIJ	AI	AIJ
58064	Canyon Creek-North Fork	3,4	AIJ	AI	AIJ
58066	Garns Mountain	AI	AIJ	AI	AIJ
58067	Hilton	AI	AIJ	ADI	AIJ
58069	Twin Creek	AI	AIJ	ADI	AIJ
58070	Wet Henderson	AI	AIJ	A	3,5
58072	Grove	AI	AIJ	AI	AIJ
58078	North Pine	AI	AI	AI	2,3,5
58079	Rocky Peak	AI	AI	AI	AI
52013	Dry Ridge	A	2,3,4	2,3,4	2,3,4
52015	Indian Meadows-Bear Canyon	A	2,3,4	2,3,4	2,3,4
52036	North Game Creek	A	2,3,4	2,3,4	2,3,4
58029	Gov Pack Trail A	AI	3,4	2,3,4	3,4
58030	Gov Pack Trail B	AI	AI	AI	AI
58047	Wood Canyon Ridge	A	3,4	3,4	3,4
58049	Mike Harris Spur 1	A	3,4	3,4	3,4
58052	Smith Canyon	A	AI	A	AI
58054	Fork of Patterson	AI	AI	AI	2,3,4,5
58058	Wright Trail	A	3,4	3,4	3,4
58059	Graham Trail	AI	AIJ	AI	AIJ
58060	Unnamed Spur 1	A	3,4	3,4	3,4
58060	Unnamed Spur 3	A	3,4	3,4	3,4
58060	Unnamed Spur 4	A	3,4	3,4	3,4
58061	Calamity Creek	AI	AI	AI	3,4,5
58061	Off Kirkham Hollow Rd Spur 1	3,4	AI	AI	AI
58014	Allen Canyon	3,4	AI	AI	AI
58081	Murphy Creek	3,4	AI	AI	3,4,5
58076	Corral Creek	AI	3,4,5	3,4,5	3,4,5
58195	Nickerson Grove	3,4	AI	3,4	AI

APPENDIX C - (1998 UPDATE)

OPEN ROAD AND MOTORIZED TRAIL ROUTE (OROMTRD) DECISION CRITERIA TABLES

Note This table is similar to the 1997 Update version. However, "strikeovers" (deletions) on the 1997 table were deleted in the 1998 update. Also, rating for closed roads have been added to show reasons for closure.

DEFINITIONS

Following are the definitions of the criteria used on the OROMTR Decision Criteria Tables

Open to Motorized Use:

- A Core Access. Needed to access private property, adjoining State and Federal Parks or State Lands and roads that access administrative sites, campgrounds and picnic areas, electronic sites, permitted communication sites, ski areas, boat ramps and special recreation sites such as Mesa Falls and Big Springs
- B First Priority. These roads were selected to remain open or be seasonally restricted because they are one of the only roads left on the system in the area
- C Eastside Ecosystem Management Project (EEMP) Guidelines. EEMP guidelines used to establish a rule set to insure consistency as each District prepared their access maps
- D Coordinated Access. Roads/trails that provide inter-District and intra-District access for administrative use
- E Maintenance of Wildlife Habitat. Road/trail selected causes less impact
- F Resource Damage. Road/trail selected caused less impact
- G Cost. Lower cost to maintain road/trail
- H District-specific criteria (e.g. historical, etc.)
- I District-specific criteria (e.g. berry picking, etc.)

* Roads are seasonally restricted

Closed to Motorized Use (year-round closure):

- 1 No longer needed for re-occurring resource activities
 - 2 For the protection of wildlife and reduced road maintenance costs
 - 3 To avoid soil erosion and protect water quality
 - 4 To meet Open Road Open Motorized Trail and Route Density (OROMTRD)
 - 5 To respond to specific road and trail comments
 - 6 No longer accessible
- Roads not on the ground

Note Roads and trails shown with letter(s)/number(s) are multiple segment routes, part of which are open and part closed. Refer to the Transportation Map for details.

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NUMBER	ROAD/TRAIL NAME	ALTERNATIVE						
		1	2	3	3M	4	5	6
80188	Charcoal Kiln	A,B	A,B	A,B	A,B	A,B	A,B	A,B
80189	willow Creek	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D
80190	Scott Canyon	A,B	A,B	A,B	A,B	A,B	2,4	2,4
80191	Myers Creek	A,B	A,B	A,B	A,B	A,B	3,4	2,3,4
80192	Emigrant Trail	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D
80193	East Fork Irving Creek	B	B	B	B	2,4	2,4	2,4
80195	Medicine Lodge Bench	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	2,3,4	2,3,4
80196	Webber Creek CG	A,B	A,B	A,B	A,B	A,B	A,B	A,B
80198	Grouse Canyon	A,B	A,B	A,B	A,B	A,B	A,B	A,B
80199	Fritz Creek	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D
80200	West Dry-Huntley	B	B	B	B	B	B	2,4
80201	Gallagher Canyon	B	B	2,4	B	2,4	2,4	2,4
80202	Chandler Canyon	B	B	B	B	B	B	2,4
80203	Blue Canyon	B	B	2,4	B	2,4	2,4	2,4
80204	Middle Creek	A,B	A,B	A,B	A,B	A,B	A,B	2,3,4
80205	West Indian Creek	B	B	B	B	B	B	2,4
80240	Kaufman Springs	B	B	B	B	2,4	2,4	2,4
80272	Viola Gulch	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D
80275	Buckhorn	B	B	B	B	B	B	2,3,4
80278	Nicholia	B	B	B	B	2,4	2,4	2,4
80279	Snaky Canyon	B	B	B	B	B	B	2,4
80280	Bannock Pass	A,B	A,B	A,B	A,B	A,B	A,B	A,B
80296	Spring Mountain	A,B	A,B	A,B	A,B	A,B	A,B	A,B
80297	Kite Canyon	B	B	2,3,4	B	2,3,4	2,3,4	2,3,4
80298	Skull-Timber	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D
80300	Cow Camp	A,B	A,B	A,B	A,B	A,B	2,3,4	2,3,4
80323	Pleasant Valley	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D
80325	Sheep Creek	A,B	A,B	A,B	A,B	A,B	A,B	A,B
80477	Middle Threemile	D,E/2,4	D,E/2,4	D,E/2,4	D,E/2,4	D,E/2,4	D,E/2,4	D,E/2,4
80478	Steel Creek	A,B	A,B	A,B	A,B	A,B	A,B	A,B
80479	Upper Corral Creek	B	2,4	2,4	B	2,3,4	2,3,4	2,3,4
80483	School Section	B	B	B	B	B	B	B
80530	Bartel Canyon	B,E	B,E	B,E	B,E	2,4	2,4	2,4
80531	Cedar Canyon	B	B	B	B	2,4	2,4	2,4
80532	Cliff Canyon	B	2,4	2,4	B	2,4	2,4	2,4
80533	Daws Canyon	B,D	B,D	B,D	B,D	2,4	2,4	2,4
80534	Deer Canyon	B,E	B,E	B,E	B,E	2,4	2,4	2,4
80537	Pierce Canyon	B,D	B,D	B,D	B,D	2,4	2,4	2,4
80538	South Fork Worthing	B,D	B,D	B,D	B,D	2,4	2,4	2,4
80539	Surrett Canyon	B	B	B	B	2,4	2,4	2,4

NUMBER	ROAD/TRAIL NAME	ALTERNATIVE						
		1	2	3	3M	4	5	6
80540	Tyler Canyon	&E	B,E	B,E	B,E	2,4	2,4	2,4
80551	Camas Creek	8	2,4	2,4	2,4	2,4	2,4	2,4
80564	Scalp Creek	B	B	B	B	B	B	B
80566	Prospect Main	B,E/2,4	B,E/2,4	B,E/2,4	B,E/2,4	B,E/2,4	B,E/2,4	B,E/2,4
80671	Bear Gulch Spur 4	B	2,4	2,4	2,4	2,4	2,4	2,4
80672	West Cottonwood East	B	2,4	2,4	2,4	2,4	2,4	2,4
80673	Lower East Cottonwood	B	2,4	2,4	2,4	2,4	2,4	2,4
80674	Bear Gulch Spur 8	B	2,4	2,4	2,4	2,4	2,4	2,4
80675	Bear Gulch Spur 9	B	2,4	2,4	2,4	2,4	2,4	2,4
80676	Lower Hersh	6	2,4	2,4	2,4	2,4	2,4	2,4
80678	Caw Creek	B	2,4	2,4	2,4	2,4	2,4	2,4
80679	Berry Creek	B	B	B	B	2,3,4	2,3,4	2,3,4
80680	West Cottonwood E Spur	6	2,4	2,4	2,4	2,4	2,4	2,4
80682	Lava Creek	B	2,4	2,4	2,4	2,4	2,4	2,4
80684	Hann Site	B	B	B	B	B	2,4	2,4
80002	Unnamed Spur 4	B	B	2,4	2,4	2,4	2,4	2,4
80002	Unnamed Spur 7	B	B	2,4	2,4	2,4	2,4	2,4
80002	Unnamed Spur 9	B	B	2,4	2,4	2,4	2,4	2,4
80002	Unnamed Spur 10	B	B	2,4	2,4	2,4	2,4	2,4
80002	Unnamed Spur 11	B	B	2,4	2,4	2,4	2,4	2,4
80002	Unnamed Spur 15	B	B	2,4	2,4	2,4	2,4	2,4
80006	Unnamed Spur	B	B	2,4	2,4	B	B	B
80006	Unnamed Road	B	B	2,4	2,4	2,4	2,4	2,4
80811	Clay Creek	B	B	B	B	B	2,3,4	2,3,4
80006	Unnamed Spur 4	B	B	B	2,4	B	2,4	2,4
80006	Unnamed Spur 10	A,B	2,4	2,4	2,4	2,4	2,4	2,4
80824	Castle Creek	B	2,3,4	B	B	2,3,4	2,3,4	2,3,4
80836	McGarry Whip	B	2,3,4	B	B	2,3,4	2,3,4	2,3,4
80011	Unnamed Spur 3	B	2,4	2,4	2,4	2,4	2,4	2,4
80823	Alex Draw Spur 1	A,B	A,B	A,B	A,B	A,B	A,B	A,B
80017	Unnamed Spur 1	B	B	B	2,4	B	2,4	2,4
80017	Unnamed Spur 2	B	2,4	2,4	2,4	2,4	2,4	2,4
80020	Long Creek Extension	B	2,4	B	B	B	2,4	2,4
80812	Electronic Site	A,B	A,B	A,B	A,B	A,B	A,B	A,B
80810	Boatman Spring	0	B	B	B	2,3,4	2,3,4	2,3,4
80820	Long Creek Spur A	B	2,4	B	B	B	2,4	2,4
80021	Unnamed Spur 7	B	B	B	2,4	B	2,4	B
80021	Unnamed Spur 10	2,4	2,4	B	2,4	2,4	2,4	2,4
80021	Unnamed Spur 8	2,4	2,4	B	2,4	B	2,4	2,4
80814	Rattlesnake Loop	B	B	B	B	B	B	B

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NUMBER	ROAD/TRAIL NAME	TERNATI						
		1	2	3	3M	4	5	6
80818	Waters Flat	A,B	A,B	A,B	A,B	A,B	A,B	A,B
80817	Saw Creek	A,B	A,B	A,B	A,B	2,3,4	2,3,4	2,3,4
80026	Unnamed Spur 8	B	B	2,4	2,4	2,4	2,4	2,4
80798	Kyle Canyon	B	B	B	B	2,4	2,4	2,4
80799	Kyle Canyon South Fork	B	B	B	B	2,4	2,4	2,4
80176	Unnamed Spur 1	B	B	B	2,4	2,4	2,4	2,4
80176	Unnamed Spur 5	B	B	A,B	2,4	2,4	2,4	2,4
80177	Unnamed Spur 1	B	B	B	2,4	2,4	2,4	2,4
80177	Unnamed Spur 4	B	B	2,4	2,4	2,4	2,4	2,4
80177	Unnamed Spur 5	B	B	B	2,4	2,4	2,4	2,4
80177	Unnamed Spur 6	B	B	B	2,4	2,4	2,4	2,4
80177	Unnamed Spur 8	B	B	B	2,4	2,4	2,4	2,4
80178	Unnamed Spur 2	B	B	2,4	2,4	2,4	2,4	2,4
80699	Mammoth Canyon	B	B	B	B	2,3,4	2,3,4	2,3,4
80183	Unnamed Spur 2	B	B	B	2,4	2,4	2,4	2,4
80708	Bell Mountain Canyon	B	B	B	B	2,4	2,4	2,4
80709	McCoy Canyon	B	B	B	B	2,4	2,4	2,4
80710	Willow Canyon	B	B	B	B	2,4	2,4	2,4
80711	UC Gulch	B	B	B	B	2,4	2,4	2,4
80712	Willow Spring	B	B	B	B	2,3,4	2,3,4	2,3,4
80713	Magpie Spring	B	B	B	B	2,3,4	2,3,4	2,3,4
80714	Meadow Canyon A	B	B	B	B	2,4	2,4	2,4
80715	Meadow Canyon Spur 1	B	2,4	B	B	2,4	2,4	2,4
80188	Unnamed Spur 2	B	B	2,4	2,4	2,4	2,4	2,4
80189	Unnamed Spur 2	B	B	B	2,4	B	B	B
80834	Hunting Camp	A,B	A,B	2,4	A,B	2,4	2,4	2,4
80831	Porky Spring	B	B	2,3,4	B	2,3,4	2,3,4	2,3,4
80195	Unnamed Spur 3	B	2,4	2,4	2,4	2,4	2,4	2,4
80195	Unnamed Spur 4	B	2,4	2,4	2,4	2,4	2,4	2,4
80851	Webber Spur	A	A	A	A	A	A	A
80198	Unnamed Spur 2	B	B	2,4	2,4	2,4	2,4	2,4
80198	Unnamed Spur 3	B	B	2,4	2,4	2,4	2,4	2,4
80198	Unnamed Spur 6	B	B	2,4	2,4	2,4	2,4	2,4
80198	Unnamed Spur 7	B	B	2,4	2,4	2,4	2,4	2,4
80801	Skyline Road	B	B	2,4	B,D	2,4	2,4	2,4
80855	Left Fork Indian Creek	B	B	B	B	2,3,4	2,3,4	2,3,4
80751	Diamond Peak #1	B	B	B	B	2,4	2,4	2,4
80835	Kaufman Springs Spur	B	B	B	B	2,4	2,4	2,4
80753	Diamond Peak #2	B	B	B	B	2,4	2,4	2,4
80754	Diamond Peak #3	B	B	B	B	2,4	2,4	2,4

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NUMBER	ROAD/TRAIL NAME	ALTERNATIVE						
		1	2	3	3M	4	5	6
80795	Diamond Peak #4	B	B	B	2,4	2,4	2,4	2,4
80796	Diamond Peak #5	B	B	B	B	2,4	2,4	2,4
80275	Buckhorn Extension	B	B	B	B	2,4	2,4	2,4
80279	Unnamed Spur 2	B	B	B	2,4	2,4	2,4	2,4
80280	Unnamed Spur 1	B	2,4	2,4	2,4	2,4	2,4	2,4
80280	Unnamed Spur 2	B	B	2,4	2,4	2,4	2,4	2,4
80280	Unnamed Spur 3	B	B	B	2,4	B	2,4	2,4
80832	Limestone	B	B	B	B	2,4	2,4	2,4
80833	Round Top	B	B	B	B	B	2,4	2,4
80280	Unnamed Spur 7	B	B	2,4	2,4	B	2,4	2,4
80280	Unnamed Spur 8	B	B	2,4	2,4	B	2,4	2,4
80280	Unnamed Spur 9	B	B	2,4	2,4	2,4	2,4	2,4
80296	Unnamed Spur 1	B	B	2,4	2,4	2,4	2,4	2,4
80683	Horseshoe Gulch	A,B	A,B	A,B	A,B	A,B	A,B	A,B
80837	Skull Mine	A,B	A,B	A,B	A,B	A,B	A,B	A,B
80323	Unnamed Spur 1	B	B	2,4	2,4	B	B	2,4
80808	Swampy Draw	A,B	A,B	A,B	A,B	A,B	A,B	2,3,4
80323	Unnamed Spur 3	B	B	2,3,4	2,3,4	2,3,4	2,3,4	2,3,4
80323	Unnamed Spur 4	B	B	2,3,4	2,3,4	2,3,4	2,3,4	2,3,4
80801	Skyline Extension	B	B	2,4	B	2,4	2,4	2,4
80821	Owens Creek	B	B	B	B	2,4	2,4	2,4
80325	Unnamed Spur 5	A,B	A,B	A,B	2,4	A,B	A,B	A,B
80815	Steel Creek North	B	B	B	B	B	B	B
80856	School Section Creek	A,B	A,B	A,B	A,B	2,3,4	2,3,4	2,3,4
80483	Unnamed Spur 3	B	B	2,4	2,4	2,4	2,4	2,4
80670	Coal Kiln Spring	B	B	2,3,4	B	2,3,4	2,3,4	2,3,4
80698	Coal Kiln Canyon	B	B	B	B	2,4	2,4	2,4
80533	Unnamed Spur 5	B	B	B	2,4	2,4	2,4	2,4
80538	So Fork Worthing Extension	B,D	B,D	B,D	B,D	2,4	2,4	2,4
80789	Hill Road	B	B	B	B	2,4	2,4	2,4
80793	Tyler D	B	B	B	B	2,4	2,4	2,4
80790	Tyler C	B	B	B	B	2,4	2,4	2,4
80794	Tyler Guzzler	A,B	A,B	A,B	A,B	2,4	2,4	2,4
80551	Unnamed Spur 1	B	2,4	2,4	2,4	2,4	2,4	2,4
81034	Unnamed Spur 1	B	B	B	2,4	2,4	2,4	2,4
80838	Timber	B	B	B	B	2,4	2,4	2,4
80839	Long Canyon Spur	B	B	B	B	B	2,4	2,4
81035	Unnamed Spur 7	B	2,4	2,4	2,4	2,4	2,4	2,4
80759	Bald Mountain	B	B	B	B	2,4	2,4	2,4
80763	Windfall Canyon	B	B	B	B	2,4	2,4	2,4

NUMBER	ROAD/TRAIL NAME	ALTERNATIVE						
		1	2	3	3M	4	5	6
80780	Post Canyon	B	B	B	B	2,4	2,4	2,4
80787	Big Dry Canyon	B	B	B	B	2,4	2,4	2,4
81047	Unnamed Road	B	2,4	2,4	2,4	2,4	2,4	2,4
81047	Unnamed Spur 1	B	2,4	2,4	2,4	2,4	2,4	2,4
80825	Spring Canyon	B	B	B	B	2,4	2,4	2,4
81047	Unnamed Spur 5	B	2,4	2,4	2,4	2,4	2,4	2,4
81047	Unnamed Spur 6	B	2,4	2,4	2,4	2,4	2,4	2,4
80827	Deadman Canyon	B	2,4	2,4	B	2,4	2,4	2,4
81047	Unnamed Spur 8	B	2,4	2,4	2,4	2,4	2,4	2,4
80826	Bloom Canyon	B	B	B	B	B	2,4	2,4
81047	Unnamed Spur 11	B	2,4	2,4	2,4	2,4	2,4	2,4
80828	Peterson Canyon	B	B	B	B	2,4	2,4	2,4
81047	Unnamed Spur 13	B	2,4	2,4	2,4	2,4	2,4	2,4
81130	Unnamed Road 1	B	B	2,4	2,4	2,4	2,4	2,4
81130	Unnamed Road 2	B	B	2,4	2,4	2,4	2,4	2,4
81130	Unnamed Road 3	B	B	2,4	2,4	2,4	2,4	2,4
81130	Unnamed Road 4	B	B	2,4	2,4	2,4	2,4	2,4
80857	Opal Mine	B	B	B	B	B	B	2,4
80857	Opal Mine	A,B	A,B	A,B	A,B	A,B	A,B	2,4
80857	Opal Mine	B	B	B	B	B	B	2,4
80857	Opal Mine	B	B	B	B	B	B	2,4
80857	Opal Mine	B	B	B	B	B	B	2,4
81173	Unnamed Spur 5	B	B	2,4	2,4	2,4	2,4	2,4
80797	Meadow Canyon	B	B	B	B	2,4	2,4	2,4
80716	Sagebrush Flat	B	B	B	B	2,4	2,4	2,4
81173	Unnamed Spur 2	B	B	B	2,4	2,4	2,4	2,4
81173	Unnamed Spur 6	B	B	2,4	2,4	2,4	2,4	2,4
81184	Unnamed Spur 3	B	B	2,4	2,4	2,4	2,4	2,4
81201	Unnamed Spur 4	B	B	2,4	2,4	2,4	2,4	2,4
80718	Keg Springs	B	B	B	B	2,4	2,4	2,4
81332	Unnamed Spur 1	B	B	B	2,4	2,4	2,4	2,4
80717	Keg Gulch	B	B	B	B	2,4	2,4	2,4
80858	Little Elk Spring	B	B	B	B	2,4	2,4	2,4
80719	Rocky Canyon	B	B	B	B	2,4	2,4	2,4
80720	Wagnor Canyon	B	B	B	B	2,4	2,4	2,4
80667	Sawmill	B	B	B	B	2,4	2,4	2,4
80722	Big Sawmill	B	B	B	B	2,4	2,4	2,4
80732	Kaufman Spring	B	B	B	B	2,4	2,4	2,4
81332	Unnamed Spur 9	B	B	B	2,4	2,4	2,4	2,4
80723	Big Horn Canyon	B	B	B	B	2,4	2,4	2,4

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NUMBER	ROAD/TRAIL NAME	ALTERNATIVE						
		1	2	3	3M	4	5	6
80721	Little Sawmill	B	B	B	B	B	2,4	2,4
80761	South Fork Bald Mt Spring	B	B	B	B	B	2,4	2,4
80829	Reynolds Crossing	B	B	B	B	B	2,4	2,4
80830	Deep Creek	B	B	B	B	B	2,4	2,4
80661	Upper Antelope	B	C	B	B	B	2,4	2,4
80643	Middle Threemile Spur	B	B	B	B	B	2,4	B
80791	Tyler Canyon C	B	B	B	B	2,4	2,4	2,4
80635	Camp Creek	AB	AB	AB	AB	AB	2,4	2,4
80636	Picnic Hollow	AB	AB	AB	AB	AB	2,4	2,4
80840	Sagebrush	AB	AB	AB	AB	AB	2,4	2,4
80638	Beacon Hill	AB	AB	AB	AB	AB	AB	AB
80031	Lookout Point	2,4	2,4	2,4	2,4	2,4	2,4	2,4
80028	West Rattlesnake	2,4	2,4	2,4	2,4	2,4	2,4	2,4
80091	Warror	2,4	2,4	2,4	2,4	2,4	2,4	2,4
80245	Steel Creek Spur 1	2,4	2,4	2,4	2,4	2,4	2,4	2,4
80668	Bear Gulch Spur 1	2,4	2,4	2,4	2,4	2,4	2,4	2,4
80669	Bear Gulch Spur 2	2,4	2,4	2,4	2,4	2,4	2,4	2,4
80175	Mandingo	2,4	2,4	2,4	2,4	2,4	2,4	2,4
80172	Pete Creek Breaks	2,4	2,4	2,4	2,4	2,4	2,4	2,4
80012	West Pete Creek	B*	B*	B*	B*	B*	2,4	2,4
80050	Alex Draw Spur 2	B*	B*	B*	B*	B*	2,4	2,4
80081	Alex Draw Spur 4	B*	B*	2,4	B*	2,4	2,4	2,4
80249	Stump Creek	B*	B*	B*	B*	B*	2,4	2,4
80308	Jug Creek	B*	B*	B*	2,4	B*	2,4	2,4
80346	Lower Slump	B*	B*	2,4	2,4	2,4	2,4	2,4
80356	West Camas A Spur	B*	2,4	2,4	2,4	2,4	2,4	2,4
80473	West Camas Spur	B*	B*	B*	B*	B*	2,4	2,4
80481	West Camas 'A'	B*	B*	B*	B*	B*	2,4	2,4
80641	Beaver Ponds	B*	B*	B*	B*	B*	2,4	2,4
80542	Corral Creek Spur 3	B*	B*	B*	B*	B*	2,4	2,4

DISTRICT DUBOIS

TRAILS

18002	Stoddard Creek	A,B	A,B	2,4	A,B	A,B	A,B	A,B
18003	West Camas Creek	B,D	B,D	2,4	2,4	2,4	2,4	2,4
18004	Continental Divide	2,4	2,4	2,4	2,4	2,4	2,4	2,4
18005	Signal Peak/Lookout Point	A,B	A,B	A,B	A,B	2,4	2,4	2,4
18008	Bear Gulch/Table Mountain	B	B	2,4	2,4	2,4	2,4	2,4
18025	North Fork Eight-Mile	B	B	B	B	B	2,3,4	2,3,4
18026	Pass Creek Lake	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	2,4	2,4
18034	Webber Creek Lakes	B	B	B	B	B	2,4	2,4

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NUMBER	ROAD/TRAIL NAME	TERNATI						
		1	2	3	3M	4	5	6
18045	South Fork Pass Creek	B	B	B	B	B	2,3,4	2,3,4
18047	Rocky Canyon	B	B	2,4	2,4	2,4	2,4	2,4
18081	CrookedCreek-Willow Creek	B	B	B	B	B	2,4	2,4
18110	Corral Canyon	B	B	B	2,4	2,4	2,4	2,4
18111	Webber Creek-Divide Creek	A,B	A,B	A,B	A,B	A,B	2,4	2,4
18113	Myers Creek	B	B	B	B	B	2,4	2,4
18175	Lone Pine Pass	B	B	B	B	2,4	2,4	2,4
18177	Van Noy Canyon	B	B	2,4	B	2,4	2,4	2,4
18179	Sloddard-HuntleyCutoff	B	B	2,4	B	B	B	B
18180	Allan Canyon	B	2,4	2,4	2,4	2,4	2,4	2,4
18013	Coal Kiln	B	2,4	2,4	2,4	2,4	2,4	2,4
18022	South Fork Eight-Mile	B	B	B	B	B	2,3,4	2,3,4
18024	Teepee Draw	B	B	B	B	B	2,4	2,4
18323	Unnamed Trail	B	2,4	2,4	2,4	2,4	B	B
18174	Scott Canyon Right Fork	B	B	2,4	B	2,4	2,4	2,4
18132	Goldmine	B	B	2,4	B	2,4	2,4	2,4
18001	Huntley	B	B	2,4	B	2,4	2,4	2,4
18138	Robbins Creek	B	B	B	B	2,4	2,4	2,4

NUMBER	ROAD NAME	ALTERNATIVE						
		1	2	3	3M	4	5	6
80105	Log Haul No 4	B	B	2,4	2,4	2,4	2,4	2,4
80112	Eccles	B,D	B,D	B,D	B,D	B,D	B,D	B,D
80113	Lucky Dog	B	B	2,4	2,4	2,4	2,4	2,4
80114	Lucky Dog Spur I	B	B	2,4	2,4	2,4	2,4	2,4
80115	Upper Split Creek	B	B	2,4	2,4	2,4	2,4	2,4
80117	Old Chick Creek	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D
80119	Trude Siding	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D
80122	Split Creek Breaks	B	2,4	2,4	2,4	2,4	2,4	2,4
80125	Black Mountain	B	B	2,4	2,4	2,4	2,4	2,4
80126	Buttermilk Loop	A,D	A,D	A,D	A,D	A,D	A,D	A,D
80127	McCrea Bridge CG	A,B	A,B	A,B	A,B	A,B	A,B	A,B
80128	Jackson Landing	A,B	A,B	A,B	A,B	A,B	A,B	A,B
80129	Mill Creek Landing	A	A	A	A	A	A	A
80130	Flatrock	B,D	B,D	B,D	B,D	B,D	B,D	B,D
80131	Flatrock C G	A	A	A	A	A	A	A
80132	Upper Split Creek Spur A	B	B	2,4	2,4	2,4	2,4	2,4
80133	Upper Split Creek Spur A1	B	B	2,4	2,4	2,4	2,4	2,4
80134	Old Highway No 3	A,D	A,D	A,D	A,D	A,D	A,D	A,D
80135	McCrea Timber	B	1	1	B	1	1	1
80136	Buffalo SH South	A	A	A	A	A	A	A
80137	Island Park R S	A	A	A	A	A	A	A
80138	Buffalo C G	A	A	A	A	A	A	A
80139	Island Park Dam	A	A	A	A	A	A	A
80141	Big Springs SH 2	A	A	A	A	A	A	A
80142	Thurmon Ridge	A	A	A	A	A	A	A
80143	Moose Creek SH Area	A	A	A	A	A	A	A
80144	Big Springs Boat Landing	A	A	A	A	A	A	A
80145	Bishop Well	B,D	B,D	B,D	B,D	B,D	B,D	B,D
80146	Big Springs Summer Home 1	A	A	A	A	A	A	A
80147	Big Springs C G	A	A	A	A	A	A	A
80148	North Fork SH Area	A	A	A	A	A	A	A
80149	IP Sanitary Landfill	A	A	A	A	A	A	A
80150	Warm River Road	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D
80152	Upper Split Creek Spur A2	B	B	2,4	2,4	2,4	2,4	2,4
80167	Green Canyon	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D
80223	Box Canyon Boat Launch	A	A	A	A	A	A	A
80284	Box Canyon C G	A	A	A	A	A	A	A
80287	Davis Lake	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D
80291	Chick Creek	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D
80292	Chick Creek Flat	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D
80293	Ridge Road	B	B	B	B	B	B	B

NUMBER	ROAD NAME	ALTERNATIVE						
		1	2	3	3M	4	5	6
80294	Mesa Falls Scenic Drive, D-2	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D
80301	Island Park Boat Landing	A	A	A	A	A	A	A
80311	Coffeepot	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D
80326	Upper Split Creek Spur A4	B	B	2,4	2,4	2,4	2,4	2,4
80327	East Dry Creek	A,B	A,B	A,B	A,B	A,B	A,B	A,B
80333	Toms Creek Spur	A	A	A	A	A	A	A
80334	Big Bay C G	A	3	3	A,B	3	3	3
a0335	Rocky Point	A	A	A	A	A	A	A
80336	Island Approach	A	A	A	A	A	A	A
80337	Buttermilk C G	A,D	A,D	A,D	A,D	A,D	A,D	A,D
80338	Lagoon Access	A	A	A	A	A	A	A
80339	Lakeside	A	A	A	A	A	A	A
80357	Orme SH	A	A	A	A	A	A	A
80405	Tuxedo	B	2,4	2,4	2,4	2,4	2,4	2,4
80406	Longshot	B	2,4	2,4	2,4	2,4	2,4	2,4
80409	Weeks SH	A	A	A	A	A	A	A
80412	Reservoir North	A	A	A	A	A	A	A
80413	Dike	A	A	A	A	A	A	A
80414	BOR Site	A	A	A	A	A	A	A
80419	Elk Creek	A	A	A	A	A	A	A
80420	Elk Creek Estates-North	A	A	A	A	A	A	A
80421	Macks Substation	A	A	A	A	A	A	A
80422	Outlet No 1	A	A	A	A	A	A	A
80423	Outlet No 2	A	A	A	A	A	A	A
80424	Kooch Ranch	A	3	A	A	3	3	3
80426	Buffalo River	A	A	A	A	A	A	A
80427	Thirsty Dog	5	B	2,4	2,4	2,4	2,4	2,4
80433	Log Haul No 7 spur 1	B	2,4	2,4	2,4	2,4	2,4	2,4
80437	Fransen Mill	A	A	A	A	A	2,4	2,4
80438	Chick Cr Flat Spur 5	B,D	B,D	2,4	2,4	2,4	2,4	2,4
80439	Trude South	B	B	2,4	2,4	2,4	2,4	2,4
80440	Ridge Road Spur 1		B,D	2,4	2,4	2,4	2,4	2,4
80441	Ridge Road Spur 2	B,D	B,D	2,4	2,4	2,4	2,4	2,4
80451	Crow Creek	A	A	A	A	A	A	A
80453	South Fork Split Creek	B	B	2,4	2,4	2,4	2,4	2,4
80454	South Fork Split Creek Sp I	B	B	2,4	2,4	2,4	2,4	2,4
80455	East Sawtelle	A,B/2,4	A,B/2,4	A,B/2,4	A,B/2,4	A,B/2,4	A,B/2,4	A,B/2,4
80456	West End A	A	A	A	A	A	A	A
80457	West End 6	A	A	A	A	A	A	A
80458	West End C	A	A	A	A	A	A	A
80459	West End D	A	A	A	A	A	A	A

ISLAND PARK - Appendix C - 4 of 8

NUMBER	ROAD NAME	ALTERNATIVE						
		1	2	3	3M	4	5	6
80463	Kenny Creek	A	A	A	A	A	A	A
80465	West End C G	A	A	A	A	A	A	A
80472	Kirk Creek	B/2,4	A/2,4	A/2,4	A/2,4	A/2,4	A/2,4	A/2,4
80474	Big Bend	A	A	A	A	A	A	4
80480	Sheridan Creek	A	A	A	A	A	A	A
80552	Bishop Burn	B,D	B,D	B,D	B,D	B,D	B,D	B,D
80560	Pit	A	A	A	A	A	2,4	A
80563	Buffalo North	A	A	A	A	A	A	A
80843	Ripley Butte East	B,D/2	B,D/2	B,D/2	B,D/2	B,D/2	B,D/2	B,D/2
80849	Lucky Dog Spur 3	B	B	2,4	2,4	2,4	2,4	2,4
80859	Boundary	B	B	2,4	2,4	2,4	2,4	2,4
80860	Ghost	⊗	B	2,4	2,4	2,4	2,4	2,4
80870	Randy's Box Canyon Access	A	A	A	A	A	A	A
80871	Last Chance Fisherman Access	A	A	A	A	A	A	A
80872	Big Springs Snow Park	A	A	A	A	A	A	A
81205	Lucky Dog Spur 2	A	B	2,4	2,4	2,4	2,4	2,4
81207	Black Canyon Spur 1	B	B	2,4	2,4	2,4	2,4	2,4
81208	Black Canyon Spur 2	B	B	2,4	2,4	2,4	2,4	2,4
81211	Meadow Cr Cutoff	B,D	B,D	B,D	B,D	2,4	B,D	B,D
81213	Orme Ranch	A	A	A	A	A	A	A
81214	Mickelsen Ranch	A	A	A	A	A	A	A
81217	Buffalo River Spur 1	A	A	A	A	A	2,4	A
81218	Buffalo River Spur 2	B	B	2,4	2,4	2,4	2,4	2,4
81219	Head of Buffalo	A	A	A	A	2,4	2,4	A
80220	Buffalo River Spur 3	B	2,4	2,4	2,4	2,4	2,4	2,4
81221	Coffee Pot Lodge	A	A	A	A	A	A	A
80020	Unnamed Spur 1	A	A	A	1,4	A	A	A
80020	Unnamed Spur 8	B	1,4	1,4	1,4	1,4	1,4	1,4
80628	State Shed Road	A	A	A	A	A	A	A
80030	Unnamed Spur 1	A	A	A	1,4	A	A	A
80371	Mill Creek	0	B	B	B	1,4	1,4	1,4
80372	Mill Creek North	A	A	A	A	A	A	1,4
80030	Unnamed Spur 6	B	B	B	1,4	1,4	1,4	1,4
80030	Unnamed Spur 7	B	1,4	1,4	1,4	1,4	1,4	1,4
81216	Ice House East	A	A	A	A	A	A	A
80030	Unnamed Spur 25	A	A	A	1,4	1,4	1,4	1,4
80030	Unnamed Spur 126	A	A	1,4	1,4	1,4	1,4	1,4
80037	Unnamed Spur 2	B	B	B	1,4	1,4	B	B
80373	Trude North	A	A	A	A	A	A	A
80375	Trude Cut-across	A	A	A	A	1,4	1,4	1,4
80050	Unnamed Spur 119	B	B	B	1,4	1,4	B	B

ISLAND PARK. Appendix C - 5 of 8

ROAD		ALTERNATIVE						
		1	2	3	3M	4	5	6
80376	Macks Substation East	A	A	A	A	A	A	A
		A	A	A	A	A	A	A
80055	Unnamed Spur 12	B	1,4	1,4	1,4	1,4	1,4	1,4
80055	Unnamed Spur 13	A	A	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
80055	Unnamed Spur 14	A	A	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
80056	Unnamed Spur 1	A	A	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
80631	BPA Powerline	B	B	1,2,4	B	1,2,4	1,2,4	1,2,4
80061	Unnamed Spur 3	B	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
80064	Unnamed Spur 1	B	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
80066	Unnamed Spur 3	B	B	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
80066	Unnamed Spur 4	B	B	B	1,2,4	B	1,2,4	1,2,4
80395	Reynolds Pass	B	B	B	B	2,4	2,4	2,4
80106	Unnamed Spur 2	B	1,2,4	B	1,2,4	1,2,4	1,2,4	1,2,4
80121	Unnamed Spur 3	B	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
80121	Unnamed Spur 23	B	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
80126	McCrea Pit	A	A	A	A	A	A	A
80626	Powerline Road (Kitgore)	A	A	A	A	A	A	A
80126	Unnamed Spur 4	A	A	1	1	A	A	A
80126	Unnamed Spur 5	B	B	B	1	B	B	B
80128	Unnamed Spur 1	A	A	1,2	1,2	A	A	A
80134	Old Hwy - Last Chance	A	A	A	A	A	A	A
80134	Unnamed Spur 3	A	A	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
80639	Bishop Well Cutoff	A	2	A	A	2	2	2
80147	Big Springs Campground-Well	A	A	A	A	A	A	A
80149	Unnamed Spur 1	B	B	1	1	B	B	B
80128	Unnamed Spur 3	A	A	1	1	A	A	A
80284	Unnamed Spur 1	B	B	B	1	B	B	B
80431	Island Park String Pit	A	A	A	A	A	A	A
80293	Unnamed Spur 14	A	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
80432	Trude South	A	4	A	A	4	4	4
80294	Unnamed Spur 8	B	1	B	1	1	1	1
80445	Coffeepot Spur	A	A	A	A	A	A	A
80334	Unnamed Spur 1	B	B	1,2	1,2	B	B	1,2,4
80336	Unnamed Spur 118	A	A	1,2	1,2	A	A	A
80357	Unnamed Spur 1	A	A	1,2	1,2	A	A	A
80412	Unnamed Spur 1	B	B	1,2	1,2	B	B	B
80413	Unnamed Spur 148	A	A	1,2	1,2	1,2	A	A
80418	Unnamed Spur 1	A	A	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
80446	Outlet 1A	B	B	B	B	B	B	1,4
80482	Outlet Spur 1B	B	B	B	B	B	1,4	B
80430	Unnamed Spur 1	B	B	1,2	1,2	1,2	1,2	1,2

NUMBER	ROAD NAME	ALTERNATIVE						
		1	2	3	3M	4	5	6
80486	Outlet 2A	B	B	B	B	B	1,2,4	B
80632	Lagoon Access-West	A	A	A	A	A	A	A
80633	Fransen Mill South	A	A	A	A	2	2	2
80451	Unnamed Spur 1	B	B	1,2	1,2	B	B	B
80455	Unnamed Spur 3	B	1,2	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
80455	Unnamed Spur 4	B	B	B	1,2	1,2,4	1,2,4	1,2,4
80465	West End South	B	B	B	B	B	B	B
80465	West End East	A	A	A	A	A	A	A
80465	West End North	A	A	A	A	A	A	A
80465	West End Spur 6	A	A	A	A	A	A	A
80465	West End Loop	A	A	A	A	A	A	A
80465	West End Spur	A	A	A	A	A	A	A
80465	West End	B	B	B	B	B	B	B
80611	Coffeepot Lodge B	A	A	A	A	2,4	2,4	2,4
80552	Unnamed Spur 24	A	1,2	B	1,2	B	1,2,4	1,2,4
80552	Unnamed Spur 26	B	B	1,2	1,2	1,2	B	B
80557	Unnamed Road	B	1,2	B	1,2	B	1,2	1,2
80560	Unnamed Spur 1	B	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
80560	Unnamed Spur 2	B	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
80560	Unnamed Spur 4	B	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
80560	Unnamed Spur 22	B	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
81205	Unnamed Spur 2	B	B	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
81207	Unnamed Spur 1	B	B	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
80536	Coffeepot Lodge Spur	A	A	A	A	4	A	4
80559	Coffeepot Lodge Loop	A	A	A	A	A	A	A
80629	Reynolds Rock Pit	A,B	A,B	A,B	A,B	2,4	2,4	2,4
80630	Preussner Road	A	A	A	A	2,4	2,4	2,4
80627	Coffeepot Well	A	A	A	A	A	A	A
80484	Fish Creek A	A	A	A	A	2,4	2,4	2,4
80557	Fr	B,D	B,D	B,D	B,D	B,D	B,D	B,D
80509	Defasus Mine	A	A	A	A	2,4	2,4	2,4
80637	Lagoon Access West	A	A	A	A	1,4	1,4	1,4
80614	Coffeepot Lodge Spur C	A	A	A	A	1,4	1,4	1,4
80589	Coffeepot Lodge A	A	A	A	A	1,4	1,4	1,4
80061	Two Top-Canyon Creek Ext	A,B	A,B	2,4	2,4	2,4	2,4	2,4
80040	White Elephant	4	4	4	4	4	4	4
80067	West Road	2,4	2,4	2,4	2,4	2,4	2,4	2,4
80068	East Road	2,4	2,4	2,4	2,4	2,4	2,4	2,4
80072	Black Canyon Breaks	2,4	2,4	2,4	2,4	2,4	2,4	2,4
80083	North Fork	2,4	2,4	2,4	2,4	2,4	2,4	2,4
80098	Tie 1	2,4	2,4	2,4	2,4	2,4	2,4	2,4

NUMBER	ROAD NAME	ALTERNATIVE						
		1	2	3	8M	4	5	6
80099	Dynamite Springs	2	2	2	2	2	2	2
80116	Log Haul No 7	2,4	2,4	2,4	2,4	2,4	2,4	2,4
80118	Kick Creek Spur 1	2,4	2,4	2,4	2,4	2,4	2,4	2,4
80340	Bear Canyon	2,4	2,4	2,4	2,4	2,4	2,4	2,4
80394	Reynolds Pass Pit	2,4	2,4	2,4	2,4	2,4	2,4	2,4
80415	Smead Well	2	2	2	2	2	2	2
80417	Ripley Butte South	2	2	2	2	2	2	2
80418	Ripley Butte North	2	2	2	2	2	2	2
80443	Blind Willow South	2,4	2,4	2,4	2,4	2,4	2,4	2,4
80447	Log Haul 4 Spur 2	2,4	2,4	2,4	2,4	2,4	2,4	2,4
80448	Log Haul 4 Spur 3	2,4	2,4	2,4	2,4	2,4	2,4	2,4
80449	Blind willow spur 4	2,4	2,4	2,4	2,4	2,4	2,4	2,4
80450	Eccles Spur 2	2	2	2	2	2	2	2
80496	Eccles Spur 1	2	2	2	2	2	2	2
80570	Smead Canyon	2	2	2	2	2	2	2
80845	East Fork Shendian Cr	3	3	3	3	3,4	3,4	3,4
80846	East Fork Shendian Cr Sp 1	3	3	3	3	3,4	3,4	3,4
80850	Bear Canyon Spur 1	2,4	2,4	2,4	2,4	2,4	2,4	2,4
80852	West Cooney Canyon	2,4	2,4	2,4	2,4	2,4	2,4	2,4
80853	East Cooney Canyon	2,4	2,4	2,4	2,4	2,4	2,4	2,4
80861	Moonshine	2,4	2,4	2,4	2,4	2,4	2,4	2,4
80862	White Lightnin	2,4	2,4	2,4	2,4	2,4	2,4	2,4
81215	Twin Creek	2,4	2,4	2,4	2,4	2,4	2,4	2,4
80369	Ripley North Spur A	2	2	2	2	2	2	2
80396	Dynamite Springs A	2	2	2	2	2	2	2
80397	Eccles Spur 1 West	2	2	2	2	2	2	2
80398	Dynamite Springs Loop	2	2	2	2	2	2	2
80416	Chick Creek West	2	2	2	2	2	2	2
80425	Chick Creek East	2	2	2	2	2	2	2
80495	Eccles Spur 2A	2	2	2	2	2	2	2
80513	Eccles Spur 1A	2	2	2	2	2	2	2
80436	Chick Creek Flat Spur 3	2	2	2	2	2	2	2
80452	Eccles Spur 4	2	2	2	2	2	2	2
80121	Dugway Fork-Split Creek	2,4	2,4	2,4	2,4	2,4	2,4	2,4
80514	Eccles Spur 1B	2	2	2	2	2	2	2
80105	Log Haul No 4	2,4	2,4	2,4	2,4	2,4	2,4	2,4
80634	Eccles Spur 1C	2	2	2	2	2	2	2
80640	White Lightnin Spur	2,4	2,4	2,4	2,4	2,4	2,4	2,4
80084	Reas Pass	4	4	B*	4	4	4	4
80085	Dead Coyote	4	4	B*	4	4	4	4
80103	Reas Pass No 2	B*	4	B*	4	4	4	4

NUMBER	ROAD NAME	ALTERNATIVE						
		3	2	3	3M	4	5	6
80107	Bootjack	4	4	4	4	4	B*	B*
80108	South Fork Split Creek	4	4	B*	4	4	4	4
80114	Lucky Dog Spur 1	4	4	4	4	4	4	B*
81205	Lucky Dog Spur 2	4	4	4	4	4	4	4
80393	Targhee Pass BPA	A*	A*	A"	A*	2,4	2,4	2,4
80327	East Dry Creek	A,B*	A,B*	A,B*	A,B*	A,B*	2,4	2,4
80465	West End CG	A"	A"	A"	A*	A"	A*	A*

DISTRICT ISLAND PARK

TRAILS

28001	Railroad R-O-W	A	A	A	A	A	A	A
28004	Continental Divide Trail (See Travel Plan) Section of Road #066 - Seasonally Restricted	A	A	A	A	2,4	2,4	2,4

NUMBER	NAME	ROAD	ALTERNATIVE						
			1	2	3	3M	4	5	6
DISTRICT ASHTON									
ROADS									
20006	Cave Falls CG		A	A	A	A	A	A	A
20006	Unnamed Spur 1		A	A	A	1,2,4	A	A	A
20026	Lake of the Woods		A	A	2,3	2,3,4	2,3,4	2,3,4	2,3,4
20027	Camp Loll		A	A	A	A	A	A	A
20032	Squirrel Meadows Spur 1		A	A	A	A	A	A	A
80033	Blue Creek Pit		A,B	A,B	A,B	2,3,4	2,3,4	2,3,4	2,3,4
20043	Tillery Lake		A	A	4	A	4	4	4
20047	Fish lake		A	A	A	A	A	3,4	3,4
20048	Loon Lake		A	A	A	A	A	A	A
20064	Hominy Peak Trailhead		A	A	A	A	2,3,4	2,3,4	2,3,4
20261	Ashton Flagg Ranch		A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D
20264	Jackass Loop Road		A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D
20265	Coyote Meadows		A,B	A,B	A,B	A,B	A,B	A,B	A,B
20582	Cave Falls		A,B	A,B	A,B	A,B	A,B	A,B	A,B
80582	Unnamed Spur 2		B	B	B	1	1	1	1
80582	Unnamed Spur 3		B	B	B	1	B	B	B
20589	Bergman Reservoir		A	A	A	A	4	4	4
80082	Fish Creek		A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D
80082	Rec Powerline		A	A	A	2,4	2,4	2,4	2,4
80082	Unnamed Spur 200		A	A	A	1	A	A	A
80092	Snow Creek		B,D	B,D	B,D	B,D	B,D	B,D	B,D
80094	Snow Creek Butte		A,B	A,B	A,B	A,B	A,B	A,B	A,B
80096	Crater Road		B,D	B,D	B,D	1,2,3	1,2,3	1,2,3	1,2,3
80097	Warm River C G		A	A	A	A	A	A	A
80110	Warm River Look Out		A,B	A,B	A,B	A,B	A,B	A,B	A,B
80112	Eccles		B,D	B,D	B,D	B,D	B,D	B,D	B,D
80120	Bishop Mtn		A,B	A,B	A,B	A,B	A,B	A,B	A,B
80124	Wyoming Cr		A,B	A,B	A,B	A,B	A,B	4	4
80150	Warm River		A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D
80150	Unnamed Spur 300		A,B	A,B	A,B	1	A,B	A,B	A,B
80151	Wood Road 6		B	B	B	B	2,3	2,3	2,3
80153	Flat Canyon		A,B	A,B	A,B	A,B	A,B	A,B	A,B
80154	Warm River Springs		A	A	A	A	A	A	A
80156	Grave Yard Flats		B	B	B	B	2,3	2,3	2,3
80157	Rattlesnake Spur 2		B	1,2,3	1,2,3	1,2,3	1,2,3	1,2,3	1,2,3
80158	Warm River Butte		B,D	B,D	B,D	B,D	B,D	B,D	B,D
80159	Gulch		A	A	A	A	A	2,3	2,3
80160	Pote Bridge C G.		A	A	A	A	A	A	A

NUMBER	ROAD NAME	ALTERNATIVE						
		I	2	3	3M	4	5	6
80351	East Hatchery Ford	A,B	A,B	A,B	A,B	A,B	A,B	A,B
80352	Griffel	A,B	A,B	A,B	A,B	A,B	A,B	A,B
80352	Black Mountain Spring Pit	B	B	B	B	2,4	2,4	2,4
80367	Wood Road 1	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	2,4	2,4
80374	IYTC Camp	A	A	A	A	A	A	A
80380	North Antelope Springs	B,D	B,D	B,D	B,D	B,D	B,D	B,D
80470	Shaeffer Creek	B	B	B	B	B	B	B
80501	Fall River Hollow	D	D	D	D	2,4	2,4	2,4
80502	Porcupine Spur	D	D	D	D	2,4	2,4	2,4
80505	July Creek Spur 1	B	B	1,2	1,2	1,2,4	1,2,4	1,2,4
80507	North Antelope Springs Sp 1	B	B	B	1,2	1,2,4	1,2,4	1,2,4
80518	Snow Creek Butte Spur 5	B	B	B	B	B	B	B
80522	Anderson Mill Spur I	B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80527	Snow Cr Cutoff	B,D	B,D	B,D	B,D	B,D	B,D	B,D
80552	Bishop Burn	B,D	B,D	B,D	B,D	2,4	2,4	2,4
80553	South Antelope Flat	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D	A,B,D
80555	Stock	B,D	B,D	B,D	B,D	B,D	B,D	B,D
80556	Parallel	B,D	B,D	B,D	B,D	2,4	2,4	2,4
80557	Fir	B,D	B,D	B,D	B,D	B,D	B,D	B,D
80558	Mc Bell	A	A	A	A	A	A	A
80561	Sheep Ridge	B	B	B	B	B	B	B
80562	Fogg Butte	B,D	B,D	B,D	B,D	B,D	B,D	B,D
80572	Big Grassy	A,B	A,B	A,B	A,B	2,4	2,4	2,4
80582	Cave Falls	A,B	A,B	A,B	A,B	A,B	A,B	A,B
80583	Granite Creek	6	6	6	6	6	6	6
80584	county Cutoff	A,D	A,D	A,D	A,D	A,D	A,D	A,D
80587	Elk Butte Spur 1	B	B	B	2,4	2,4	2,4	2,4
80588	Warm River Spur 1	B	B	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
80590	REA Power Line	A,D	A,D	A,D	A,D	A,D	A,D	A,D
80606	Cold Spnngs	B	B	B	B	2,4	2,4	2,4
30607	Pioneer	B,D	B,D	B,D	B,D	B,D	2,4	2,4
80608	Hachery Ford Spur 1	B,D	B,D	1,4	1,4	1,4	1,4	1,4
80609	Hachery Ford Spur 2	B,D	B,D	1,4	1,4	1,4	1,4	1,4
80610	Wood Road 14	A	A	A	A	A	2,4	2,4
80621	Cinder Butte	A	A	A	A	A	A	A
80624	Graveyard Flat Spur 1	B	B	1,2	1,2	1,2,4	1,2,4	1,2,4
80700	State Section Access	A	A	A	A	A	A	A
80701	West Hatchery Ford	A,B	A,B	A,B	A,B	A,B	2,4	2,4
80724	N. Hatchery Butte Spur 7	B,D	B,D	B,D	B,D	B,D	2,4	2,4
80726	North Hatchery Butte Spur 7C	B	B	B	1	1,4	1,4	1,4

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NUMBER	ROAD NAME	ALTERNATIVE						
		1	2	3	3M	4	5	6
80730	Anderson Mill Spur 6	B	B	2,4	2,4	2,4	2,4	2,4
80735	Sheep Falls Spur 1	A	A	A	A	A	2,4	2,4
80736	South Hatchery Butte Spur 1A	B	B	B	2,4	B	2,4	2,4
80743	fish Creek Spur 20	B	B	2,4	2,4	2,4	2,4	2,4
80755	North Baker Draw Spur 2	B	B	2,4	2,4	2,4	2,4	2,4
80756	North Baker Draw Spur 2B	B	B	2,4	2,4	2,4	2,4	2,4
80757	North Baker Draw Spur 2C	B	B	2,4	2,4	2,4	2,4	2,4
80760	Sheep Falls Trailhead	A	A	2,4	A	2,4	2,4	2,4
80761	Fish Creek Spur 3E	B	B	2,4	2,4	2,4	2,4	2,4
80764	Power Line Spur 1	A	A	A	A	A	2,4	2,4
80766	North Hatchery Butte Spur 70	B	B	B	2,4	2,4	2,4	2,4
80767	North Antelope Flat Spur 1	A,B	A,B	A,B	A,B	2,4	2,4	2,4
80768	North Antelope Flat Spur 3	B	B	B	2,4	2,4	2,4	2,4
80771	Antelope Cutoff	B,D	B,D	B,D	B,D	B,D	2,4	2,4
80772	Conant Creek	B	B	B	2,3,4	2,3,4	2,3,4	2,3,4
80772	Unnamed Spur 1	B	B	B	1,2,4	1,2,4	1,2,4	1,2,4
80773	Flat Canyon Spur 1	B	B	B	B	2,4	2,4	2,4
80776	Flat Canyon Spur 3	B	B	B	B	2,4	2,4	2,4
80779	Hidden Res	B,D	B,D	B,D	B,D	B,D	B,D	B,D
20030	Squirrel Meadows Ranch	A	A	A	A	A	A	A
20047	Unnamed Spur 1	A	A	A	2,4	A	2,4	2,4
20261	Unnamed Spur 1	A	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
80765	Wood Road 14A	A	2,4	2,4	2,4	2,4	2,4	2,4
20261	Unnamed Spur 5	A,B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
20261	Unnamed Spur 6	A,B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
20261	Unnamed Spur 7	A,B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
20261	Unnamed Spur 9	B	B	1,2	1,2	1,2,4	1,2,4	1,2,4
20261	Unnamed Spur 11	A,B	A,B	A,B	1,2	A,B	A,B	1,2,4
20261	Unnamed Spur 12	B	B	1,2	1,2	1,2,4	1,2,4	1,2,4
20261	Unnamed Spur 19	B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
20264	Unnamed Spur 1	B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
20264	Unnamed Spur 4	B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80020	Unnamed Spur 1	A	A	1,2	1,2	1,2,4	1,2,4	1,2,4
80020	Unnamed Spur 2	A	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80020	Unnamed Spur 3	A	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80020	Unnamed Spur 4	A	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80082	Unnamed Spur 1	A,B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80082	Unnamed Spur 8	A	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80082	Unnamed Spur 9	A	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80082	Unnamed Spur 10	A	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4

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NUMBER	ROAD NAME	ALTERNATIVE						
		1	2	3	3M	4	5	6
80082	Unnamed Spur 11	A	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80082	Unnamed Spur 12	A	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80082	Unnamed Spur 27	A	A	1,2	1,2	1,2,4	1,2,4	1,2,4
80082	Unnamed Spur 22	A	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80094	Unnamed Spur 1	A,B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80361	Thompson Hole	A	A	A	A	2,4	2,4	2,4
80150	Unnamed Spur 1	A	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80150	Unnamed Spur 2	A	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80154	Unnamed spur 1	A,B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80160	Unnamed Spur 1	A,B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80164	Unnamed Spur 1	B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80167	Unnamed Spur 1	B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80167	Unnamed Spur 2	B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80167	Unnamed Spur 3	B	1,2	1,2	1,2	2,4	2,4	2,4
80167	Unnamed Spur 4	B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80167	Unnamed Spur 5	B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80167	Unnamed Spur 6	B	B	1,2	1,2	1,2,4	1,2,4	1,2,4
80160	Unnamed Spur 1	B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80168	Unnamed Spur 2	B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80168	Unnamed Spur 3	B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80168	Unnamed Spur 4	A,B	A,B	1,2	1,2	1,2,4	1,2,4	1,2,4
80168	Unnamed Spur 5	B	B	1,2	1,2	1,2,4	1,2,4	1,2,4
80169	Unnamed Spur 1	A,B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80169	Unnamed Spur 2	B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80170	Unnamed Spur 1	A,B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80170	Unnamed Spur 2	A,B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80241	Unnamed Spur 1	B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80241	Unnamed Spur 2	A,B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80243	Unnamed Spur 7	A	A	1,2	1,2	1,2,4	1,2,4	1,2,4
80261	Unnamed Spur 8	B	B	2,4	2,4	2,4	2,4	2,4
80261	Unnamed Spur 10	B	B	2,4	2,4	2,4	2,4	2,4
80261	Unnamed Spur 14	B	B	2,4	2,4	2,4	2,4	2,4
80261	Unnamed Spur 15	B	2,4	2,4	2,4	2,4	2,4	2,4
80261	Unnamed Spur 16	A,B	2,4	2,4	2,4	2,4	2,4	2,4
80261	Unnamed Spur 17	A,B	2,4	2,4	2,4	2,4	2,4	2,4
80263	Unnamed Spur 1	B	2,4	2,4	2,4	2,4	2,4	2,4
80263	Unnamed Spur 2	B	2,4	2,4	2,4	2,4	2,4	2,4
80263	Unnamed Spur 3	B	2,4	2,4	2,4	2,4	2,4	2,4
80263	Unnamed Spur 5	A	2,4	2,4	2,4	2,4	2,4	2,4
80265	Unnamed Spur 1	B	2,4	2,4	2,4	2,4	2,4	2,4

NUMBER	ROAD NAME	ALTERNATIVE						
		1	2	3	3M	4	5	6
80286	Unnamed Spur 1	A,B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80289	Unnamed Spur 1	B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80294	Unnamed Spur 1	B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80294	Unnamed Spur 2	A,B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
90294	Unnamed Spur 3	A,B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80294	Unnamed Spur 4	A,B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80362	Osborne Pit	A	A	A	A	A	A	A
80294	Harriman State Park	A	1,2,3	A	1,2,3	1,2,3	1,2,3	1,2,3
80313	Unnamed Spur 1	A,B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80313	Unnamed Spur 3	A,B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80315	Unnamed Spur 1	A,B	A,B	1,2	1,2	1,2,4	1,2,4	1,2,4
80317	Unnamed Spur 1	A,B	A,B	1,2	1,2	1,2,4	1,2,4	1,2,4
80363	Little Butte Pit	A	1,2	A	A	2,4	2,4	2,4
80319	Unnamed Spur 1	B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80346	To Blue Creek Res	A	A	1,2	D	2,4	2,4	2,4
80348	Unnamed Spur 1	A,B	A,B	1,2	1,2	A,B	1,2,4	1,2,4
80348	Unnamed Spur 2	B	B	1,2	1,2	B	2,4	2,4
80352	Unnamed Road	B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80352	Unnamed Spur 400	B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80352	Unnamed Spur 500	B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80367	Unnamed Spur 1	A,B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80380	Unnamed Spur 1	B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80509	Unnamed Road	A,B	A,B	1,2	1,2	1,2,4	1,2,4	1,2,4
80527	Unnamed Spur 2	B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80553	Unnamed Spur 3	B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80557	Unnamed Spur 1	A	A	1,2	1,2	1,2,4	1,2,4	1,2,4
80582	Unnamed Spur 1	B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80582	Unnamed Spur 2	B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80582	Unnamed Spur 3	A,B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80582	Unnamed Spur 5	A,B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80582	Unnamed Spur 6	A,B	A,B	1,2	1,2	1,2,4	1,2,4	1,2,4
80582	Unnamed Spur 7	A,B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80584	Unnamed Spur 1	A,B	1,2	1,2	1,2	A,B	A,B	A,B
80590	Unnamed Spur 1	B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80590	Unnamed Spur 2	B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80590	Unnamed Spur 3	B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80610	Unnamed Spur 2	B	B	1,2	1,2	1,2,4	1,2,4	1,2,4
80621	Unnamed Spur 1	A,B	1,2	1,2	1,2	1,2,4	1,2,4	1,2,4
80724	Unnamed Spur 1	B	B	1,2	1,2	1,2,4	1,2,4	1,2,4
80730	Unnamed Spur 1	B	B	1,2	1,2	1,2,4	1,2,4	1,2,4

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ROAD		ALTERNATIVE						
NUMBER	NAME	1	2	3	3M	4	5	6
80901	Unnamed Road	A	1,2	1,2	1,2	2,4	2,4	...
20034	Hominy Creek	2	2	2,4	2,4	2,4	2,4	2,4
80488	Cow Camp	2	2	2,4	2,4	2,4	2,4	2,4
80123	Anderson Mill Spur 4	2	2	2,4	2,4	2,4	2,4	2,4
80516	Anderson Mill Spur 2	2	2	2,4	2,4	2,4	2,4	2,4
80554	Snow Creek Spur 1	2	2	2,4	2,4	2,4	2,4	2,4
80571	North Baker Draw	2	2	2,4	2,4	2,4	2,4	2,4
80578	Long Meadows	2	2	2,4	2,4	2,4	2,4	2,4
80702	Fish Creek Spur	2	2	2,4	2,4	2,4	2,4	2,4
80744	Fish Creek Spur 20A	2	2	2,4	2,4	2,4	2,4	2,4
80368	Yellowstone Ditch	2	2	2,4	2,4	2,4	2,4	2,4
80344	Rattlesnake	2	2	2,4	2,4	2,4	2,4	2,4
80345	Rattlesnake Spur 5	2	2	2,4	2,4	2,4	2,4	2,4
80512	East West Road	2	2	2,4	2,4	2,4	2,4	2,4
80612	Elk Butte Pit	2	2	2,4	2,4	2,4	2,4	2,4
80491	Huckleberry Ridge	2	2	2,4	2,4	2,4	2,4	2,4
80158	Warm River Butte	2	2	2,4	2,4	2,4	2,4	2,4
80749	Fish Creek Spur 3	2	2	2,4	2,4	2,4	2,4	2,4
80285	Warm River Power Line	A'	A'	A*	A*	A*	A*	A*
DISTRICT	HTON							
TRAILS			2,4					
32002	Bitch Creek	A	2,3,4	2,4	A	2,4	2,4	2,4
32059	Hidden Lake	A	2,3,4	2,3,4	2,3,4	2,3,4	2,3,4	2,3,4
38001	Railroad ORV Trail	A		A	A	A	A	A

NUMBER	ROAD/TRAIL NAME	ALTERNATIVE						
		1	2	3	3M	4	5	6
ROADS								
20017	4th of July Commissary	ABHI	ABHI	ABHI	ABHI	ABHI	ABHI	ABHI
20020	Long Springs-Alpine 4H	A	A	AI	AI	AI	AI	AI
20021	Alpine Summer Home	AF	AF	AF	AF	AF	AF	AF
20024	Jordan Canyon	AF	AF	AF	AF	AF	AF	AF
20037	Antelope Creek	AH	AH	AH	AH	AH	AH	AH
20056	Gibson Creek	I	I	I	I	I	2,3	2,3
20057	Bally's Hole	AH	AH	AH	AH	AH	AH	AH
20058	Bear Creek-Elk Jensen	ABI	ABI	ABI	ABI	ABI	ABI	ABI
20055	Bear Creek-Corral Road	AI	AI	AI	AI	AI	AI	AI
20059	Long Gulch	AI	AI	AI	AI	AI	AI	AI
20065	Fisher Road	A	A	A	A	A	A	A
20066	Blacktail Can-Pt Lookout	ABI	ABI	ABI	ABI	ABI	ABI	AD1
20070	Nelson Creek	AHI	AHI	AHI	AHI	AHI	AHI	AHI
20074	McNeel Creek	A	A	A	A	A	A	A
20076	Snake River-Calamity	AI	AI	AI	AI	AI	AI	AI
20077	Fall Creek-Skyline	ADHI	ADHI	ADHI	ADHI	ADHI	ADHI	ADHI
20079	Fleming Road	A	A	A	A	A	A	A
20081	Garden Canyon	AI	AI	AI	A	AI	AI	AI
20082	Pritchard Creek	AI	AI	AI	A	AI	AI	AI
20083	South Fork Bear Creek	I	I	I	I	I	I	2,314
20084	Lava Creek	AI	AI	AI	AI	AI	AI	AI
20085	South Fork Fall Creek	I	3,4	3,4	AI	3,4	314	3,4
20086	Brockman Creek	AFHI	AFHI	AFHI	AFHI	AFHI	AFHI	AFHI
20087	Salt River-McCoy	ABFHI	ABFHI	ABFHI	ABFHI	ABFHI	ABFHI	ABFHI
20138	Trout Creek	AI	AI	AI	AI	AI	AI	AI
20143	Corral Ridge	AI	AI	4	4	4	4	4
20151	Sawmill Creek	ABI	ABI	ABI	ABI	ABI	ABI	ABI
20157	Indian Fork	AI	AI	AI	AI	AI	AI	AI
20358	Brockman Ridge	ADI	2,3,4	2,3,4	2,3,4	2,314	2,3,4	2,3,4
20159	tombard Corral	DI	DI	DI	DI	DI	DI	2,3
20161	Indian Creek	AI	4	4	AI	AI	AI	AI
20170	Rash Canyon	AI	AI	AI	AI	AI	AI	AI
20060	Bagley	A/6	A/6	A/6	A/6	A/6	A/6	A/6
20173	South Fork Lava Creek Spur 1	I	I	3,4	3,4	3,4	3,4	314
20067	McCoy Creek Campground	A	A	A	A	A	A	A
20182	Bates Canyon	AI	AI	AI	AI	AI	2,3	2,3
20211	Lone Pine Ridge	ABI	ABI	ABI	ABI	3,4	3,4	314
20247	Bear Creek Trailhead	A	A	A	A	A	A	A

NUMBER	ROAD/TRAIL NAME	ALTERNATIVE						
		1	2	3	3M	4	5	6
20248	Brockman GS	AH	AH	AH	AH	AH	AH	AH
20274	Hell Creek	A	A	A	A	A	A	A
20277	Gravel Flats	A	4	A	A	A	A	A
20278	Calamity Shortcut	I	1,3,6	1,3,6	1,3,6	1,3,6	1,3,6	1,3,6
20279	Tag Alder	AI	AI	AI	AI	At	AI	AI
20283	Brockman Basin	I	I	I	I	4	4	4
20286	Pat Canyon	ABDHI	ABDHI	ABDHI	ABDHI	ABDHI	ABDHI	ABDHI
20288	Hawthorne Hollow	ABI	ABI	ABI	ABI	ABI	ABI	3
20376	June Creek	ABI	ABI	ABI	ABI	ABI	A81	ABI
20863	West Fork Elk Creek	AB	A6	AB	A0	AB	AB	AB
80206	South Fork Snake	ABHI	ABHI	ABHI	ABHI	ABHI	ABHI	ABHI
80206	South Fork Snake Spur 1	I	1,3,4	1,3,4	1,3,4	1,3,4	1,3,4	1,3,4
80210	Big Burns	AH	AH	AH	AH	AH	AH	AH
80212	Fullmer/Cottonwood Landing	AI	AI	AI	AI	AI	AI	AI
80213	Hinckley Creek	ABI	4	ABI	ABI	ABI	4	4
80217	Table Rock Canyon	AHI	AHI	AHI	AHI	AMI	AHI	AHI
80218	Kelly Canyon	AHI	AHI	AHI	AHI	AHI	AHI	AHI
80222	Browning Creek	A	A	A	A	A	A	A
80227	Cold Spring	I	394	314	I	314	394	314
80229	Fleming Canyon	AB	A0	AB	A0	AB	3,4	3,4
80230	West Pine Creek	A	A	A	A	A	A	A
80232	Graham Hollow	ABHI	ABHI	ABHI	ABHI	ABHI	ABHI	ABHI
80238	Table Rock C G	A	A	A	A	A	A	A
80248	Pine Basin Ski Area	ABH	ABH	ABH	ABH	ABH	ABH	ABH
80250	Mike Spencer	ABI	ABI	ABI	ABI	ABI	ABI	ABI
80252	Tie Canyon	AI	AI	AI	At	AI	AI	AI
80253	Upper Rainey Creek	ABDI	ABDI	ABDI	ABDI	ABDI	ABDI	ABDI
80255	Palisades Campground	A	A	A	A	A	A	A
80257	Lower Rainey Creek	A8	A0	A0	A0	AB	AB	A6
80258	North Moody Road	ABI	ABI	ABI	ABI	ABI	ABI	ABI
80259	Sawmill Canyon	A	A	A	A	A	A	A
80260	Sheep Creek	ABI	ABI	A01	ABI	ABI	A81	A01
80260	Sheep Creek 200 Spur	ABI	2,3	A61	2,3	2,3	2,3	2,3
80262	Big Elk Creek	ABF	ABF	ABF	ABF	ABF	ABF	ABF
80268	Little Elk Creek	AI	AI	AI	AI	AI	AI	AI
80270	Big Elk Creek Campground	A	A	A	A	A	A	A
80271	Blowout Canyon	ABI	ABJ	ABI	ABI	ABI	ABI	A01
80281	South Indian	A01	AB1	ABI	A01	ABI	ABI	ABI
80282	North Indian	AI	AI	AI	AI	AI	4	4
80318	Windy Ridge	AI	AI	AI	AI	AI	AI	AI

NUMBER	ROADITRAIL NAME	ALTERNATIVE						
		1	2	3	3M	4	5	6
80399	Spaulding's Road-Table Rock	A	A	A	A	A	A	A
80401	Adams Homestead	AH	AH	AM	AH	AH	AH	AH
80404	Spring Run	I	I	3,4	I	3,4	3,4	3,4
80464	Fish Cr Sp 1-South Moody	AI	AI	2,3,4	2,3,4	2,3,4	2,3,4	2,3,4
80466	Fish Cr Sp 2-South Moody	AI	2,3,4	2,3,4	2,3,4	2,3,4	2,3,4	2,3,4
80467	Big Elk Creek Boat Landing	A	A	A	A	A	A	A
80651	Moody Swamp	ABFI	ABFI	ABFI	ABFI	ABFI	4	4
80883	Wolverine	AI	4	AI	AI	At	4	4
80887	Buckskin Morgan	ABI	4	4	ABI	4	4	4
20017	Commissary Ridge Extension	AI	2,4	AI	2,4	AI	AI	2,4
20017	Commissary Ridge Spur 3	I	2,4	2,4	2,4	2,4	2,4	2,4
20038	Alpine Cemetary Road	A	A	A	A	A	A	A
20019	Haul Road	A	4	A	A	A	A	A
20014	Pond Road	A	4	AI	AI	AI	4	4
20059	Long Gulch E Spur	AI	2,4	2,4	2,4	2,4	2,4	2,4
20001	Fisher A Spur	A	4	A	A	A	A	A
20002	Fisher B Spur	A	4	A	A	A	A	A
20066	Blacktail-Point Lookout A Spur	I	2,4	2,4	2,4	I	2,4	2,4
20066	Blacktail-Point Lookout B Spur	I	2,4	2,4	2,4	I	2,4	2,4
20066	Blacktail-Potnt Lookout C Spur	I	2,4	2,4	2,4	I	2,4	2,4
20066	Blacktail-Point Lookout D Spur	AI	2,4	2,4	2,4	AI	2,4	2,4
20072	Hawthorne Hollow County Road	AI	3	AI	AI	AI	AI	AI
20040	Spring Creek Boat Lending	AI	AI	AI	AI	AI	AI	AI
20041	River Access	A	1,4	1,4	1,4	1,4	1,4	1,4
20004	Bed Ground Road	I	I	I	I	I	I	I
20077	Fall Creek-Skytine Spur 3	A	2,4	2,4	2,4	2,4	2,4	2,4
20077	Fall Creek-Skyline Spur 9	I	2,4	2,4	2,4	2,4	2,4	2,4
20077	Fall Creek-Skyline Spur 10	I	2,4	2,4	2,4	2,4	2,4	2,4
20077	Fall Creek-Skyline Spur 20	I	2,4	2,4	2,4	2,4	2,4	2,4
20077	Fall Creek-Skyline Spur 33	I	2,4	2,4	2,4	2,4	2,4	2,4
20077	Fall Creek-Skyline Spur 444	I	2,4	2,4	2,4	2,4	2,4	2,4
20077	Fall Creek-Skyline Spur 200	I	2,4	I	2,4	I	I	I
20003	Phosphate Canyon	I	4	I	I	I	I	I
20084	Lava Creek Spur 1	A	3,4	A	3,4	A	A	A
20005	Little Box	A	A	4	A	4	4	4
20102	Fish and Game A Spur	AI	AI	AI	AI	AI	At	AI
20143	Corral Ridge Spur 143A	A	2	A	2	A	A	A
20157	Indian Fork Spur 1	I	I	4	4	4	4	4
20157	Indian Fork Spur 2	I	4	4	4	4	4	4
20157	Indian Fork Spur 4	I	I	4	4	4	4	4

NUMBER	ROAD/TRAIL NAME	ALTERNATIVE						
		1	2	3	3M	4	5	6
20161	Indian CreekA Spur	A	A	A	4	4	4	4
20170	Rash Canyon willow Spring Sp	I	2,3	2,3	2,3	2,3	2,3	2,3
20170	Rash Canyon Extension	I	I	I	2,3	I	I	2,3
20242	Calamity C G Wafer System	A	4	A	A	4	4	4
20023	Gravel Flats Spur	AI	4	AI	AI	AI	AI	AI
20022	Antelope Creek, Head	AH	AH	AH	AH	AH	AH	AH
20042	Little Box Canyon	AI	AI	AI	AI	AI	AI	AI
20287	Tissue Point	AI	AI	AI	AI	AI	AI	AI
20278	Calamity Shortcut Spur 1	AI	1,2,3	1,2,3	1,2,3	1,2,3	1,2,3	1,2,3
20278	Calamity Shortcut Spur 2	AI	1,2,3	1,2,3	1,2,3	1,2,3	1,2,3	1,2,3
20376	June Creek Spur	I	2,3	2,3	2,3	2,3	2,3	2,3
20004	Alpine Boat Landing Spur 2	A	A	1,3	1,3	1,3	1,3	1,3
20004	Alpine Boat Landing Spur 3	A	A	1,3	1,3	1,3	1,3	1,3
20004	Alpine Boat Landing Spur 4	A	A	1,3	1,3	1,3	1,3	1,3
80254	Roller Canyon	AI	4	AI	AI	AI	AI	4
80277	Shurtliff Canyon	A	4	A	A	A	A	4
80283	Oakden Canyon	A	4	A	A	A	A	4
80302	Holland Canyon	A	4	4	A	A	A	4
80228	Unmamed Road	A	1,2,3	A	1,2,3	A	A	A
80353	Mud Spnngs	A	4	4	A	4	4	4
80218	Kelly Canyon Spur 1	I	314	314	3,4	314	3,4	3,4
80218	Kelly Canyon Spur 2	I	314	A	3,4	314	314	3,4
80343	Kelly Sheep Corrals	A	314	3,4	A	3,4	3,4	3,4
80218	Kelly Canyon Spur 4	I	314	314	3,4	3,4	3,4	3,4
80218	Kelly Canyon Spur 5	I	314	3,4	3,4	3,4	3,4	3,4
80342	Morning Glory Mine	AI	4	3,4	AI	4	4	4
80218	Kelly Canyon Spur 8	I	3,4	314	314	314	3,4	314
80218	Kelly Canyon Spur 10	I	3,4	314	3,4	314	314	3,4
80218	Kelly Canyon Spur 11	I	3,4	314	3,4	314	3,4	3,4
80222	Browning Creek Spur 1	I	314	314	3,4	314	3,4	3,4
80222	Browning Creek Spur 2	I	314	3,4	3,4	314	314	314
80222	Browning Creek Spur 3	I	3,4	3,4	3,4	3,4	3,4	314
80229	Fleming Canyon Spur 1	I	314	3,4	3,4	3,4	3,4	3,4
80232	Graham Hollow Spur 1	I	3,4	314	3,4	3,4	314	314
80232	Graham Hollow Spur 2	I	3,4	3,4	3,4	3,4	3,4	314
80234	Lower Rainey Diversion	AI	3,4	3,4	AI	314	3,4	314
80258	North Moody Spur 1	I	I	I	3,4	3,4	3,4	314
80258	North Moody Spur 2	I	3,4	3,4	314	314	3,4	3,4
80258	North Moody Spur 3	I	314	314	3,4	3,4	3,4	314
80258	North Moody Spur 5	I	3,4	3,4	314	314	3,4	3,4

PALISADES - Appendix C - 5 of 9

NUMBER	ROAD/TRAIL NAME	ALTERNATIVE						
		1	2	3	3M	4	5	6
80258	North Moody Spur 6	I	3,4	3,4	3?4	3,4	3,4	3,4
80231	Butler Canyon Road	AI	AI	AI	AI	AI	AI	AI
80318	Windy Ridge Spur 1	AI	3,4	3,4	3t4	3!4	3,4	3,4
80318	Windy Ridge Spur 2	I	3,4	3,4	3,4	3,4	3,4	3,4
80400	Byrnes Homestead	AH	AM	AH	AM	AH	AM	AH
80464	Fish Creek South Moody Spur A	I	3,4	3,4	3,4	3,4	3t4	3t4
80651	Moody Swamp Spur 1	AI	3,4	3,4	3,4	3,4	3,4	3,4
80651	Moody Swamp Spur 2	AI	3,4	3,4	3,4	3,4	3t4	3,4
80651	Moody Swamp Spur 3	AI	3,4	3,4	3,4	3,4	3t4	3,4
80651	Moody Swamp Spur 4	AI	3,4	3,4	3,4	3,4	3,4	3,4
80883	Wolverine Spur 1	I	3t4	3,4	3,4	3,4	3,4	3,4
80903	BPA Powerline B Spur	A	4	4	4	4	4	4
80903	BPA Powerline C Spur	A	4	4	4	4	4	4
81085	Stateland	A	3,4	3,4	3?4	3,4	3,4	3,4
81085	Private A	A	3,4	3,4	3t4	3,4	3,4	3,4
81085	Private B	A	3!4	3,4	3,4	3!4	3,4	3!4
20035	Jordan Canyon Access	A	AF	AF	AF	AF	AF	AF
80233	Little Sheep Road	A	A	A	A	A	2,4	2,4
80211	Table Rock Pit Road	A	A	A	A	A	2,4	2,4
80004	Alpine Boat Landing	A	A	A	A	A	A	A
20009	Papoose Creek (private)	A	A	A	A	A	A	A
20868	Hoffman Summer Home Loop	AD	AD	AD	AD	AD	AD	AD
80329	Blowout Boat Ramp	A	A	A	A	A	A	A
20181	Hoffman Summer Home Area	A	A	A	A	A	A	A
20061	Calamity Summer Home Road	A	A	A	A	A	A	A
20062	Palisades Summer Homes	A	A	A	A	A	A	A
80269	Sheep Creek Summer Home Loop	A	A	A	A	A	A	A
80402	Mennonite Camp Road	A	A	A	A	A	A	A
20078	Boy Scout Camp Little Lemhi	A	A	A	A	A	A	A
20241	Calamity Campground	A	A	A	A	A	A	A
80322	Dry Canyon	A	4	4	4	4	4	4
80220	Timber	A	4	4	4	4	A	A
80221	Upper Timber Drive	A	4	4	4	4	4	4
80251	Lower Farnes	AI	2,4	2,4	2,4	2,4	2,4	2,4
80273	Garner Ponds	A	4	4	2,4	2,4	2,4	2,4
80274	Upper Browning Creek	A	4	4	2,4	2,4	2,4	2,4
80659	Argument Ridge	A	4	4	4	4	4	4
80882	Kelly Mtn Spur	A	4	4	4	4	4	4
20386	Travertine Mine Spur	AI	4	4	4	4	4	4
20406	Deer Creek	A	2,4	2,4	2,4	2,4	2,4	2,4

PALISADES-Appendix C - 6 of 9

NUMBER	ROAD/TRAIL NAME	ALTERNATIVE						
		1	2	3	3M	4	5	6
20166	Hoffman Water User	A	4	4				
20167	Hoffman CG Water	A	4	4	4	4	4	4
80320	BPA Power Line	A	4	4	4	4	4	4
20320	BPA Power Line	A	4	4	4	4	4	4
80321	BPA Power Line	A	4	4	4	4	4	4
20069	Hoffman Campground	A	4	4	4	4	4	4
20280	Snake River Boat Club	A'	4	4	A'	4	4	4
80256	Upper Farnes	AI*	AI*	AI'	AI*	4	4	4
80881	Kelly Mtn Road	A'	A'	A'	A'	A'	A'	A'
80251	Lower Farnes Spur 1	A*	4	4	4	4	4	4
80256	Upper Farnes Spur 3	A'	4	4	4	4	4	4
80256	Upper Farnes Spur 4	A*	4	4	4	4	4	4
80256	Upper Farnes Spur 5	A'	4	4	4	4	4	4
80273	Upper Browning Creek Spur 2	A'	4	4	4	4	4	4
80274	Gamer Ponds Spur 1	A'	4	4	4	4	4	4
80659	Argument Ridge A Spur	A'	4	A	A	4	4	4
80256	Upper Farnes Spur 1	AI'	AI'	AI'	AI*	AI'	4	4
80885	Cold Springs Road	A'	A'	A'	A'	A'	4	4

DISTRICT PALISADES

TRAILS

42045	Indian Creek Loop	BI	BI	BI	BI	BI	BI	BI
42046	Big Basin	BI	1	1	BI	2,3	2,3	2,3
42053	Green Knoll	1	2,3	2,3	2,3	2,3	2,3	2,3
42055	Long Springs	BI	BI	BI	BI	BI	2,4	2,4
42061	Driveway Canyon	BI	BI	BI	BI	2,4	2,4	2,4
42056	Divide Trail	DI	DI	DI	DI	2,4	2,4	2,4
42057	Burnt Timber	DI	DI	DI	DI	2,4	2,4	2,4
42058	Deadhorse	BI	BI	BI	BI	2,4	2,4	2,4
42059	Elk Creek Divide	BI	BI	BI	2,3,4	2,3,4	2,3,4	2,3,4
42122	North Indian	BI	2,4	2,4	BI	2,4	2,4	2,4
48116	Spring Canyon	A	2,4	2,4	2,4	2,4	2,4	2,4
45004	Black Mountain Trail	ADI	2	2	ADI	2	2	2
45026	Garden Creek	A	A	A	A	A	A	A
45027	Pritchard Creek	AI	AI	AI	AI	AI	AI	AI
45028	Porcupine	AI	AI	AI	AI	AI	AI	AI
45029	Bear Creek Sheep	AI	2	2	AI	2	2	2
45030	South Fork of Fall Creek	AI	2	2	AI	2	2	2
45032	South Fork-Rash Canyon	AI	AI	AI	AI	AI	AI	2,4
45033	Fourth of July Ridge	AI	AI	AI	AI	AI	AI	2,4

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NUMBER	ROAD/TRAIL NAME	ALTERNATIVE						
		1	2	3	3M	4	5	6
45034	Fourth of July-Red Peak	AI	AI	AI	AI	AI	AI	2,4
45035	Red Ridge	AI	AI	AI	AI	AI	AI	2,4
45036	Yeaman Creek-Dry Gulch	I	I	I	2,3,4	2,3,4	2,3,4	2,3,4
45037	Russell Creek	AI	AI	AI	AI	AI	AI	2,4
45038	Deadhorse Ridge	AI	AI	AI	AI	AI	AI	2,4
45039	Indian Creek	AI	AI	AI	AI	AI	AI	2,4
45040	White Spring	A	A	A	A	A	A	2,4
45041	Little Elk Mtn	A	A	A	A	A	A	2,4
45042	Deadman Creek	I	I	I	I	I	I	2,4
45043	Currant Creek	I	I	I	I	I	I	2,4
45044	Muddy Cr	AI	AI	AI	AI	AI	AI	2,4
45047	Bear Creek	AI	AI	AI	AI	AI	AI	2,4
45048	South Fork of Bear Creek	I	2,3	2,3	I	2,3	2,3	2,3
45049	North Fork of Bear Creek	AI	2,3	2,3	AI	2,3	2,3	2,3
45055	Box Canyon	I	2,3,4	2,3,4	2,3,4	2,3,4	2,3,4	2,3,4
45130	Elk Mountain Ridge	I	2,3	2,3	I	2,3	2,3	2,3
45138	Garden-Pntchard	AI	AI	AI	AI	AI	AI	AI
45140	Horse Creek	AI	AI	AI	AI	AI	AI	2,4
45142	Echo Canyon-Indian Creek	AI	AI	AI	AI	AI	AI	2,4
45144	Golden Gate	AI	AI	AI	AI	AI	AI	2,4
45148	Warm Springs Ridge	AI	AI	AI	AI	AI	AI	2,4
45157	Five Pine	I	I	I	AI	I	I	2,4
45158	Poker Peak Wells	I	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4
45159	Elk Creek-Jensen Creek	I	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4
48031	Hawley Gulch	AI	AI	AI	AI	AI	2,4	2,4
48051	Sheep Driveway	ADI	2,3	2,3	ADI	2,3	2,3	2,3
48060	Carlton Cutoff	ADI	ADI	ADI	ADI	ADI	2,4	2,4
48063	Mike Spencer Loop	AI	AI	AI	AI	AI	2,4	2,4
48064	Coalmine Canyon	AI	2,4	2,4	AI	2,4	2,4	2,4
48066	N Rainey-S Rainey	AI	AI	AI	AI	AI	AI	2,4
48067	Prospect Peak	AI	AI	AI	AI	AI	2,4	2,4
48068	Big Burns Creek	AI	AI	AI	AI	AI	2,4	2,4
48070	Hell Hole	A	2,3	2,3	A	2,3	2,3	2,3
48071	Little Burns Creek	AI	AI	AI	AI	AI	2,4	2,4
48073	Little Burns-Black Canyon	AI	2	2	AI	2	2	2
48073	Little Burns-Slide Rock	AI	AI	AI	2,3,4	AI	2,3,4	2,3,4
48074	Black Canyon	AI	AI	AI	AI	AI	2,4	2,4
48076	Castle Lake	AI	3	3	AI	3	3	3,4
48077	Thousand Springs	ADI	2,4	2,4	ADI	ADI	2,4	2,4
48078	West Pine Creek	AI	AI	AI	AI	AI	2,4	2,4

NUMBER	ROAD/TRAIL NAME	ALTERNATIVE						
		1	2	3	3M	4	5	6
48079	Fleming Canyon	AI	AI	AI	AI	AI	2,4	2,4
48080	Dry Canyon	AI	AI	AI	AI	AI	2,4	2,4
48082	Wolverine Creek	AI	2	AI	AI	AI	2,4	2,4
48089	North Fork Rainey	AI	AI	AI	AI	AI	AI	2,4
48090	South Fork Rainey	AI	AI	AI	AI	AI	AI	2,4
48092	Water Canyon	I	2,3,4	2,3,4	2,3,4	2,3,4	2,3,4	2,3,4
48094	Dry Elk	I	2,3,4	2,3,4	2,3,4	2,3,4	2,3,4	2,3,4
48120	Spring Run-Blowout	I	I	2,3	2,3	2,3	2,3	2,3
48155	South Fork	AI	AI	AI	AI	AI	AI	2,4
48161	Tie Canyon	I	2,3,4	2,3,4	2,3,4	2,3,4	2,3,4	2,3,4
48162	Spencer Mountain	AI	2,3,4	2,3,4	AI	2,3,4	2,3,4	2,3,4
48464	Trail Exf	I	2,3	2,3	2,3	2,3	2,3	2,3
	Road Canyon	A	2,4	2,4	2,4	2,4	2,4	2,4
42053	Green Knoll Hunter Trail	A	2,3	2,3	2,3	2,3	2,3	2,3
42153	Red Slide	I	3	3	3	3	3	3
45021	Basin	I	2,4	2,4	I	2,4	2,4	2,4
45022	Pritchard Cr Cutoff	A	2,4	2,4	A	2,4	2,4	2,4
45023	Jim Hill	AB	2	2	AB	2	2	2
45024	Tag Alder	I	2	2	I	2	2	2
45026	Pritchard-Nelson	I	I	I	2,3	I	I	2,3
45026	Garden-Nelson	AI	AI	AI	2,3	AI	AI	2,3
45027	Unnamed Spur 1	I	I	I	2,3	I	I	2,3
45028	Porcupine Creek	AI	AI	AI	AI	AI	2	2
45035	Red Spring	I	I	I	2,3	2,3	2,3	2,3
45129	Red Ridge Repeater	A	A	A	A	4	4	4
45038	Little Currant Hollow	I	I	2,3	2,3	2,3	2,3	2,3
45042	Deadman Creek 1	I	I	I	2,3	I	I	2,3
45059	Long Gulch-Indian Creek	AI	AI	AI	AI	AI	2,4	2,4
45013	Flatiron Pond	I	I	I	I	2,4	2,4	2,4
45077	Jim Hill 5	AI	AI	1,2,3	1,2,3	1,2,3	1,2,3	1,2,3
45077	Jim Hill 6	I	I	1,2,3	1,2,3	1,2,3	1,2,3	1,2,3
45141	Flatiron	3	3	3	A	2	2	2
45146	Hunter	I	2	I	I	2	2	2
42127		BI			BI			
45130	Elk Mountain	I	I	I	I	I	2,4	2,4
48031	Hawley Gulch	AI	AI	AI	AI	AI	2,3,4	2,3,4
48115	Rainey Creek	AI	AI	AI	AI	AI	AI	AI
48119	Blowout/Quaker Flat	I	I	2,3	2,3	2,3	2,3	2,3
48131	Lookout Mountain	3	AI	AI	AI	3	3	3
48139	Morning Glory Mine	AI	AI	AI	AI	AI	4	4

NUMBER	ROAD/TRAIL NAME	ALTERNATIVE						
		1	2	3	3M	4	5	6
48219	Unnamed Trail	I	1,2,3	1,2,3	1,2,3	1,2,3	1,2,3	1,2,3
48169	Leaning Fir	ADI	3,4	ADI	ADI	3,4	3,4	3,4
48083	South State	I	I	I	I	I	2,4	2,4
45123	Blowout	I	2,3,4	2,3,4	2,3,4	2,3,4	2,3,4	2,3,4
48079	Fleming Canyon	A	A	A	A	A	A	A
48051	Sheep Driveway	I	I	I	I	I	2,4	2,4

NUMBER	ROAD/TRAIL NAME	ALTERNATIVE						
		1	2	3	3M	4	5	6
ROADS								
20007	North Leigh	ABI	ABI	ABI	ABI	ABI	ABI	ABI
20008	South Leigh	ABI	ABI	ABI	ABI	ABI	ABI	ABI
20009	Teton	ABHI	ABHI	ABHI	ABHI	ABHI	ABHI	ABHI
20010	Rapid Creek	AH1	AH1	AH1	AH1	AH1	AH1	AH1
20011	Teton Greek Spur	AI	AI	AI	AI	AI	AI	AI
20012	Darby Canyon	ABHI	ABHI	ABHI	ABHI	ABHI	ABHI	ABHI
20013	Dry Ridge	AI	AI	AI	AI	AI	AI	AI
20016	Trail Creek C G	AI	AI	AI	AI	AI	AI	AI
20025	Fred's Mountain	ABFJ	ABFI	ABFI	ABFI	ABFI	ABFI	ABFI
20049	Teton Campground	AI	AI	AI	AI	AI	AI	AI
20050	Darby Girls Camp	AI	AI	AI	AI	AI	AI	AI
20063	Fox Creek	ABHI	ABHI	ABHI	ABHI	ABHI	ABHI	ABHI
20098	Reunion Flat	AI	AI	AI	AI	AI	AI	AI
20099	Worse Transfer Station	AI	AI	AI	AI	AI	AI	AI
20123	Tiehack Spur 4	1,2,4	A	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
20125	Swanner Cr	1,2,4	A	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
20254	South Jackpine	AI/124	AI/124	AI	AI/124	AI/124	AI/124	AI/124
20255	Steep Creek	AI	AI	AI	AI	AI	AI	AI
20266	Jackpine/Pinochle	ABI	ABI	ABI	ABI	ABI	ABI	ABI
20267	Rammell Mountain	AH	AM	AH	AH	AH	AH	AH
20276	Moose Creek	ABI	ABI	ABI	ABI	ABI	ABI	ABI
20383	Pole Canyon North	1,2	ABI	ABIH	ABIH	ABI	ABI	ABI
20656	Indian Meadows	AI	AI	AI	AI	AI	AI	AI
20809	Briggs Cabin	1,2	ABHI	ABHI	ABHI	1,2	1,2	1,2
20813	Poachers Trail	AI	AI	AI	AI	AI	AI	AI
20818	Commissary Ridge	A/1,2	1,2,4	A/124	A/124	A/124	1,2,4	A/124
80013	Dry Ridge	ABI	ABI	ABI	ABI	ABI	ABI	ABI
80207	Birch Spur	AI	1,2,4	1,2,4	AI	1,2,4	1,2,4	1,2,4
80219	Relay Ridge	ABI	ABI	ABI	ABI	ABI	ABI	ABI
80235	Horseshoe-Packsaddle	ABI	ABI	ABI	ABI	ABI	ABI	ABI
80236	Mahogany Creek	1,3	AB	AB	AO	A 0	AB	1,3
80237	Patterson Creek	AB	A8	A 8	AB	A 0	AB	1,3
80239	Mike Harris	AI	AI	AI	AI	AI	AI	AI
80253	Upper Rainey	ABDI	ABDI	ABDI	ABDI	ABDI	ABDI	ABDI
80266	Jackpine-Pinochle Loop	ABI	ABI	ABI	ABI	ABI	ABI	ABI
80267	Rammell Mountain	AH	AH	AH	AH	AH	AH	AH
80276	Moose Creek	ABI	ABI	ABI	ABI	ABI	ABI	ABI
80328	Kirkham Hollow	ABI/1,2,3	ABI/1,4	ABI/1,4	ABI/1,2,3	ABI/1,4	ABI/1,4	ABI/1,4

NUMBER	ROAD/TRAIL NAME	ALTERNATIVE						
		1	2	3	3M	4	5	6
80330	Mike Harris Campground	AI	AI	AI	AI	AI	AI	AI
80381	Rammel Hollow Rd-Packsaddle	AH	AM	AH	AH	AH	AH	3
80383	Pole Canyon North	1,2	AI	1,2,4	AIBH	1,2,4	1,2,4	1,2,4
80388	Wright Creek	1,2	1,2,4	1,2,4	1,2,4	1,2,4	A	1,2,4
80391	Wright Creek Spur	1,2	1,2,4	1,2,4	1,2,4	1,2,4	A	1,2,4
80543	Henderson Creek	AB	AB	AB	AB	AB	AB	1,2,4
80544	Dry Fork Henderson	A	A	A	A	A	A	1,2,4
80546	Grove Creek	AB	AO	AB	AB	AB	AO	1,2,4
80547	Pole Canyon South	ABI	ABI	2,4	ABI	2,4	2,4	2,4
80657	Grandview Guard Station	H	1	H	H	H	H	H
80663	Grandview Main	ABI	ABI	ABI	ABI	ABI	ABI	ABI
80800	Carlton Creek	1,2	1,2,4	1,2,4	A	1,2,4	1,2,4	1,2,4
80802	Maytag	A	A	A	A	A	A	A
80806	Decoster	1,2	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
80809	Briggs Cabin	ABHI	ABHI	ABHI	ABHI	1,2	1,2	1,2
80175	Spur 18	A	A	AH	AH	AH	AH	1,2
80922	Bleggi Gooseneck	1,2	1,2,4	AH	1,2,4	1,4	A	A
20009	Teton Canyon Spur 4	A	A	1,3	1,3	A	1,3	1,3
20009	Teton Canyon Spur 6	A	A	1,3	1,3	1,3	1,3	1,3
20009	Teton Canyon Spur 11	A	A	1,3	1,3	A	1,3	1,3
20019	Teton Pass	A	1,4	1,4	1,4	1,4	1,4	1,4
20672	Baldy Knoll	AH	AM	AH	AH	AH	AH	AH
20509	Baldy Knoll Spur 1	AH	AH	AH	AH	AH	AM	AH
20912	Pinnical Road	AHI	AHI	AHI	AHI	AHI	AHI	AHI
80031	BPA Powerline	AI	3	1,3	AI	3	AI	3
80088	Irene Creek (Spur 16)	AI	AI	AI	E	AI	AI	AI
80219	Spur 1	A	1,2,4	A	1,2,4	A	A	A
80209	Graham Springs	AI	AI	AI	AI	AI	AI	AI
80508	Packsaddle Dam	AI	AI	AI	AI	AI	AI	AI
80235	Spur 2 (Idaho Mine)	A	A	A	A	A	A	1,3
80235	Spur 9	A	A	A	A	A	A	1,3
80235	Spur 11	A	A	A	A	A	A	1,3
80328	Spur 4	A	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
80328	Spur 5	A	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
80381	Packsaddle Spur 1	1,3,4	1,3,4	A	1,3,4	1,3,4	A	1,3,4
80901	Spur 1	D	D	D	2,4	D	2,4	D
80901	Spur 2	D	D	D	2,4	D	2,4	D
80901	Spur 4	D	D	D	2,4	D	2,4	D
80901	Spur 6	D	D	D	2,4	D	2,4	D
20018	Coal Creek	AI	AI	AI	AI	AI	AI	AI

NUMBER	ROAD/TRAIL NAME	ALTERNATIVE						
		1	2	3	3M	4	5	6
20466	Mail Cabin	AI	AI	AI	AI	AI	AI	AI
80309	Pine Creek C G	AI	AI	AI	AI	AI	AI	AI
20044	Bustle Creek	A	A	A	A	A	A	A
20045	Dry Creek Power line	A	A	A	A	A	A	A
20046	Cold Springs	A	A	1,2,3	A	A	A	1,2,3
80194	235-0 (Horseshoe/Packsaddle)	AI	AI	AI	E	AI	AI	1,2,3
20089	Kiln Creek Spur 1	1,2,4	1,4	1,4	1,2,4	1,4	1,4	1,4
20125	Swanner Cr	1,2,4	1,4	1,4	1,2,4	1,4	1,4	1,4
20816	Badger Spngs Spur 1	A	A	A	1,2,4	1,4	1,4	1,4
20385	Pole Canyon Spur	1,2,4	A	1,4	1,2,4	1,4	1,4	1,4
20386	Juniper	1,2,4	1,4	1,4	1,2,4	1,4	1,4	1,4
20392	Tiehack	1,2,4	1,4	1,4	1,2,4	1,4	1,4	1,4
20538	Grouse Cr Spur	1,2,4	1,4	1,4	1,2,4	1,4	1,4	1,4
20539	Wiggleton Hollow	1,2,4	1,4	1,4	1,2,4	1,4	1,4	1,4
20540	Bear Walk	1,2,4	1,4	1,4	1,2,4	1,4	1,4	1,4
20541	Bear Walk Spur	1,2,4	1,4	1,4	1,2,4	1,4	1,4	1,4
20627	Yellow Cr	1,2,4	1,4	1,4	1,2,4	1,4	1,4	1,4
20651	Grouse Cr	1,2,4	1,4	1,4	1,2,4	1,4	1,4	1,4
20667	PolePatch A	1,2,4	1,4	1,4	1,2,4	1,4	1,4	1,4
20668	PolePatch B	1,2,4	1,4	1,4	1,2,4	1,4	1,4	1,4
20817	Little Dry Cr	1,2,4	1,4	1,4	1,2,4	1,4	1,4	1,4
20256	Steep Creek Spur	1,2,4	1,4	1,4	1,2,4	1,4	1,4	1,4
80033	BPA Powerline	2,4	2,4	1,4	1,2,4	2,4	2,4	2,4
80382	Teepee	1,2,4	1,4	1,4	2,4	1,4	1,4	1,4
80386	Juniper	1,2,4	1,4	1,4	1,2,4	1,4	1,4	1,4
80208	Klein Spur	1,2,4	1,4	1,4	1,2,4	1,4	1,4	1,4
80387	Pony Bench	1,2,4	1,4	1,4	1,2,4	1,4	1,4	1,4
80389	Tepee Ridge	1,2,4	1,2,4	1,4	1,2,4	1,4	1,4	1,4
80390	Packsaddle Ridge	1,2,4	1,2,4	1,4	1,2,4	1,4	1,4	1,4
80392	Tiehack	1,2,4	1,2,4	1,4	1,2,4	1,4	1,4	1,4
80654	Teepee Ridge	1,2,4	1,2,4	1,4	1,2,4	1,4	1,4	1,4
80655	Lower Teepee	1,2,4	1,2,4	1,4	1,2,4	1,4	1,4	1,4
80385	Pole Canyon Spur	1,2,4	1,2,4	1,4	1,2,4	1,4	1,4	1,4
80658	Reservoir	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4	1,4
80652	Dry Creek	1,2,4	1,2,4	1,4	1,4	1,4	1,4	1,4
80664	Boundary Creek	1,2,4	1,2,4	1,2,4	1,2,4	1,4	1,4	1,4
80665	Crooked Creek	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4	1,4	1,4
80666	Pony Creek	1,2,4	1,4	1,4	1,2,4	1,4	1,4	1,4
80803	Carlton Cr Spur	1,2,4	1,4	1,4	1,2,4	1,4	1,4	1,4
80816	Calamity	1,2,4	1,4	1,4	1,2,4	1,4	1,4	1,4

NUMBER	ROAD/TRAIL NAME	ALTERNATIVE						
		1	2	3	3M	4	5	6
80822	Kirkham Hollow Spur	1,2,4	1,4	1,4	1,2,4	1,4	1,4	1,4
80922	Bleggi Gooseneck	1,2,4	1,2,4	1,2,4	1,2,4	1,4	1,4	1,4
80951	Milk Creek Ridge	1,2,4	1,4	1,4	1,2,4	1,4	1,4	1,4
20088	Kiln Creek	A*	A*	A*	A*	2,4	2,4	1,2,4
20090	Kiln Cr Spur 2	A*	A*	A*	2,4	2,4	2,4	1,2,4
20122	Tiehack 3	A*	A*	A*	1,2,4	1,2,4	1,2,4	1,2,4
20123	Tiehack 4	A*	A*	A*	1,2,4	1,2,4	1,2,4	1,2,4
20124	Tiehack 7	A*	A	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
20384	Bitch Creek	A*	A*	A*	1,2,4	1,2,4	1,2,4	1,2,4
20393	Tiehack Spur 1	A*	A*	A*	1,2,4	1,2,4	1,2,4	1,2,4
20660	Cave	A*	A"	A*	1,2,4	1,2,4	1,2,4	1,2,4
20661	Slow Elk	A*	A*	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
20801	Jackpine Boundary	A*	A"	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
20802	Jackpine Boundary S	A*	A*	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
20809	809 D	A*	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
20810	Briggs Cabin Spur 1	A*	A*	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
20819	Wildcat	A*	A*	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
80031	BPA Powerline	A*	A*	1,2,4	1,2,4	A*	A*	A*
80074	235-E Spur 4	AI*	AE*	AE*	E*	1,2,4	AEI*	1,2,4
80070	235-J Spur 5	A*	AE*	AE*	E*	AEI*	AEI*	1,2,4
80075	235-L Spur 12	A*	AE*	AE*	E*	AEI*	AEI*	1,2,4
80076	235-M Spur 13	A*	AE*	AE*	E*	AEI*	AEI*	1,2,4
80155	235-N Spur 14	A*	AE*	AE*	E*	AEI*	AEI*	1,2,4
80073	235-O Spur 15	A*	AE*	AE*	E*	1,2,4	1,2,4	1,2,4
80140	253-B Spur 17	A*	E"	E*	E*	A*	A*	1,2,4
80383	Pole Canyon N	ABI*	A*	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
80384	Bitch Cr N Jackpine	A*	A"	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
80547	Pole Canyon South	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4	AB*	AB*
80653	Twodraw	A*	A*	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
80662	Horse Creek	A*	A*	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
80663	Grandview Main	AI*	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
80804	Tiehack Spur 2	A*	A*	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
80805	Tiehack Spur 5	A*	A'	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
80806	Decoster	A*	A'	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
80807	Decoster Spur	A*	A*	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4
80867	867A (Morris Creek)	A*	A	1,2,4	1,2,4	1,2,4	1,2,4	1,2,4

ROADITRAIL		ALTERNATIVE						
NUMBER	NAME	1	2	3	3M	4	5	6
DISTRICT TETON BASIN								
TRAILS								
52077	Poly-Wog	A	A	A	314	A	3,4	A
58065	Blacktail	ADI	ADI	ADI	ADI	ADI	314	314
58069	Spur 1	A	A	AH	AH	3	A	314
58070	Henderson Cut Off Spur	A	A	A	A	A	A	314
58071	Dry Henderson	AI	AI	AI	AI	AI	AI	3?4
58071	Spur 1	314	A	3,4	314	3,4	314	314
58901	Private 1	A	2,4	2,4	2,4	2,4	2,4	2,4
58051	Sheep Driveway (1000 SPR)	ADHI	ADHI	ADHI	ADHI	ADHI	ADHI	ADHI
58060	Carlton Cutoff	AI	1,3	AIH	AIH	AI	1,3	1,3
52032	Spring Creek	AI	AI	AI	AI	AI	AI	AI
52034	Aspen	AIH	AIH	AIH	AIH	AIH	AIH	2,3
52043	Burbank	A	A	3,4	314	3,4	3,4	3,4
58049	Mike Harris-Mail Cabin	A	314	314	314	314	3,4	3,4
58174	Pole Canyon	AH	AH	AH	AH	AH	3,4	314
58053	Big Hole Crest	AI	AI	AI	AI	AI	3,4	3,4
58056	South Horseshoe	AI	AI	AI	AI	AI	3,4	3,4
58057	N Mahogany-Elk Flat	AI	AI	AI	AI	AI	AI	AI
58062	Elk Flat-Relay Ridge	AI	AI	AI	AI	AI	314	314
58063	Canyon Creek-South Fork	AI	AI	AI	AI	AI	3,4	3,4
58064	Canyon Creek-North Fork	AI	3,4	314	AI	314	314	3,4
58066	Garns Mountain	AI	AI	AI	AI	AI	3,4	314
58067	Hilton	AI	3,4	3,4	ADI	3,4	3,4	3,4
58069	Twin CreekS	AI	AI	3,4	ADI	ADI	3,4	314
58070	Wet Henderson	AI	AI	3,4	AI	314	3,4	3,4
58072	Grove	AI	AI	3,4	AI	AI	3,4	3,4
58078	North Pine	AI	AI	3,4	AI	314	314	3,4
58079	Rocky Peak	AI	AI	AI	AI	AI	3,4	314
52013	Dry Ridge	A	2,3,4	2,3,4	2,3,4	2,3,4	2,3,4	2,3,4
52015	Indian Meadows-Bear Canyon	A	2,3,4	2,3,4	2,3,4	A	2,3,4	2,3,4
52036	North Game Creek	A	A	A	2,314	A	2,3,4	2,3,4
58029	Gov Pack Trail A	AI	AI	AI	AI	AI	AI	3,4
58030	Gov Pack Trail B	AI	AI	314	AI	AI	AI	314
58047	Wood Canyon Ridge	A	A	A	314	A	314	3,4
58049	Mike Harris Spur 1	A	3,4	314	3,4	3,4	3,4	3,4
58052	Smith Canyon	A	A	3,4	AI	314	314	314
58054	Fork of Patterson	AI	AI	2,3,4	AI	2,3,4,5	2,3,4,5	2,314
58058	Wright Trail	A	3,4	314	3,4	3,4	314	3,4

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NUMBER	ROAD/TRAIL NAME	ALTERNATIVE						
		1	2	3	3M	4	5	6
58059	Graham Trail	AI	314	3,4	AI	3,4	314	3,4
58060	Unnamed Spur 1	A	A	314	3,4	3,4	A	3,4
58060	Unnamed Spur 3	A	A	3,4	3,4	3,4	A	3,4
58060	Unnamed Spur 4	A	A	3,4	3,4	3,4	A	3,4
58061	Calamity Creek	AI	3,4	3,4	AI	3,4	3,4	3,4
58061	Off Kirkham Hollow Rd Spur 1	3,4	3,4	3,4	AI	3,4	3,4	3,4
58014	Allen Canyon	3,4	3,4	3,4	AI	314	3,4	3,4
58081	Murphy Creek	3,4	314	3,4	AI	3,4	3,4	3,4
58076	Corral Creek	AI	AI	AI	AI	314	3,4	3,4

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APPENDIX D

BIOLOGICAL EVALUATION AND BIOLOGICAL ASSESSMENT PROCESS

The Biological Evaluation (BE) and Biological Assessment (BA) for the 1997 Forest Plan Revision FEIS have been reviewed and considered in relation to the analysis of this DEIS. As indicated by the analysis in Chapter IV of this DEIS, there are no consequences which would indicate any different conclusions than those reached in the Biological Evaluation and Biological Assessment for the 1997 Forest Plan Revision. The summary of conclusion of effects for sensitive species is displayed in the following table.

SENSITIVE SPECIES BIOLOGICAL EVALUATION SUMMARY OF CONCLUSION OF EFFECTS for the AGENCY PREFERRED ALTERNATIVE

Species	No Impact	May Impact Individuals Or Habitat, But Will Not Likely Contribute To A Trend Towards Federal Listing Or Loss Of Viability To The Population Or Species	Will Impact Individuals Or Habitat With A Consequence That The Action May Contribute To A Trend Towards Federal Listing Or Cause A Loss of Viability To The Population Or Species	Beneficial Impact
WILDLIFE SPECIES				
Northern Goshawk		X		
Flammulated Owl		X		
Boreal Owl		X		
Great Gray Owl		X		
Trumpeter Swan		X		
Spotted Frog		X		
Common Loon		X		
Harlequin Duck	X			
Spotted Bat	X			
Townsend's Big-eared Bat	X			
Fisher		X		
Wolverine		X		
Three-toed Woodpecker	X			
Cutthroat Trout		X		
PLANT SPECIES				
Pink agoseris (<i>Agoseris lackschewitzii</i>)		X		
Sweet-flowered rock jasmine (<i>Adonisace chamaejasme</i> var. <i>carinata</i>)		X		
Lost River milkvetch (<i>Astragalus amnis-amissi</i>)	X			
Lemhi milkvetch (<i>Astragalus aquilonius</i>)		X		
Meadow milkvetch (<i>Astragalus diversifolius</i>)		X		
Park milkvetch (<i>Astragalus leptaleus</i>)		X		
Payson's milkvetch (<i>Astragalus paysonii</i>)		X		
White Cloud milkvetch (<i>Astragalus vexilliflexus</i> var. <i>nubilus</i>)	X			

Species	No Impact	May Impact Individuals Or Habitat, But Will Not Likely Contribute To A Trend Towards Federal Listing Or Loss Of Viability To The Population Or Species	Will Impact Individuals Or Habitat With A Consequence That The Action May Contribute To A Trend Towards Federal Listing Or Cause A Loss of Viability To The Population Or Species	Beneficial Impact
Centennial rabbitbrush (<i>Chrysothamnus parryi</i> <i>ssp montanus</i>)	X			
Douglass' wavewing (<i>Cymopterus douglassii</i>)		X		
Welsh rockcress draba (<i>Draba globosa</i> (D densifolia var <i>apiculata</i>)		X		
Payson's bladderpod (<i>Lesquerella paysonii</i>)		X		
Lemhi penstemon (<i>Penstemon lemhiensis</i>)		X		
Alkali primrose (<i>Primula alcalina</i>)	X			
Weber's saussurea (<i>Saussurea weberi</i>)	X			

X--represents **evaluated** level of effects

A BE and BA addressing all appropriate species are being prepared to reflect the analysis in this DEIS. The BA will be submitted for consideration by the US Fish and Wildlife Service during the final analysis for this proposal, and a Biological Opinion will be published along with the FEIS and Record of Decision.

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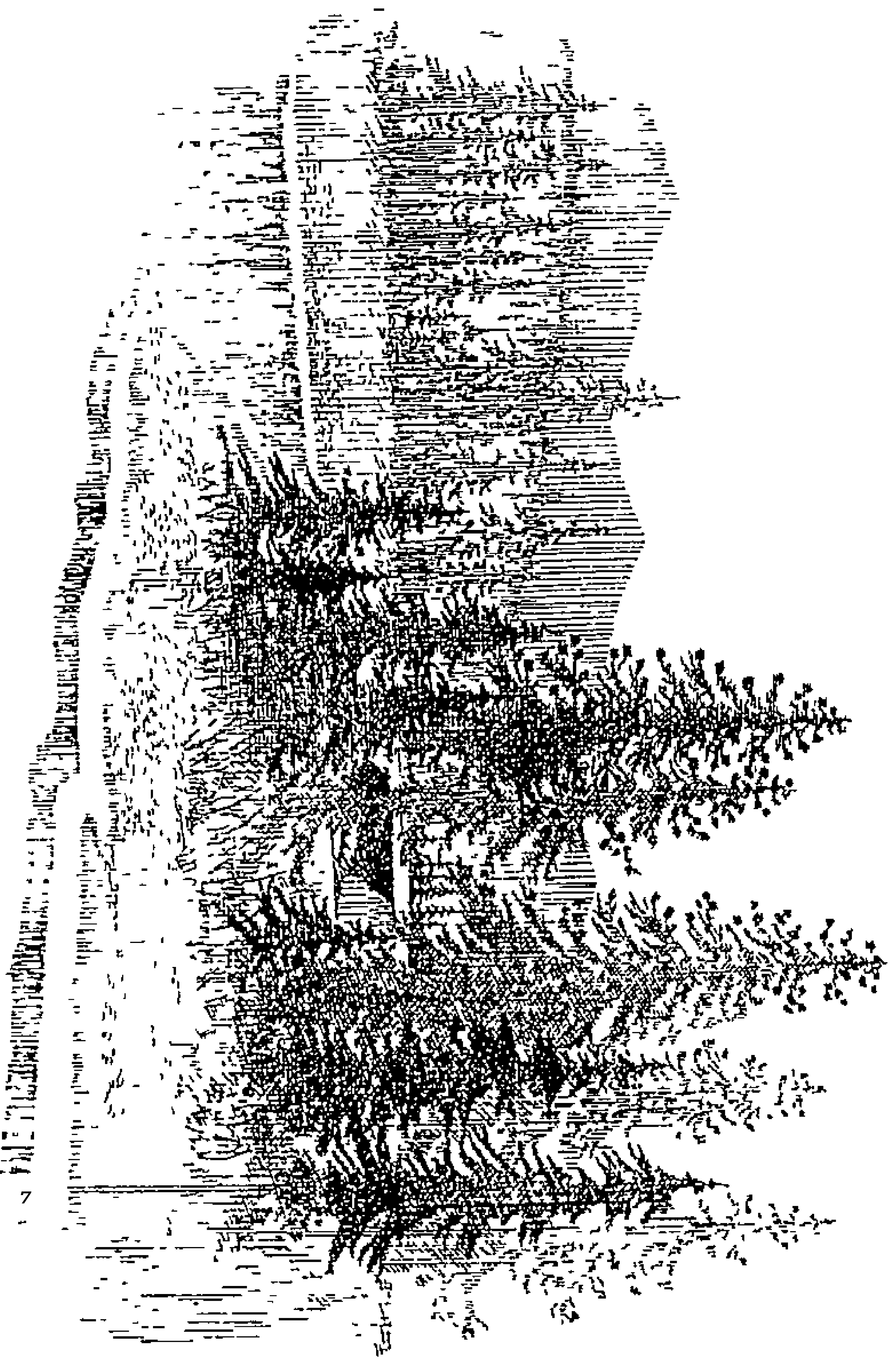
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Smith, Dr & Mrs Richard
Smith, David M
Smith, Dan
Smith, Carol Rae
Snowden, Bob &Janice
Solecki, Jim
Sorensen, LaDawn
Souza, William R
Souza, Bill & Shirley
Spaulding, Jr , Lawrence O
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Staten, Richard
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Stephens, Alan &Ann
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Stimpson, J C &Janice

Stone, David
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Strain, Jack
Strobel, Mark & Joan
Stromberg, Kenneth
Sturdevent, Michael
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Summer, Kim
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Thomas, Butch
Thompson, Lyle
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Thompson, Gary
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Vadnais. Steve
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Weighall, Steven L
Weinberg, Perry
Welles, Georgia
Wemple, Bob
Weston, Martin & Barbara
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Wheatley, Bruce
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Wight. Teddy
Wiles, Gary
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Williams, Rick
Willie, Dale Rodney
Wilson, Jim & Terri
Wilson, Bill C

Wilson, Robert & Ida
Wilson, Don Wade
Winder, Craig
Winegar, Nancy
Wood, Vaughn
Wood, Jason & Kristy
Wood, Jim
Woodall, Bob
Woolford, W G
Woolstenhulm, Claren
Woolstenhulm, Eric
Woolstenhulme, Lane
Woolstenhulme, Bart
Wray, Greg B
Wright, Jeff, Bryant & Karen
Wuzzel, Ms J M
Yancey, Roger
Yancey, Trent
Young, Rob
Youngblut, Lyle Frank
Zillig, Mr & Mrs Fred
Zitting, Dale
Zohner, Bruce & Patty
Zumberge, Paul A

ORGANIZATIONS

Alliance for Wild Rockies
American Snowmobile Magazine
American Wildlands
Anderson Outfitting
Antler Motel, Clarence Law
Army Corps of Engineers
Army Corps of Engineers
Ashley National Forest
Ashton Public Library
Ashton Chamber of Commerce
Ashton Area Develop Comm

Ashton Area Develop Comm
Assoc Montana Snowmobile
Associated Logging Contractors, Inc
Bannock County Commissioners
Basin Lumber
BCH, John & Eve Wilson
BCH, Donna Aldrich
Beaverhead National Forest
Bighorn National Forest
Bingham County Commissioners
Biodiversity Legal Foundation
Blue Ribbon Flies
Blue Ribbon Coalition
Boise Cascade Corp
Boise National Forest
Bonneville County **P & Z**
Bonneville County Commissioners
Boy Scouts of America
BPA -ECN-4, Nancy Wittpenn
Bridger-Teton National Forest
Buena Vista Snowdrifters
Bureau of Reclamation
Bureau of Land Management
Bureau of Indian Affairs
Butte County Commissioner
C & B Timber, Inc
Call Farms, Brent & June Call
Caribou National Forest
Christiansen Logging
Citizens for Teton Valley
City of Island Park **P & Z**
City of Island Park
City of Irwin
City of Idaho Falls
Clark Timber
Clark County Snowriders Club

Clark County Sheriff
Clark County Commissioners
Continental Divide Trail Assoc
Continental Divide Trails Alliance
Department of Tourism & Ind Dev
Department of Lands
Department of Juvenile Corrections
Department of Interior, Office of E A
Department of Interior, Director of EPR
Department of Health & Human Service
Department of Environmental Quality, Beth Pratt
Department of Environmental Quality, Herschler Bldg.
Department of Commerce
Department of Commerce, James V Hawkins, Director
Dept of Health & Human Services, NCEH, Special Programs Group
Dept of Health & Welfare-DEQ
DEQ, Steven Robinson
DEQ, Jim Johnston
Division of Environmental Quality, Chris Mebane
Division of Environmental Quality, Dave Hull
Dixie National Forest
Dnggs City Council
Driggs Chamber of Commerce
E C I P D A
Economic Development Council, Albert Tilt
Edmo, Maxine, Shoshone-Bannock Land Use Comm
Edrington, Brian, AEC Sportsman's Club
Environmental Protection Agency, Office of Federal Activity
Environmental Protection Agency
Environmental Protection Agency, Robert S Burd
Environmental Protection Agency, Region 10

Environmental Protection Agency, Elizabeth Corbsyn & Jayne Hague
ERBCH, Tom Cooper
ERBCH, Connie Bowcutt
Fall River Review
Fall Creek Basin Cattlemen's Assoc
Fed of West Outdoor Club, c/o Martin Huebner
Federal Railroad Administration, Nassif Building
Federal Railroad Administration, Research and Special
Federal Highway Administration, Rodney D Vaughn, Div Mgr
Federal Highway Administration, Nassif Building
Federal Energy Regulatory Comm
Federal Aviation Administration, Northwest Region O R
Fishlake National Forest
Flathead National Forest
FMID, c/o LaDonna Henman
FMID, c/o George Crapo
Forestry Sciences Lab, c/o Chuck Swartz
Four Corners Trail Club
Fremont Herald-Chronicle
Fremont Economic Action Team
Fremont County Commissioners
Fremont County Planning & Zoning
Fremont-Madison irrigation Dist
Friends of Fall River
Friends of Con. & Squirrel Cr.
Gallatin National Forest
Gerber, Jim, Citizens for a User Friendly Forest
Governor of Idaho, Honorable Phil Batt
Grand Teton National Park
Grand Targhee
Greater Yellowstone Coalition

Greater I F Chamber of Commerce
 Hangenbarth Livestock
 Harriman State Park
 Harshbarger Farms
 Hell-Skiing High Mountain
 Henry's Fork Watershed Center
 Henry's Fork Foundation
 High Country News
 High Mountain Trail Machine Assoc
 High Country RC & D, c/o Steve Smart
 Holland & Hart, c/o Paula Fleck
 Honorable Joan E Wood
 Honorable Don Burtenshaw
 Honorable Cameron Wheeler
 House of Representatives. Honorable Mel Richardson
 House of Representatives, Diana Richman
 House of Representatives, Max Mortensen
 House of Representatives, Golden Linford
 House of Representatives, Lenore Barrett
 Humbolt-Toiyabe National Forest
 Idaho Sportsman Coalition
 Idaho State Univ Outdoor Program
 Idaho Wool Growers
 Idaho Women in Timber
 Idaho Watersheds Project
 Idaho State University
 Idaho State Snowmobiling
 Idaho State Historical Society
 Idaho Ski Area Assoc
 Idaho Rivers United
 Idaho Outfitters & Guides Assoc
 Idaho Mining Association
 Idaho Dept of Fish & Game
 Idaho Farm Bureau
 Idaho Falls Trail Machine Assoc
 Idaho Falls Public Library
 Idaho Falls Dental Group
 Idaho Falls City Council
 Idaho Falls Chamber of Commerce
 Idaho Environmental Council
 Idaho Dept of Water Resources
 Idaho Dept of Parks & Recreation
 Idaho Dept of Lands, c/o Merlin Sharp
 Idaho Dept of Fish & Game
 Idaho Department of Commerce
 Idaho Conservation League, c/o John McCarthy and Linn Kinncannon
 Idaho Cattle Assoc
 Idaho Assoc of Counties
 Idaho Outfitters & Guides
 IDWR, c/o Ellen Berggren
 INEEL, c/o Ron Rope
 J R Simplot
 Jackson Hole News
 Jackson Hole Mountain Guides
 Jackson Hole Guide, Christopher Shelton/David Simpson
 Jackson Hole All for Resp Pln
 Jackson Hole Conservation Alliance
 Jackson Chamber of Commerce
 Jefferson County Commissioners
 KADQ-FM
 Key Bank of Idaho, Douglas Martin
 Key Bank of Idaho, Attn Kent C Gunnell
 KID Radio, c/o Bob Ziel
 KIFI Channel 8 Television
 Knight, Geneo, Teton County Commissioner
 Lee, Robert, Idaho State Senate
 Lemhi County Commissioners
 Lewis & Clark ATV Club
 Lincoln County Wyoming Planning
 Lincoln County Wyoming Commissioners

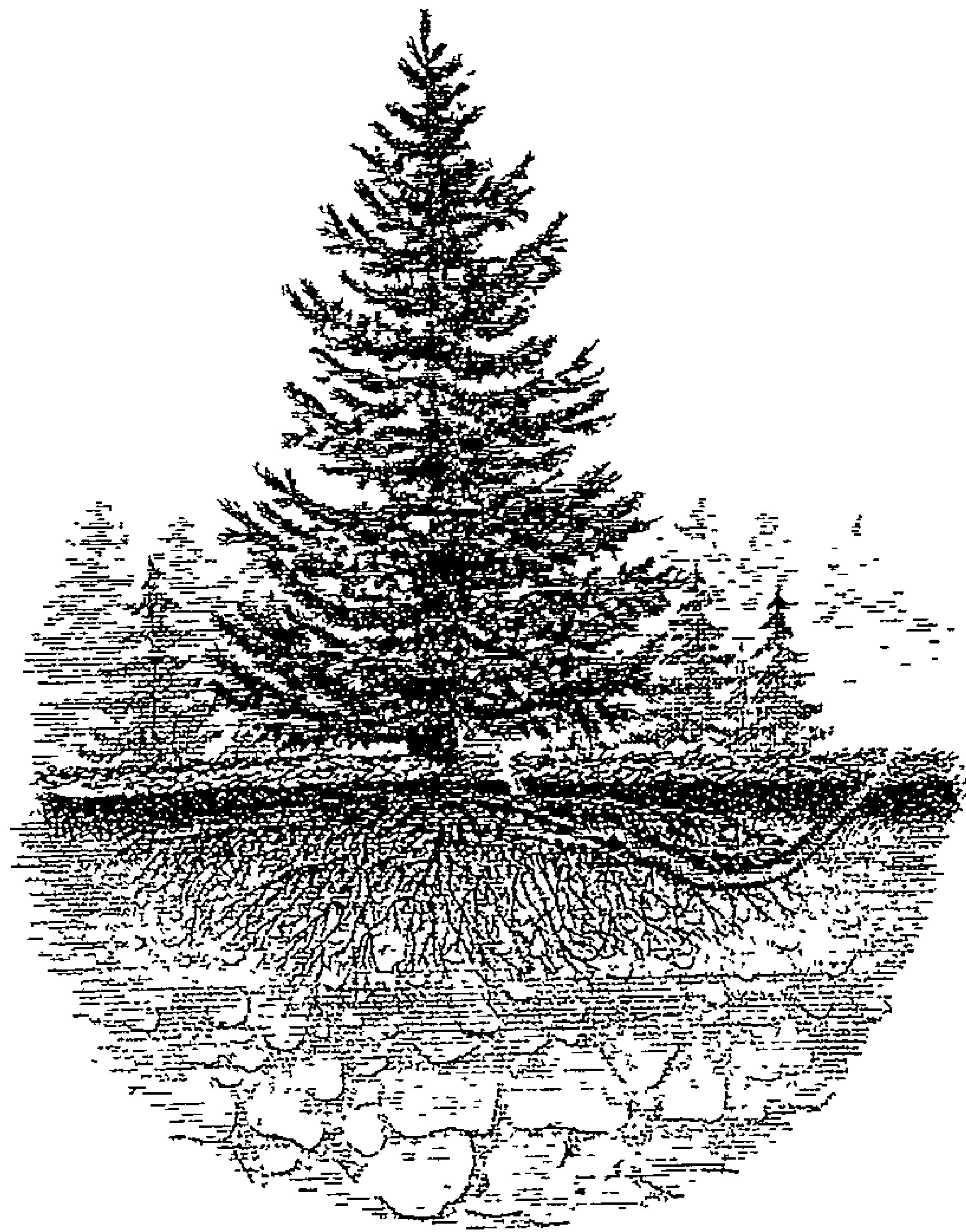
Lionshead Resort
Louisiana Pacific
Lumber Products Inc
Madison Library District
Madison Ford-Mercury, Inc
Madison County Parks & Rec
Madison County P & Z
Madison County Commissioners
Magic Valley Trail Machine
Manti-LaSal National Forest
Medicine Bow-Routt N F
Midwest 4 Wheel Drive Assoc
Morris & Wolff, P A
National Wildlife Federation, c/o Tom France
National Park Service
New Mexico Trout
North Fork Club
Nybakken and Associates
Office of the Governor, State Planning Coordinator, Capitol Building, Cheyenne, WY
Payette National Forest
Pence Contracting
Penta Posts Co , Inc.
Pocatello Trail Machine Assoc
Post Register
Predator Project
Ranson, Ted, Save our Access & Right of Way
Region 6 ID Wildlife Council, c/o J Morgan Lake
Representative Michael Crapo
Representative Barbara Cubin
Rexburg Standard Journal
Ricks College
S F Chamber of Commerce
Salmon-Challis National Forest
Santa Fe National Forest

Sawtooth Snowmobile Club
Sawtooth National Forest
Senator Larry Craig
Senator Dirk Kempthorne
Senator Craig Thomas
Senator Conrad Burns
Sheep Experiment Station
Shoshone- Bannock Tribal
Some Technology
Squirrel Meadows Grazing Assn
Squirrel Meadows Cattlemen
Squirrel Meadow Cattle Assn
St Anthony Library
St Anthony City Council
Star Valley Chamber of Commerce
State of Wyoming, c/o Paul Kruse, 122 W 25th St , Herschler Bld 3W, Cheyenne, WY 82002-0600
State of Wyoming, John T Keck, Historic Presv Officer, 1825 Carey Avenue, Cheyenne, WY 82002-0240
State of Wyoming, Teton County, c/o Michael Giereau, P O Box 1727, Jackson, WY 83001
State of Idaho, Division of Environment, 224 S Arthur, Pocatello, ID 83204
State Historic Preservation Office, c/o Richard Bryant, 6101 Yellowstone, 2nd Floor, Cheyenne, WY 82002
Stoddard Lumber Co , Ron & Elaine Stoddard
Stohl Ranches
Swift Creek Outfitters
T P Outfitters
Teton Valley Fitness
Teton Valley News
Teton Valley Idaho Chamber of Commerce
Teton Soil Conservation District
Teton Group of Sierra Club
Teton County, Idaho Commissioners
Teton Communications, Inc

Tetonia City Council
The Wilderness Society
The Teton Crest Outfitter
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Thompson Masonry Contractor, Inc.
Trost, Charles, Idaho State University Biology
Dept
Trude Ranch
True Oil Company
U S Forest Service, Nancy Green
U S Fish & Wildlife Service, Mike Donahoo
U S Senator Michael B Enzi
Uinta National Forest
United States Congress, Michael Crapo
University of Minnesota, c/o Tom Gelatte,
Dept of Ecology
University of Idaho, Aaron Harp, Dept of Ag
Econ
University of Idaho, c/o Maxine Dakins
Upper Snake River Cattle Co
USDA Forest Service, Dir Land Management
Plan
USDA-ADC, c/o Craig Maycock
Utah Trail Machine Assoc
Victor Adventures
Waldorf College, c/o Paul Bartelt, Dept of Bi-
ology
Wasatch-Cache National Forest
West Yellowstone Chamber of Commerce
Wild Forever, c/o Louisa Wilcox
Wildlife Council, Region 6
Wyoming Outdoor Council, c/o Caroline Byrd
Wyoming Chapter Sierra Club, c/o Paige Mc-
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Wyoming Transportation Dept , c/o Dave
Young
Wyoming State Planning & Coord
Wyoming State Forestry Division
Wyoming State Clearinghouse

Wyoming Dept of Game & Fish
Wyoming Dept of Commerce
Yellowstone Track Systems
Yellowstone SCD
Yellowstone National Park

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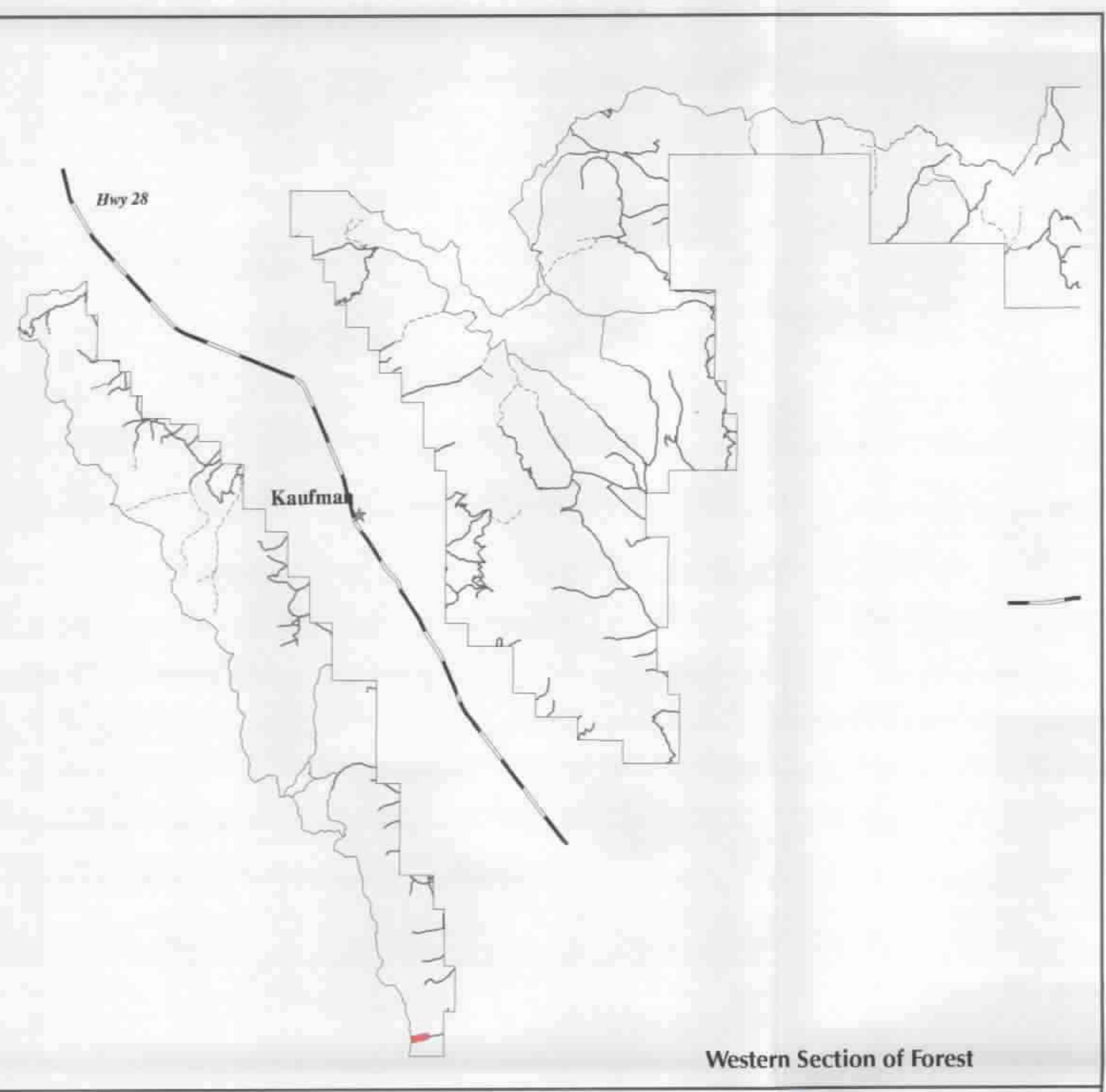
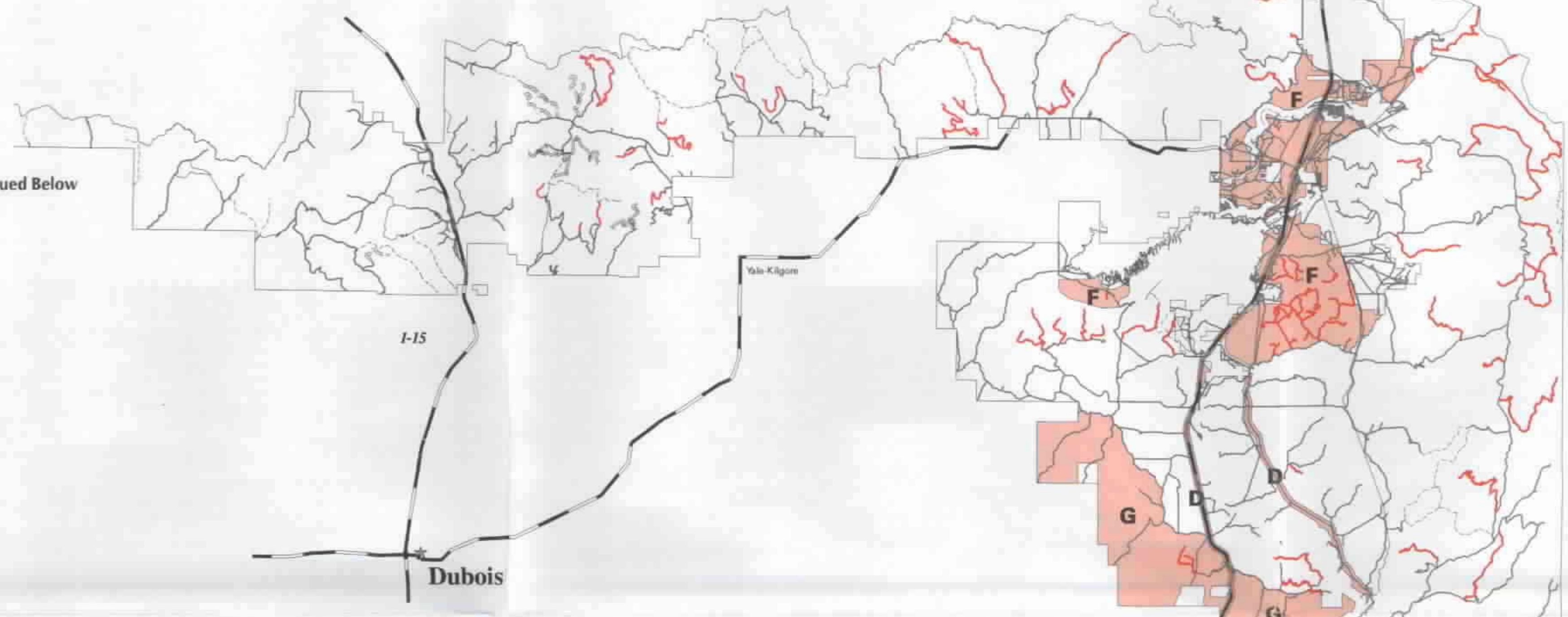
MAPS



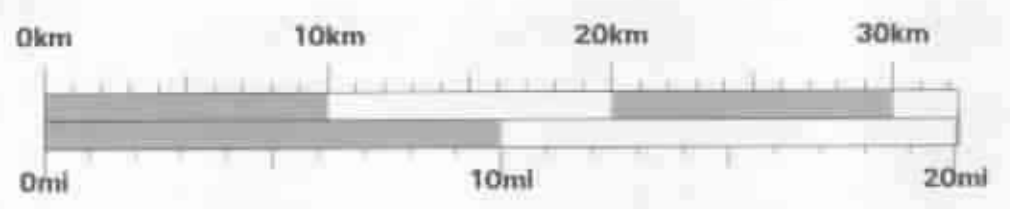
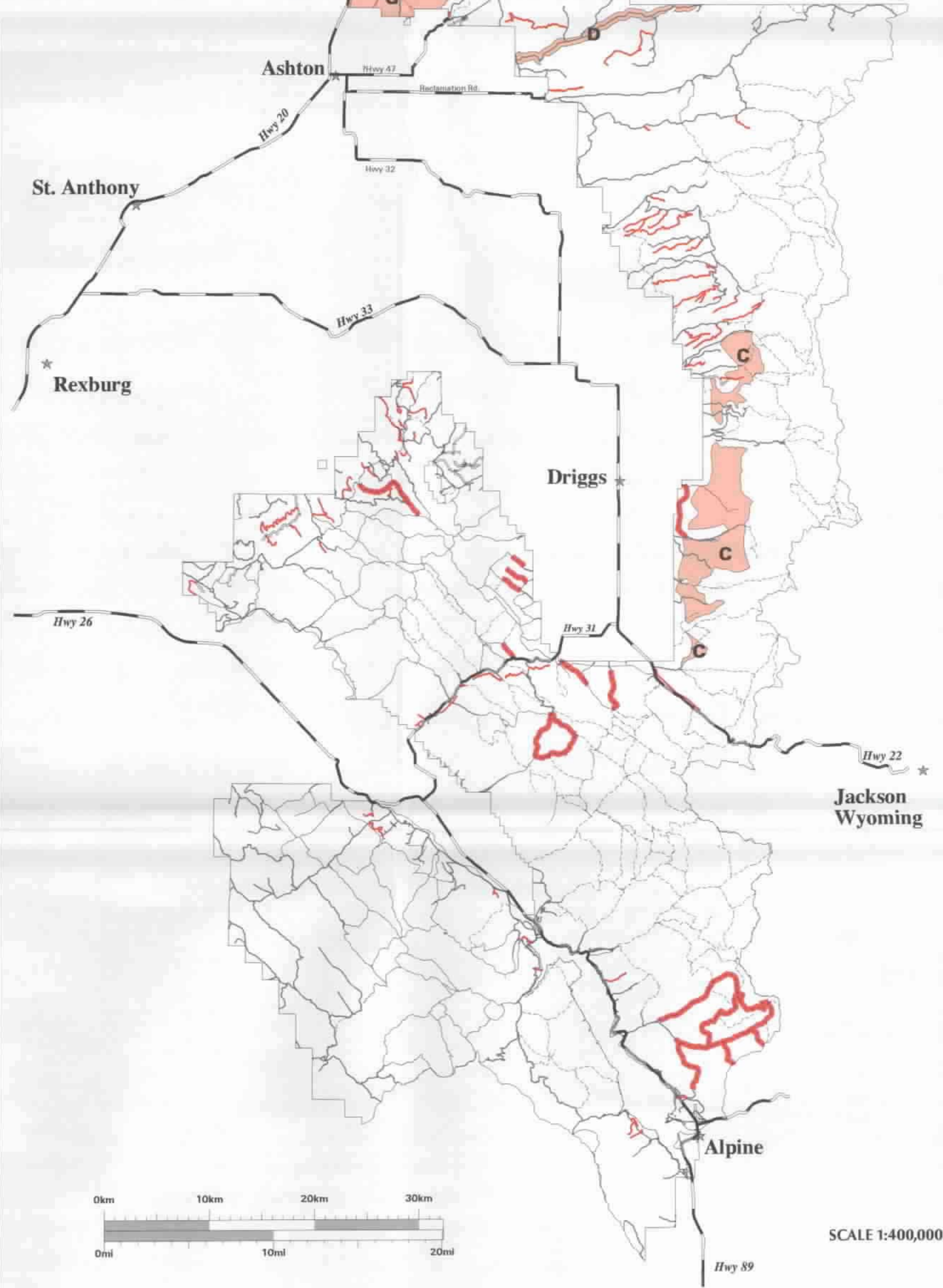
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West Yellowstone
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Western Section of Forest



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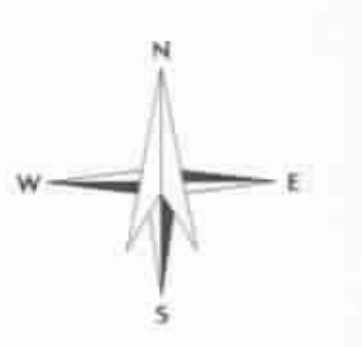
LEGEND

- Roads Open to Motorized Access
 - Roads Closed to Motorized Access Yearlong
 - Roads Closed to Motorized Access During Fall
 - Roads Closed to Motorized Access During Spring
 - Roads Closed to Motorized Access During Spring/Fall
 - Trails Open to Motorized Access
 - Trails Closed to Motorized Access
 - Areas Open to Cross-Country Motorized Travel
 - Areas Closed to Cross-Country Motorized Travel
- Trails Closed to Motorized Access (These were Open in Alternative 3M)



Forest Travel Plan Targhee National Forest Idaho and Wyoming

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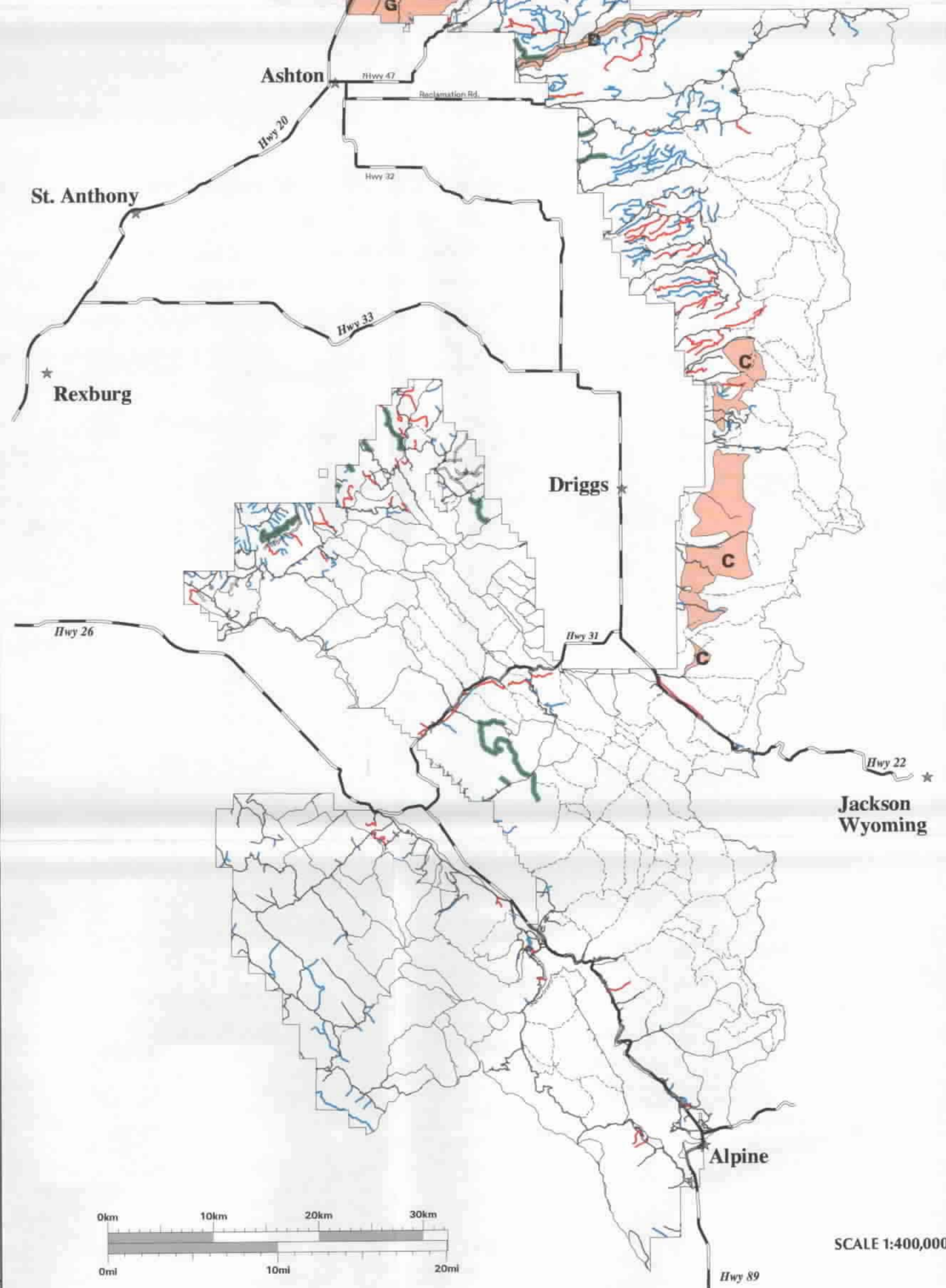
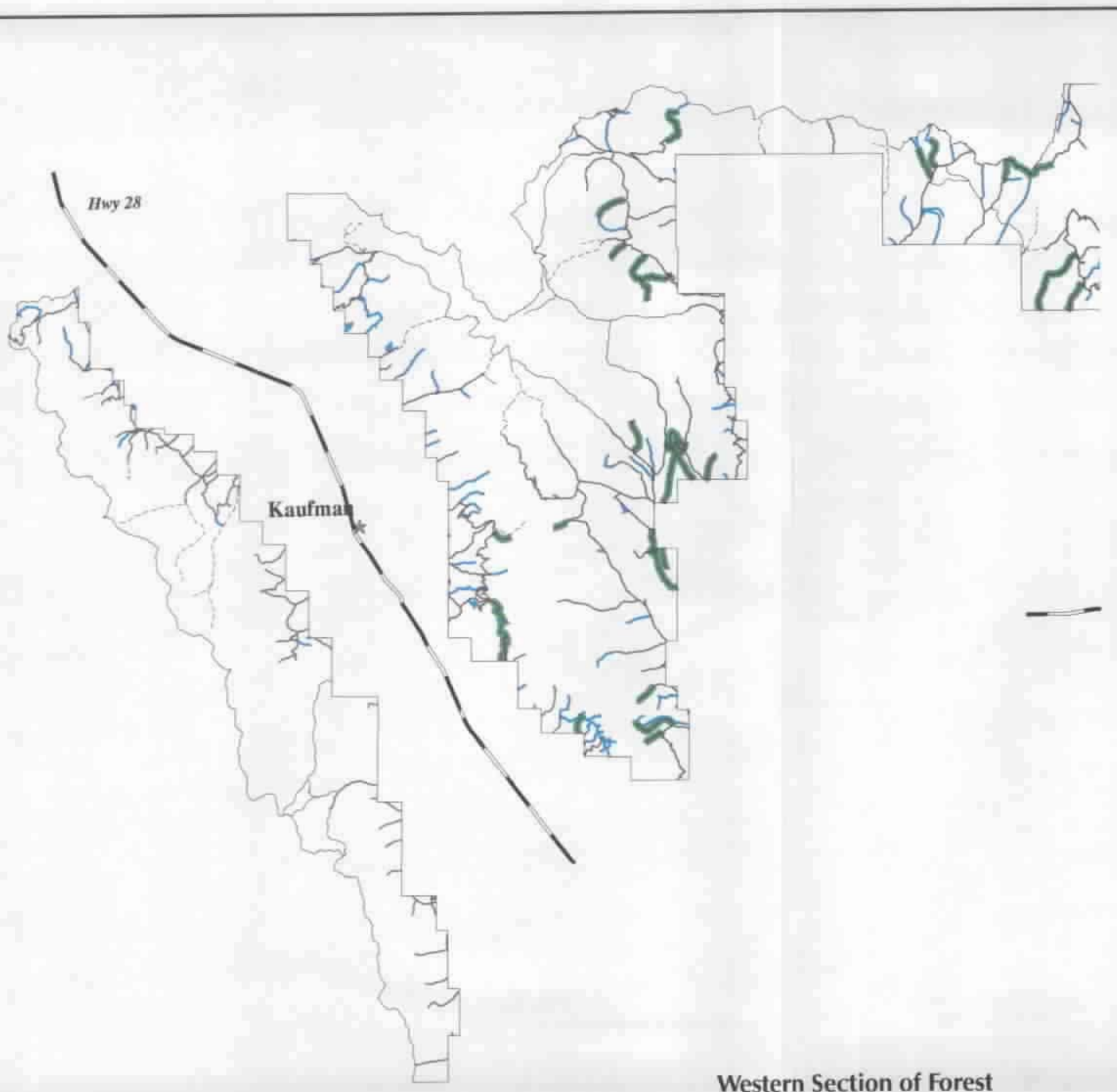
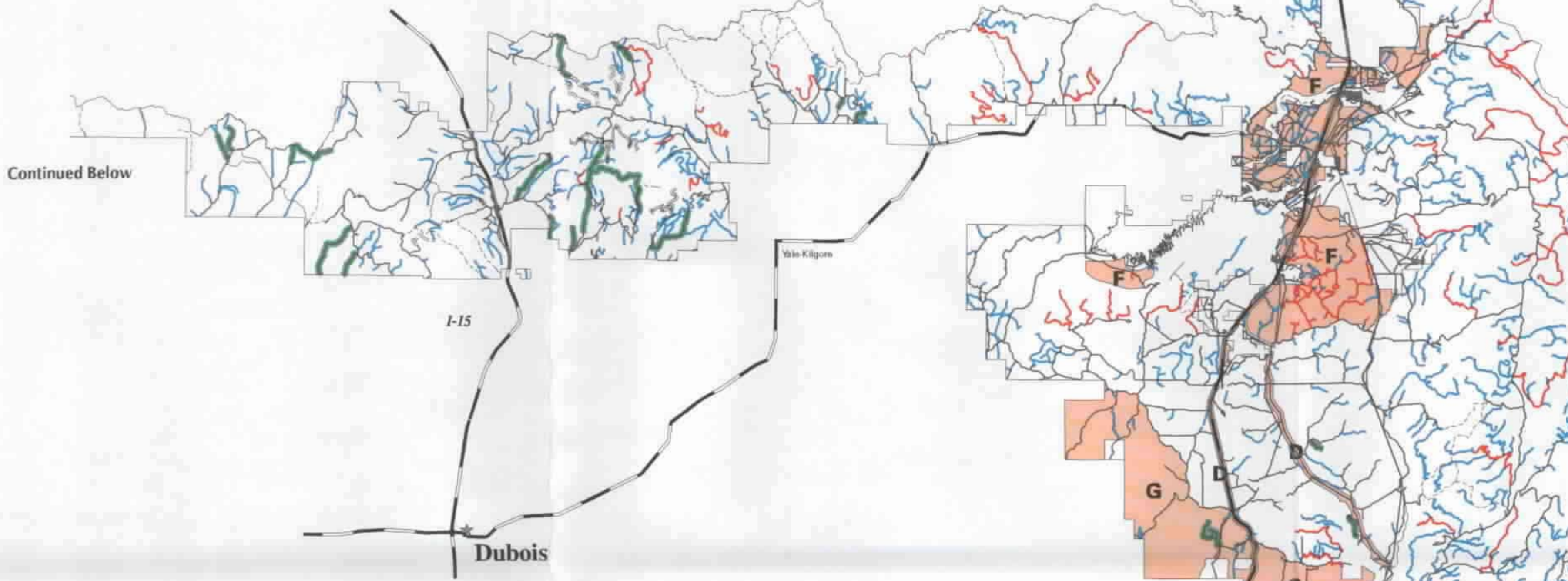
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Summer Transportation Alternative 3M+



West Yellowstone
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Content of Travel Plan

The new Forest Travel Plan to be published in 1999 will include: the details from this Transportation Plan Map (#4); the 1997 Travel Plan Addendum (Appendix A of this EIS); and the designated road, trail and cross-country matrices displayed in the Addendum. The Travel Plan Map and Restriction Order will be developed and implemented in the same format as the 1997 Travel Plan Map.

DISCLAIMER

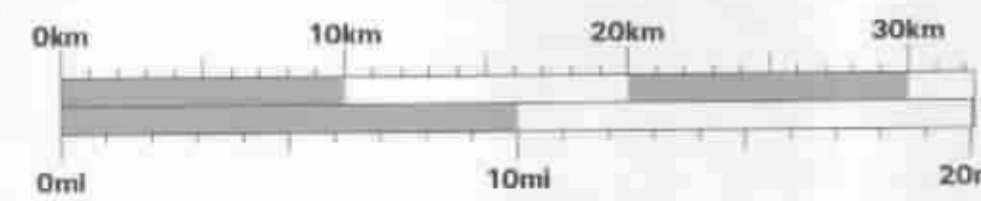
Users of undeveloped forest areas assume the obvious and inherent risks associated with the activities in which they participate. Safety problems from use of undeveloped forest areas may arise due to the user's lack of familiarity concerning dangers of undeveloped areas, inexperienced vehicle operators, and from conflicts among user groups.

Beginning in 1998, the Forest began to decommission some additional roads on the forest - in particular in the Island Park and Ashton areas. These decommissioned roads are now considered undeveloped forest areas. The method of decommission includes constructing "Kelly" humps (earthen berms), falling trees across the road, and pulling slash and rocks into the road prism. During the summer months, these conditions will be readily noticeable. HOWEVER, during the winter months, they may not be as noticeable to the winter user and in particular to snowmobilers. THEREFORE, it is the responsibility of the forest user to negotiate undeveloped forest areas in a safe and prudent manner.

NOTE: It is possible that some decommissioned roads are not displayed on this map. Additional information may be obtained at the local Ranger District Office.

Cross-Country Travel

The motorized cross-country area designation letters have been added to this map for convenience only. The decision on cross-country use was made by the Forest Plan Revision and it is not part of this DEIS. See the cross-country matrices in Appendix A for interpretation of travel opportunities in these areas. Non-motorized travel designations (areas) are not shown on this map. Refer to the 1997 Travel Plan for non-motorized restrictions which apply.



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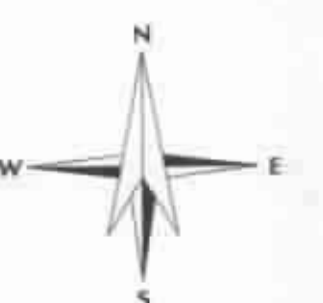
LEGEND

- Roads Open to Motorized Access
- Roads Closed to Motorized Access Yearlong
- Roads Closed to Motorized Access During Fall
- Roads Closed to Motorized Access During Spring
- Roads Closed to Motorized Access During Spring/Fall
- Trails Open to Motorized Access
- Trails Closed to Motorized Access
- Areas Open to Cross-Country Motorized Travel
- Areas Closed to Cross-Country Motorized Travel
- Roads and Trails Open or Seasonally Restricted (These were Restricted in Alternative 3M)
- Roads Planned For Decommission



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Summer Transportation Alternative 3M

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Continued Below

I-15

Dubois

State Capitol

Ashton

St. Anthony

Rexburg

Driggs

Hwy 26

Jackson
Wyoming

Alpine

Hwy 89



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LEGEND

- Roads Open to Motorized Access
- Roads Closed to Motorized Access Yearlong
- Roads Closed to Motorized Access During Fall
- Roads Closed to Motorized Access During Spring
- Roads Closed to Motorized Access During Spring/Fall
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- Trails Closed to Motorized Access
- Areas Open to Cross-Country Motorized Travel
- Areas Closed to Cross-Country Motorized Travel



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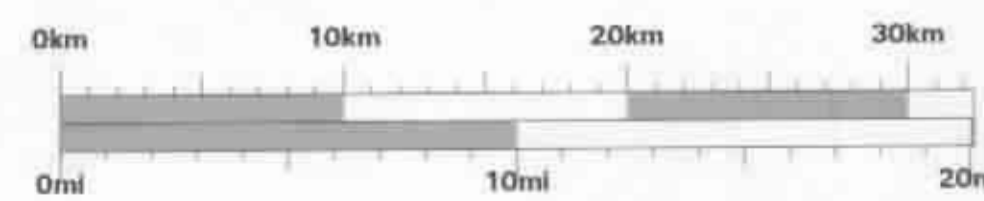
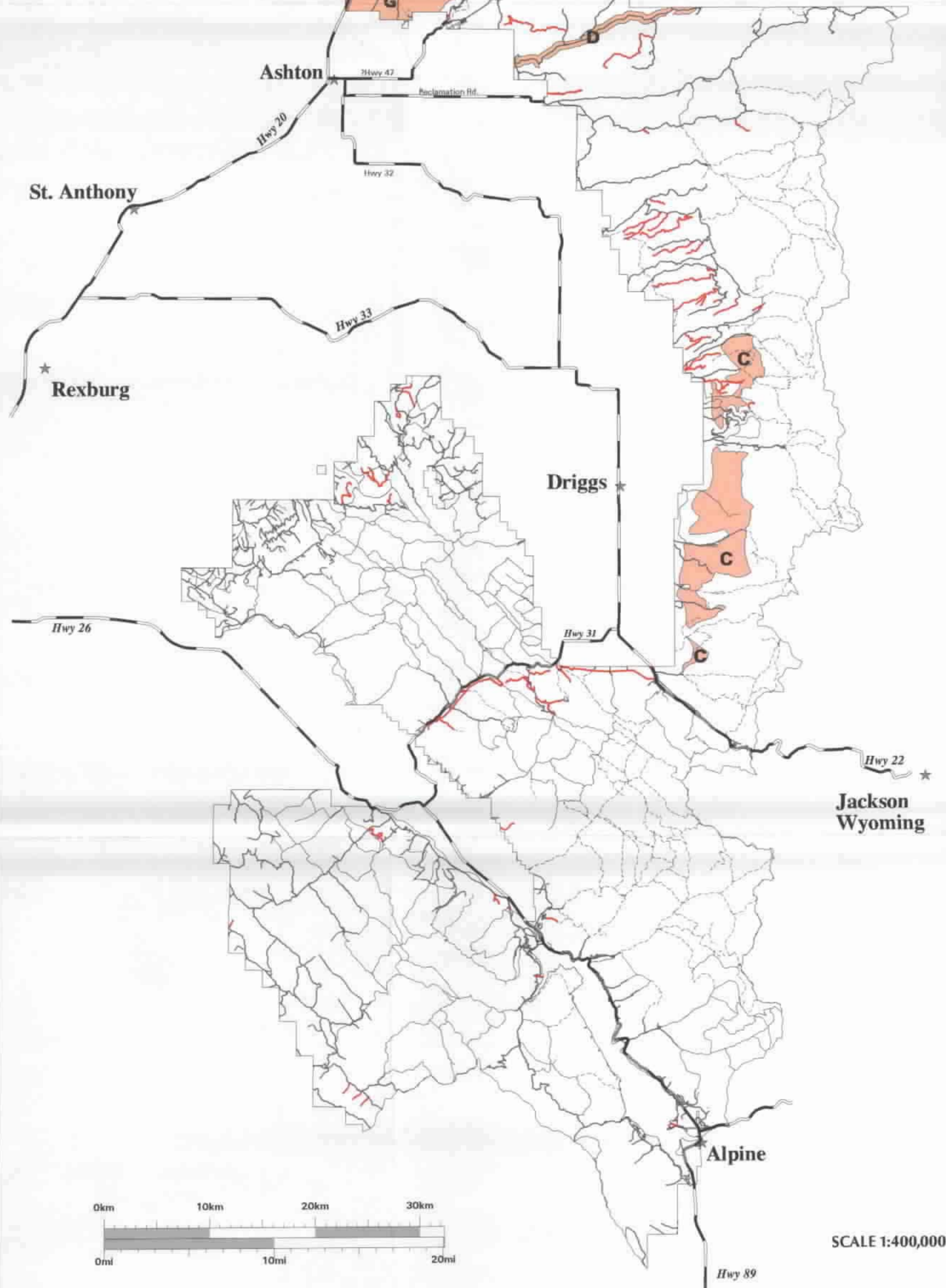
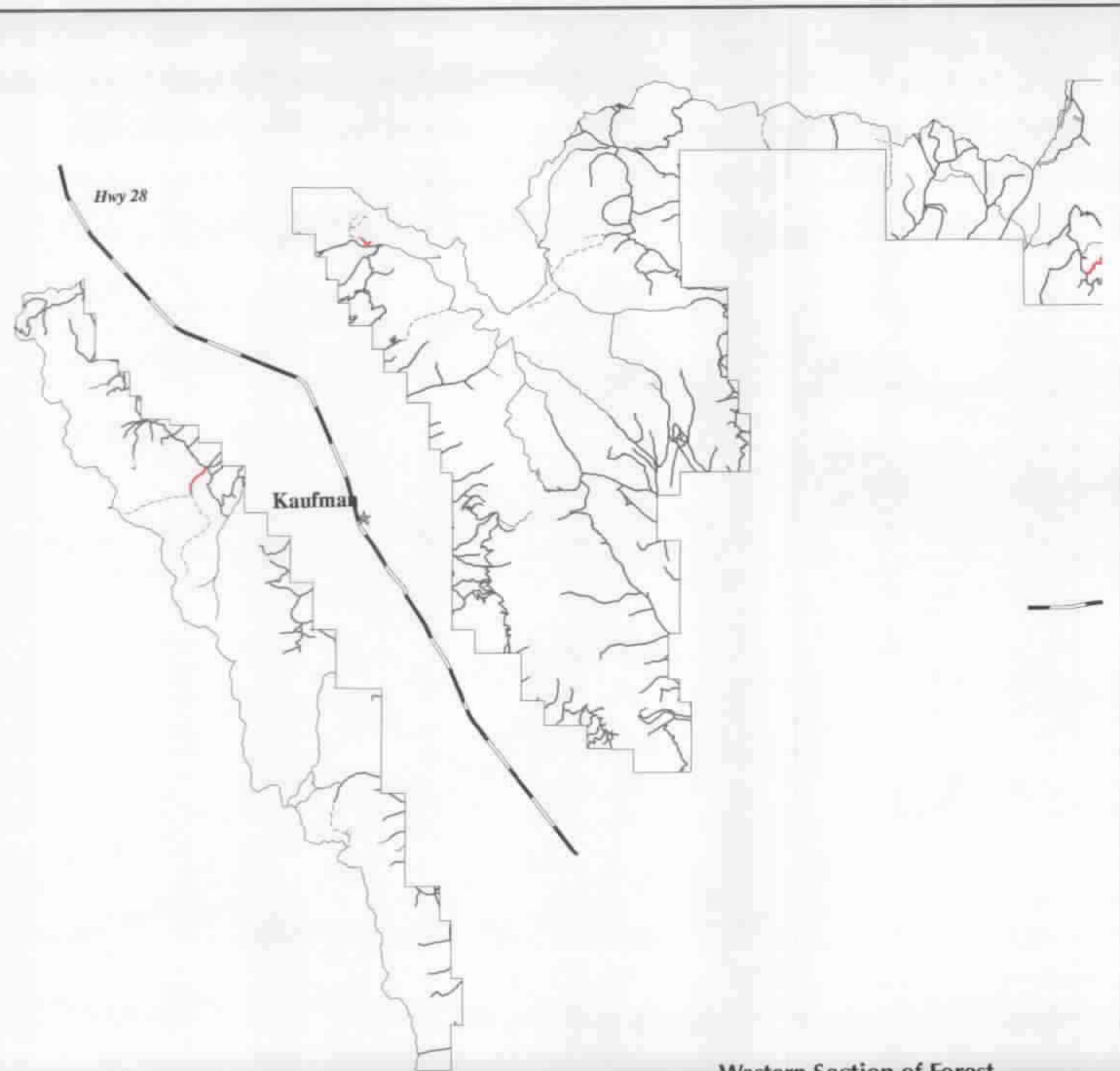
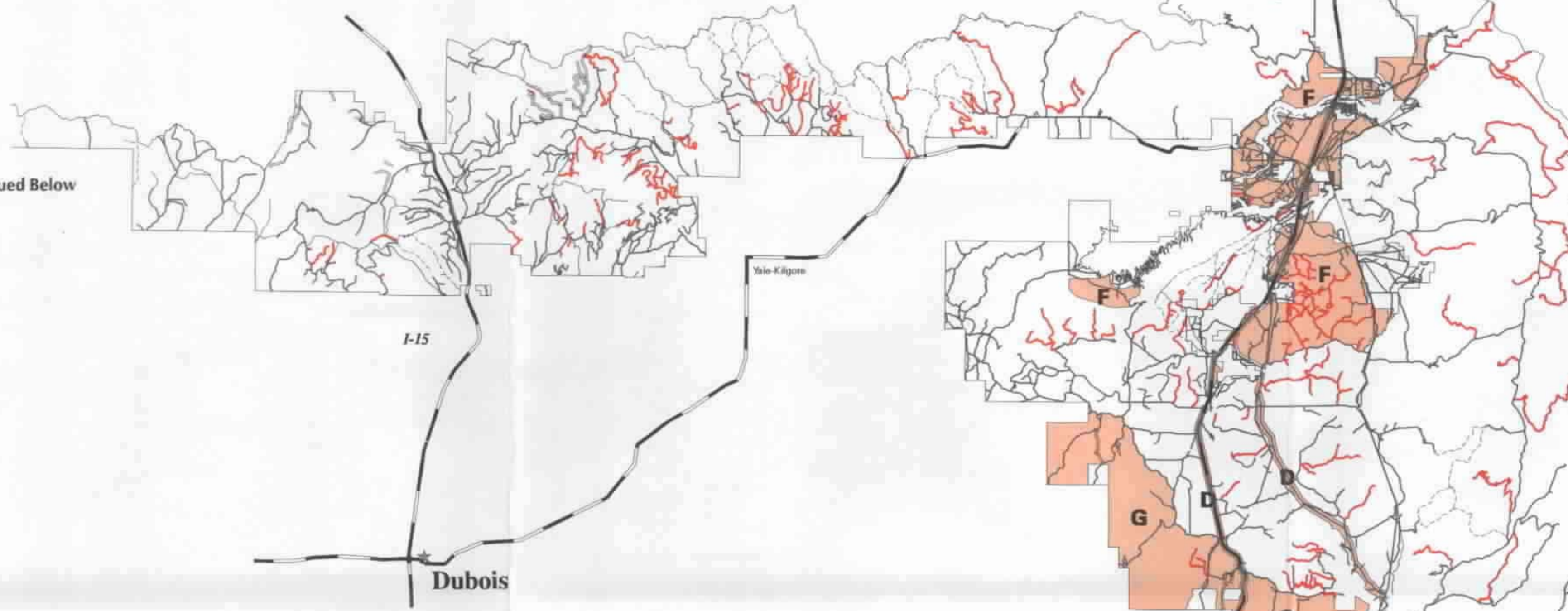
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Summer Transportation Alternative 1M



West Yellowstone
Montana

Continued Below



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LEGEND

- Roads Open to Motorized Access
- Roads Closed to Motorized Access Yearlong
- Roads Closed to Motorized Access During Fall
- Roads Closed to Motorized Access During Spring
- Roads Closed to Motorized Access During Spring/Fall
- Trails Open to Motorized Access
- Trails Closed to Motorized Access
- Areas Open to Cross-Country Motorized Travel
- Areas Closed to Cross-Country Motorized Travel

Forest Travel Plan Targhee National Forest Idaho and Wyoming



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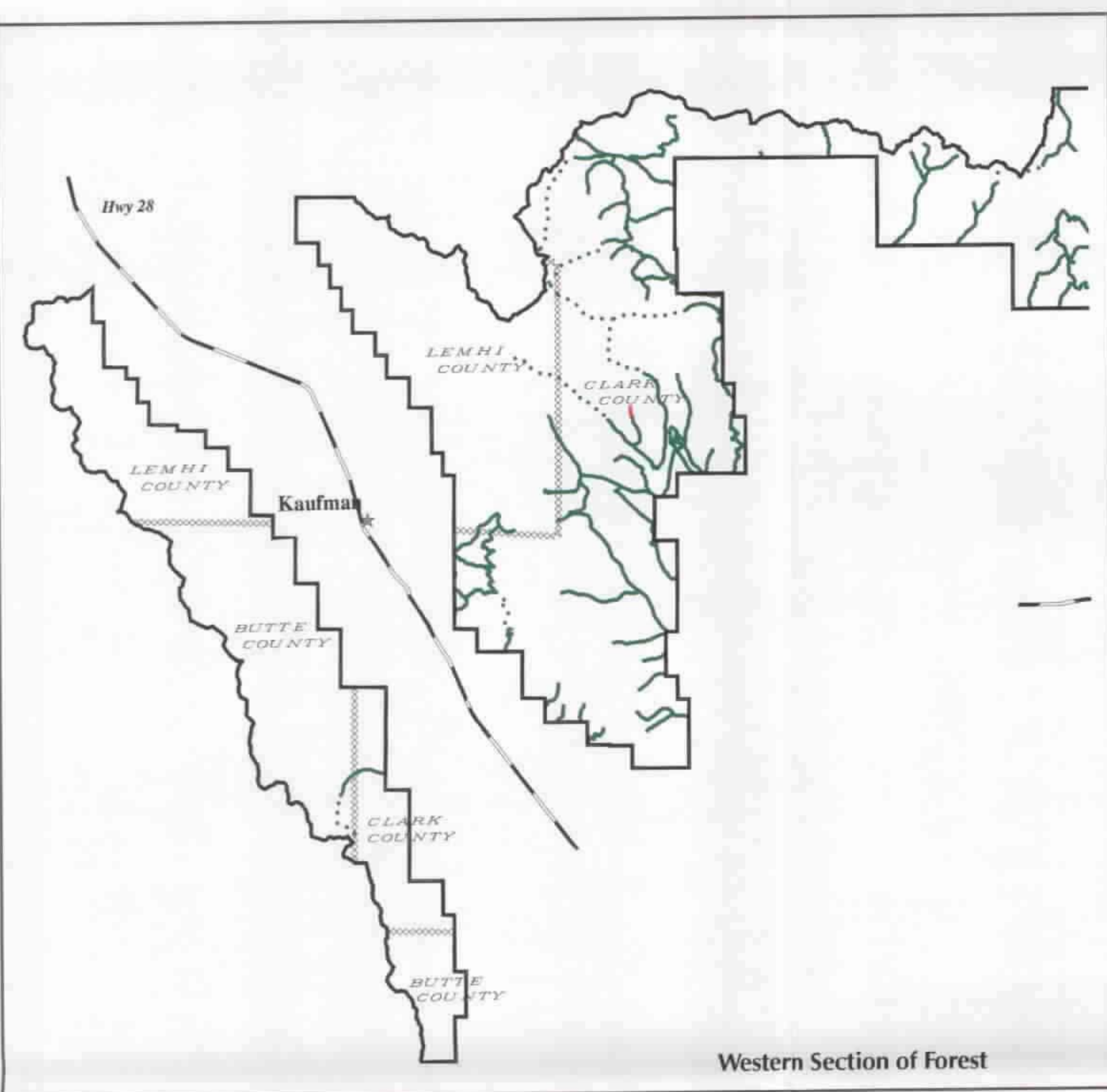
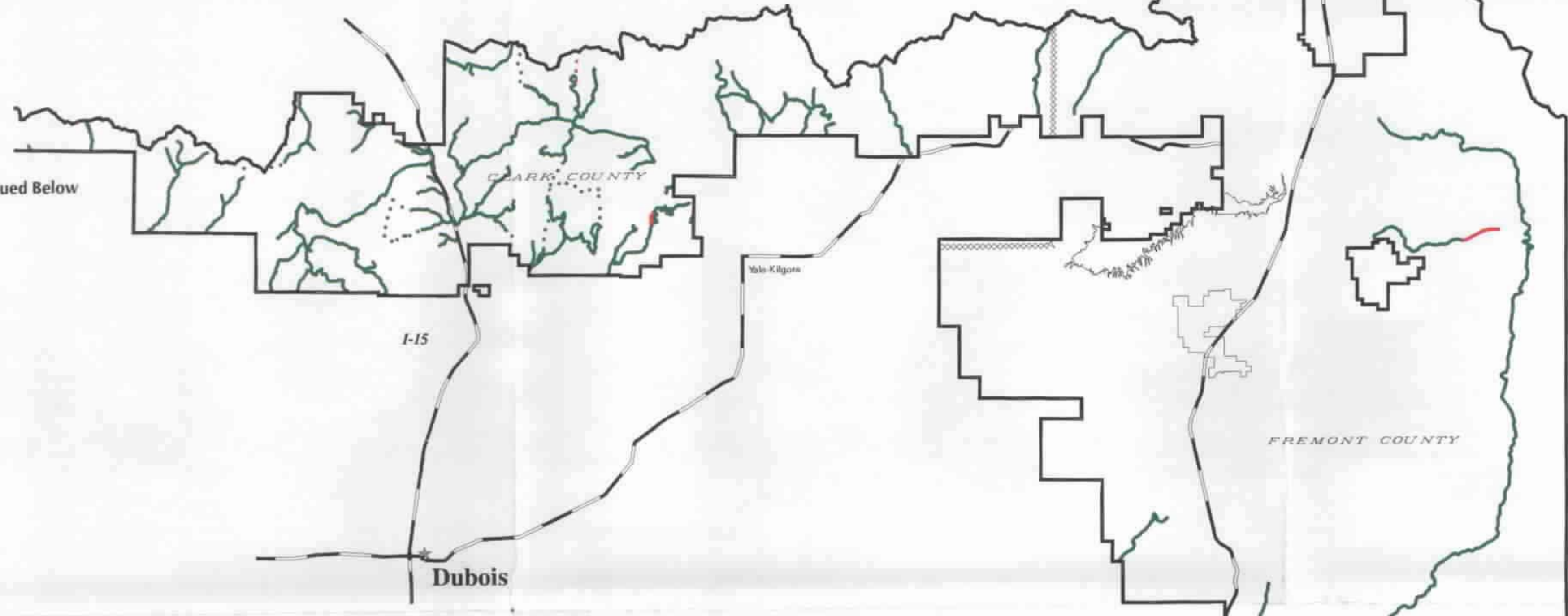
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RS 2477 Road and Trail Assertions by Area Counties

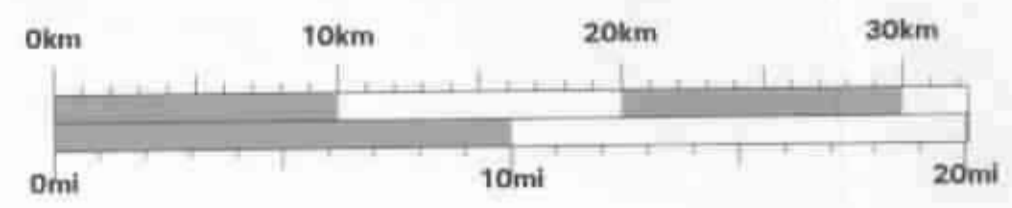
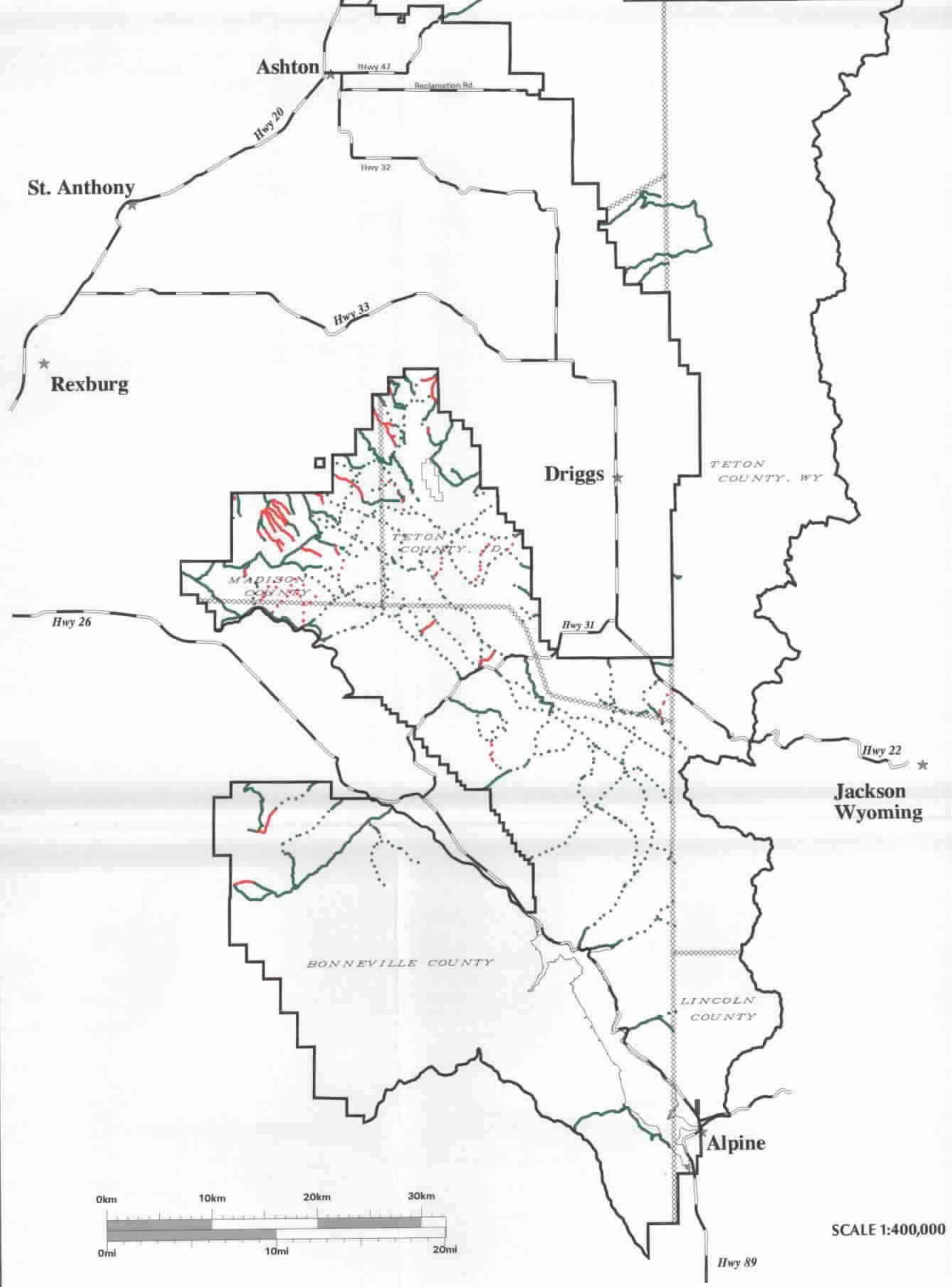


West Yellowstone
Montana

Continued Below



Western Section of Forest



SCALE 1:400,000

LEGEND

- Road Assertions Open In Alternative 3M+
- Trail Assertions Open In Alternative 3M+
- Road Assertions Not Open In Alternative 3M+
- Trail Assertions Not Open In Alternative 3M+
- County Lines



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Forest



Update of Appendix C Summer & Winter Access Final Environmental Impact Statement for the Forest Plan Revision



Update of Appendix C, Summer and Winter Access
August 1997

Final Environmental Impact Statement for the
Forest Plan Revision

Targhee National Forest

The District tables contained in Appendix C of the Final Environmental Impact Statement for the Forest Plan Revision have been updated as shown on the attached sheets.

Deletions are shown as strike-overs. Changes and additions are shown in bold. Most of the changes are the result of relabelling roads and trails to correspond with current designations. A large number of duplicate entries have been eliminated.

OPEN ROAD AND OPEN MOTORIZED TRAIL ROUTE (OROMTRD) DECISION CRITERIA TABLES

DEFINITIONS

Following are the definitions of the criteria used on the OROMTR Decision Criteria Tables:

- A. Core Access: Needed to access private property, adjoining State and Federal Parks or State Lands, and roads that access administrative sites, campgrounds and picnic areas, electronic sites, permitted communications sites, ski areas, boat ramps and special recreation sites such as Mesa Falls and Big Springs.
- B. First Priority: In some areas the application of management prescriptions and density standards resulted in this type of road/trail being the only facility designated "open" in the area.
- C. Eastside Ecosystem Management Project (EEMP) Guidelines: EEMP guidelines used to establish a rule set to insure consistency as each District prepared their access maps.
- D. Coordinated Access: Roads/trails that provide inter-District access.
- E. Maintenance of Wildlife Habitat: Road/trail selected causes less impact.
- F. Resource Damage: Road/trail selected caused less impact.
- G. Cost: Lower cost to maintain road/trail.
- H. District-specific criteria (if any).
- I. District-specific criteria (if any).

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Forest



Record of Decision for the Open Road and Open Motorized Trail Travel Plan



TARGHEE NATIONAL FOREST

OPEN ROAD AND OPEN MOTORIZED TRAIL TRAVEL PLAN

RECORD OF DECISION

Bonneville, Butte, Clark, Fremont, Jefferson, Lemhi, Madison
and Teton Counties, Idaho

Lincoln and Teton Counties, Wyoming

THE DECISION - AN OVERVIEW

This document presents my decision for the open motorized road and trail network for the Targhee National Forest. It explains why I have selected the Travel Plan Portion of Alternative 3M, as modified between the draft EIS and final EIS [displayed as Alternative 3M in the Final Environmental Impact Statement (final **EIS**) for the 1997 Revised Forest Plan].

The purpose and need of this Travel Plan is to offer a balanced range of motorized road and trail related recreation opportunities in the Forest that is consistent with the management prescriptions adopted in the Revised Forest Plan. These prescriptions include standards for the miles of open roads and motorized trails allowed per square mile. This Travel Plan shows which roads and trails will remain open to meet these road and trail density standards.

The Travel Plan in Alternative 3M, as modified from the Revised Forest Plan draft **EIS**, in response to site specific public comments, responds to the need for a reasonable network of motorized roads and trails that meet the open road and open motorized trail route density (OROMTRD) standards in the Revised Forest Plan. This decision provides for 1,577 miles of open motorized roads, 25 miles of seasonally restricted roads and 540 miles of open motorized trails. Prior to this decision 1,985 miles of roads were open, 73 miles of road were seasonally restricted and 773 miles of trail were open for motorized use. Therefore, there will be a reduction of approximately 408 open miles of road, 48 miles of seasonally restricted road, and 233 miles of open motorized trail from existing condition to meet the OROMTRD standards specified in the Revised Forest Plan. For more specifics, see Table IV-13 on page IV-45 in the final **EIS**.

Some signing of open motorized routes will begin this fall consistent with the Travel Plan maps.

We will also implement a monitoring and evaluation strategy to assess the effectiveness of this motorized travel plan. This monitoring item is a priority one for the Forest (See Revised Forest Plan, Chapter V for further details), which means it is mandatory.

In the process of preparing this Record of Decision and its accompanying Travel Maps we identified numerous instances in which Appendix C of the Final EIS could be clarified and updated. This decision is based on that corrected Appendix C.

BACKGROUND

One of the most controversial aspects of the Revised Forest Plan is the key issue of access and what level of motorized access is appropriate for the Targhee National Forest. The Revised Plan has numerous management prescriptions and included in most of these prescriptions is an access table that indicates the type of access (motorized or nonmotorized), cross country travel and road and trail travel that is allowed year round and seasonally, including an open road and open motorized trail route density for most prescriptions. This Record of Decision designates the roads and trails that will be open for motorized use to begin implementation of the Revised Forest Plan.

The final **EIS** for the Revised Forest Plan portrays both the cumulative effects and site specific considerations for the motorized road and trail network (See Appendix C of the final **EIS** for further information).

During the Revision of the Forest Plan, each motorized road and trail was carefully scrutinized by the Interdisciplinary Team (IDT) and field going personnel from the Ranger Districts. Resource concerns included elk security and elk habitat effectiveness, Threatened, Endangered and Sensitive species habitat, riparian areas, sensitive soils and steep slopes. The public was also involved in this analysis and disclosure which is summarized below.

PUBLIC INVOLVEMENT

Public involvement has been extensive throughout the planning and analysis process leading to this decision. Key public comment and participation was obtained on numerous occasions. I feel confident that all interested publics have had ample opportunities to participate and share their concerns regarding this Travel Plan. The following outlines the major steps in the public involvement effort.

* In October of 1994, meetings were held in Idaho Falls and Driggs to give the public an opportunity to identify which individual areas, roads and trails should be permanently open, permanently closed, obliterated or seasonally restricted.

* Open houses were held in June 1995 in Idaho Falls, Ashton, and Rexburg at the Henry's Fork Watershed Council meeting to present the proposed action, (Alternative 3M in the draft **EIS** for the Revised Forest Plan) to interested people, gather information and exchange ideas.

The **DEIS** was available for a 90-day comment period from February 1996 to June 1996. The Travel Plan was displayed on maps 11 and 12. other alternatives in the Draft **EIS** displayed different Travel Plans to meet the road and trail density standards for those alternatives (various maps 2-20).

During the comment period, numerous public information meetings were held throughout the local area. Detailed travel maps were on display for Alternative **3M** and participants were asked at each meeting to provide input as to why individual roads and trails should be open or closed.

Substantive access comments and the responses are listed in Appendix A of the final **EIS** for the Revised Forest Plan (Pgs. **I-1** through **1-84**).

Public involvement and discussions continue. We listened to all points of view and incorporated many suggestions. I am confident the staff listened, and that public involvement in this process has strengthened this decision.

PLANNING RECORDS

With the above collaboration with the public, other agencies and expertise from many Forest Service employees, an IDT completed the environmental analyses as summarized in the Final **EIS** (Chapter IV) & the updated Appendix **C**. The Team has provided detailed explanations of the analysis and results of the planning process in planning records. Detailed planning records can be reviewed at:

Forest Supervisor's Office
Targhee National Forest
420 N. Bridge Street
St. Anthony, Idaho 83445

ALTERNATIVES CONSIDERED

Based on available data, public involvement, and Final **EIS** Appendix **C** (as updated), three reasonable alternatives that address varying Travel Plans were considered. The three Alternatives analyzed in detail are briefly described below. For a more complete discussion of alternative development see the final **EIS**, Appendix **C**.

Alternative 1 "NoAction" - This alternative would leave the 1996 Travel Plan in place. This alternative was displayed on travel maps for Alternative 1 in the draft EIS and final EIS (maps 2 and 3). Approximately 1,985 miles of road, 73 miles of seasonally restricted road, and 773 miles of motorized trail would remain open, as are currently available. No additional road closures would be implemented at this time.

Alternative 3M (draft EIS) - The alternative is the travel plan for Alternative 3M, as displayed in the draft EIS for the Revised Forest Plan (maps 2 and 3). It was also the proposed action. This alternative had 1,560 miles of open road, 120 miles of seasonally restricted road, and 438 miles of open motorized trail.

The selected alternative, Alternative 3M (final EIS), as modified between draft and final EIS - approximates the travel plan that was displayed in the final EIS for the Revised Forest Plan (maps 11 and 12). As displayed in the final EIS, this alternative had 1,577 miles of roads, 25 miles of seasonally restricted road, and 540 miles of motorized trails open for use.

OTHER ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY

The draft EIS and final EIS also displayed open motorized road and trail travel plans for five other alternatives considered (2,3,4-6). Neither of these alternatives were selected by the Regional Forester to be the Revised Forest Plan and therefore were eliminated from detailed study in this travel plan analysis because they did not meet the densities decided upon in the Revised Forest Plan.

THE DECISION

My decision is to adopt the road and trail network as shown in Alternative 3M which was modified after reviewing site specific public comments made on the draft EIS for the Revised Plan (see attached map).

The system, as mapped, will offer a variety of motorized and nonmotorized use across the Forest in an environmentally acceptable way. The map clearly describes where people may go to either enjoy or avoid motorized activities.

The following illustrates the miles of roads and trails which will be open for motorized use by Ranger District:

	Miles of Road Open For Motorized use	Miles of Seasonally Restricted Roads	Miles of open Trail
Dubois District	359	11	98
Island Park	423	4	24
Ashton	356	0	18
Palisades	287	7	258
Teton Basin	152	3	142
TOTAL	1,577	25	540

MONITORING COSTS AND IMPLEMENTATION OF ROAD AND TRAIL CLOSURES

This project includes the commitment of the Forest to implement all the road and trail closures and to monitor the effectiveness of the closures as described in the Monitoring Plan for the Revised Forest Plan.

RATIONALE FOR THE DECISION

Alternative 3M, as detailed in the accompanying Travel Maps and updated final EIS Appendix C, is the result of the alternative development and public involvement stages of the Forest Plan Revision process. Important considerations to protect the environment that have influenced my decision include:

Protection of the basic resources (air, soil, and water), as mandated by our agency's mission, vision and guiding principles, are provided for with the Travel Plan.

The local and national people who use the Targhee National Forest, the communities they live in, and the relationship of the Forest Service with people and local communities.

Compared to the other alternatives, Alternative 3M, as modified, will implement the open motorized road and trail density standards for the Forest. Reasonable access to the Forest is provided on a system of designated routes.

This decision is one that involved a balancing of compelling resource concerns and competing public interests with timely, responsible ecosystem recovery. I have reached my decision after careful consideration of the environmental analysis of the effects of the three alternatives, public comments received between draft and final EIS and associated planning records.

I selected the Travel Plan for Alternative 3M, as modified, because it best meets the most important objectives of the Regional Forester's decision in selecting Alternative 3M as the Revised Forest Plan: management of the Forest for sustainability of all components of the ecosystem, maintaining or improving habitat for all wildlife species, especially elk and grizzly bear, maintaining or improving riparian conditions, protecting long-term soil productivity and providing an array of recreational opportunities. Other important considerations were: roadless area resources, fish habitat, and elk and deer winter range.

FINDINGS REQUIRED BY OTHER LAWS

As the Forest Supervisor (Deciding Officer), I have considered the multitude of statutes governing management of the Targhee National Forest, and I believe that this decision represents the best possible approach relative to harmonizing and reconciling the current statutory duties of the Forest Service related to Travel Management.

This decision complies with the 1997 Revised Forest Plan for the Targhee National Forest. The open motorized road and trail network, as proposed in Alternative 3M, as modified, meets the open motorized road and trail route density standards for all prescription areas for the Forest.

This decision complies with the Clean Water Act, the National Historic Preservation Act, the Endangered Species Act, and the Clean Air Standards Act as shown by the conclusions presented in Chapter IV of the Final EIS for the Revised Forest Plan and Appendix C of the Final EIS.

This Travel Plan complies with the Endangered Species Act and the US Fish and Wildlife Service Biological Opinion as shown in the conclusions presented in Chapter IV, Wildlife section of the Final EIS.

THE ENVIRONMENTALLY PREFERRED ALTERNATIVE

I am identifying the selected Alternative 3M, as modified, as environmentally preferable based on the following interpretation of the law and agency policy.

Regulations implementing the National Environmental Policy Act (NEPA) require agencies to specify the alternative or alternatives which were considered to be environmentally preferable (40 CFR 1505.2(b)). Forest Service policy further defines environmentally preferable as an alternative

that best meets the goals of section 101 of NEPA. Ordinarily this is the alternative that causes the least damage to the biological and physical environment and best protects, preserves, and enhances historical, cultural, and natural resources. In some cases there may be more than one environmentally preferable alternative (FSH 1909.15-05).

Section 101 of NEPA declares national environmental policy, calling on federal, state, and local governments and the public to create and maintain conditions under which humans and nature can exist in productive harmony. This broad policy is further defined in six goals:

- (1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
- (2) assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
- (3) attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
- (4) preserve important historic, cultural, and natural aspects of our national heritage and maintain wherever possible an environment which supports diversity and variety of individual choice;
- (5) achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and
- (6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

The goals of Section 101 are similar to the principles of ecosystem management and of the Revised Forest Plan, calling for sustainable and balanced use, and provision for future generations. Section 101 does not call for the exclusion of Americans from use of their natural resources, but does demand that such uses avoid degradation of the environment. Alternative 3M, as modified best meets the goals of Section 101 of NEPA. By this standard, the selected Alternative 3M, as modified is the environmentally preferable alternative for this Travel Plan.

MITIGATION AND MONITORING

All practicable means to avoid or minimize environmental harm from the proposed designation of open motorized roads and trails in Selected Alternative 3M, as modified, have been adopted. Monitoring the effectiveness of road closures in priority one (per Chapter V, Revised Forest Plan) and will check the effectiveness of the closures and achievement of Total Motorized Access Route Density and open Road and Open Motorized Trail Route Density (further information can be found on pages V-39 through V-41 of the Revised Forest Plan).


APPEAL AND IMPLEMENTATION

This decision is subject to administrative review pursuant to 36 CFR 215. Any appeal of this decision must be fully consistent with 36 CFR 215.14, Content of Notice of Appeal, including the reasons for appeal and must be filed with:

Appeal Reviewing Officer
USDA-Forest Service
324 25th Street
Ogden, Utah

Any appeal must be postmarked within **45** days from the date the legal notice of this decision is published in the Idaho Falls Post Register.

If no appeal is filed, implementation may occur on, but not before, **5** business days from the close of the appeal filing period. If an appeal is filed, implementation may not occur for 15 days following the date of appeal disposition.


JERRY B. REESE
Forest Supervisor

AUG 15 1997
Date: _____

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