UNITED STATES
DEPARTMENT OF
AGRICULTURE

FOREST SERVICE

APRIL 2006

FOREST PLAN AMENDMENT FOR GRIZZLY BEAR HABITAT CONSERVATION FOR THE GREATER YELLOWSTONE AREA NATIONAL FORESTS

RECORD OF DECISION

BEAVERHEAD-DEERLODGE NATIONAL FOREST
BRIDGER-TETON NATIONAL FOREST
CARIBOU-TARGHEE NATIONAL FOREST
CUSTER NATIONAL FOREST
GALLATIN NATIONAL FOREST
SHOSHONE NATIONAL FOREST

COUNTIES IN IDAHO
BEAR LAKE, BONNEVILLE, CARIBOU, CLARK, FRANKLIN, FREMONT, MADISON, AND TETON
COUNTIES IN MONTANA
BEAVERHEAD, CARBON, GALLATIN, MADISON, PARK, STILLWATER, AND SWEET GRASS
COUNTIES IN WYOMING
FREMONT, HOT SPRINGS, LINCOLN, PARK, SUBLETTE, AND TETON

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Abstract: The Forest Service is amending six forest plans on six Greater Yellowstone Area national forests (Beaverhead-Deerlodge, Bridger-Teton, Caribou-Targhee, Custer, Gallatin, and Shoshone National Forests) to incorporate the habitat standards and other relevant provisions in the Final Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Area. Amended forest plans are the 1986 Beaverhead Forest Plan, the 1990 Bridger-Teton National Forest Land and Resource Management Plan, the 1997 Revised Forest Plan—Targhee National Forest, the 1987 Custer National Forest and Grasslands Land and Resource Management Plan, the 1987 Gallatin National Forest Plan, and the 1986 Shoshone National Forest Land and Resource Management Plan. The purpose and need for the amendments is to ensure conservation of habitat to sustain the recovered grizzly bear population, update the management and monitoring of grizzly bear habitat, provide consistency among Greater Yellowstone Area national forests in managing grizzly bear habitat, and ensure the adequacy of regulatory mechanisms for grizzly bear habitat protection upon delisting as identified in the Grizzly Bear Recovery Plan. This Record of Decision presents the three principal reasons the responsible officials selected Alternative 2-Modified described in the Forest Plan Amendment for Grizzly Bear Habitat Conservation for the Six Greater Yellowstone Area National Forests Final Environmental Impact Statement. Additionally, this decision document describes the public involvement process and issues and other alternatives considered; it explains legally required findings and administrative review procedures. The amendment to the six forest plans is contained in the appendix.

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Preface

This Record of Decision describes our decision to approve Alternative 2-Modified from the Forest Plan Amendment for Grizzly Bear Habitat Conservation for the Greater Yellowstone Area National Forests Final Environmental Impact Statement.

This Record of Decision has two purposes. First, it is a legal document detailing a formal decision from a government agency. Second, it explains why the decision was made.

We want to thank all of the 55,000+ people that provided comments during the development of this amendment. Your comments helped guide the development of the amendment's components. When implemented, this amendment and the supporting documents will shape the management of grizzly bear habitat for many years.

Our decision strikes a balance that sustains a recovered grizzly bear population in the Greater Yellowstone Area while retaining public enjoyment and economic uses of these public lands.

While the management direction in this amendment provides a firm foundation for grizzly bear habitat management, we recognize that habitat management is dynamic and new information is constantly being developed. The selected alternative embraces an adaptive management approach—as conditions change, so will management direction. Any necessary changes, based on monitoring and evaluation, will involve public collaboration.

Again, thank you for your interest in grizzly bear habitat conservation and in the management of your national forests.

Sincerely,

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Lawrence A. Timchak, Forest Supervisor, Caribou-Targhee National Forest

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Part 1 Introduction

1.1 About this document

This Record of Decision is organized into eight parts.

- *Part 1—Introduction.* This part includes information about the Greater Yellowstone Area, a summary of the history of grizzly bear conservation in the Greater Yellowstone Area, and describes the purpose and need for action.
- *Part 2—Decision.* The decision and a summary of direction in the selected alternative are presented in part 2.
- *Part 3—Reasons for the Decision.* In this part, the three principal reasons for the decision are described.
- *Part 4—Implementation.* Part 4 includes information about the implementation of the amendment and the delisting process.
- *Part 5—Public Involvement and Issues.* The public involvement process, a summary of public comment, a description of government consultation, and the issues are included in part 5.
- *Part 6—Alternatives Considered.* This part describes the alternatives considered in the Forest Plan Amendment for Grizzly Bear Habitat Conservation for the Greater Yellowstone Area National Forests Final Environmental Impact Statement.
- *Part 7—Legally Required Findings.* Part 7 lists the laws and regulations that were considered during the process.
- *Part 8—Administrative Review.* Administrative review procedures are described in part 8.

The Forest Plan Amendment for Grizzly Bear Habitat Conservation for the Greater Yellowstone Area National Forests, baseline values and other relevant data, and a list of criteria and definitions used in the amendment are included in the appendix.

1.2 Setting

Since the 1960s, the Greater Yellowstone Area has been acknowledged as an ecosystem that extends beyond the core of Yellowstone National Park. The Greater Yellowstone Area is approximately 18 million acres of public and private lands. Public lands comprise about 76 percent, or 13.6 million acres, of the Greater Yellowstone Area, including six national forests, two national parks, two national wildlife refuges, Bureau of Land Management and Bureau of Reclamation lands, and state and tribal lands. The Greater Yellowstone Area is in the states of Idaho, Montana, and Wyoming.

Public lands are concentrated around the Yellowstone Plateau. Geographically, the Greater Yellowstone Area includes the headwaters of the Missouri-Mississippi, Snake-Columbia, and Green-Colorado River systems and 14 surrounding mountain ranges.

Grizzly bear conservation in the Greater Yellowstone Area

In 1975, the U.S. Fish and Wildlife Service listed the grizzly bear as a threatened species in the lower 48 states, placing the species under federal protection under the Endangered Species Act of 1973, as amended[1].

Since listing, government agencies have worked to improve habitat conditions, minimize grizzly bear/human conflicts and grizzly bear mortality, and increase public awareness and appreciation for the grizzly bear in the Greater Yellowstone Area. In 1975, land management agencies in the Greater Yellowstone Area initiated an effort to develop consistent management direction for grizzly bears. In 1983, the Interagency Grizzly Bear Committee was formed to coordinate management and research actions more effectively for recovery of grizzly bears in different ecosystems, and the Yellowstone

[1] In this Record of Decision, all references to the Endangered Species Act of 1973 are to the Endangered Species Act of 1973, as amended.

Ecosystem Subcommittee was created to coordinate management of the Yellowstone grizzly bear habitat and population. The 1982 and 1993 Grizzly Bear Recovery Plans (Recovery Plan) were developed to identify actions necessary for the conservation and recovery of the grizzly bear. The Recovery Plan[2] defined a recovered grizzly bear population as one that could sustain a defined level of mortality and that is well distributed throughout the recovery zone.

In 2003, the Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Area (Conservation Strategy) was developed to be the document guiding management and monitoring of the Yellowstone grizzly bear population and its habitat upon recovery and delisting. The Conservation Strategy describes the Primary Conservation Area for grizzly bears, which is the same area as the recovery zone identified in the Recovery Plan. The Primary Conservation Area for the grizzly bear in the Greater Yellowstone Area is approximately 5,893,000 acres in size and includes portions of the six national forests, two national parks, and other intermingled lands (Figure 1).

The states of Idaho, Montana, and Wyoming developed state grizzly bear management plans that were incorporated as integral parts of the Conservation Strategy. These state grizzly bear management plans recommend and encourage land management agencies to maintain or improve habitats that are important to grizzly bears in areas biologically suitable and socially acceptable for grizzly bears and to monitor habitat conditions in those areas.

Decades of interagency management efforts resulted in the grizzly bear population's increasing from an estimated 200 bears to current estimates of 500 to 600 bears. The U.S. Fish and Wildlife Service reviewed the status of the Yellowstone grizzly bear population under the Endangered Species Act and the Proposed Rule to delist the Yellowstone grizzly bear population has been published in the Federal Register. The Status Review determined adequate regulatory mechanisms are in place to delist the grizzly bear if the habitat standards in the Conservation Strategy are incorporated into the National Park Service's Superintendent's Compendium for each affected national park and if current forest plans for each of the six Greater Yellowstone Area national forests are amended before the Rule is finalized.

1.3 The purpose and need for action

The management of grizzly bear habitat on national forests in the Greater Yellowstone Area is a dynamic process. Experience provides the public and land managers with understanding and insights regarding the conservation of grizzly bear habitat. Scientific research continues to bring forth new theories, observations, and findings relevant to the management of these resources. This learning is continuous. Most importantly, the Yellowstone grizzly bear population has increased over the past 25 years to the point where all established[3] demographic recovery targets have been met or exceeded since 1998 and the Yellowstone grizzly bear population is in the process of being delisted.

The purpose of these amendments is to:

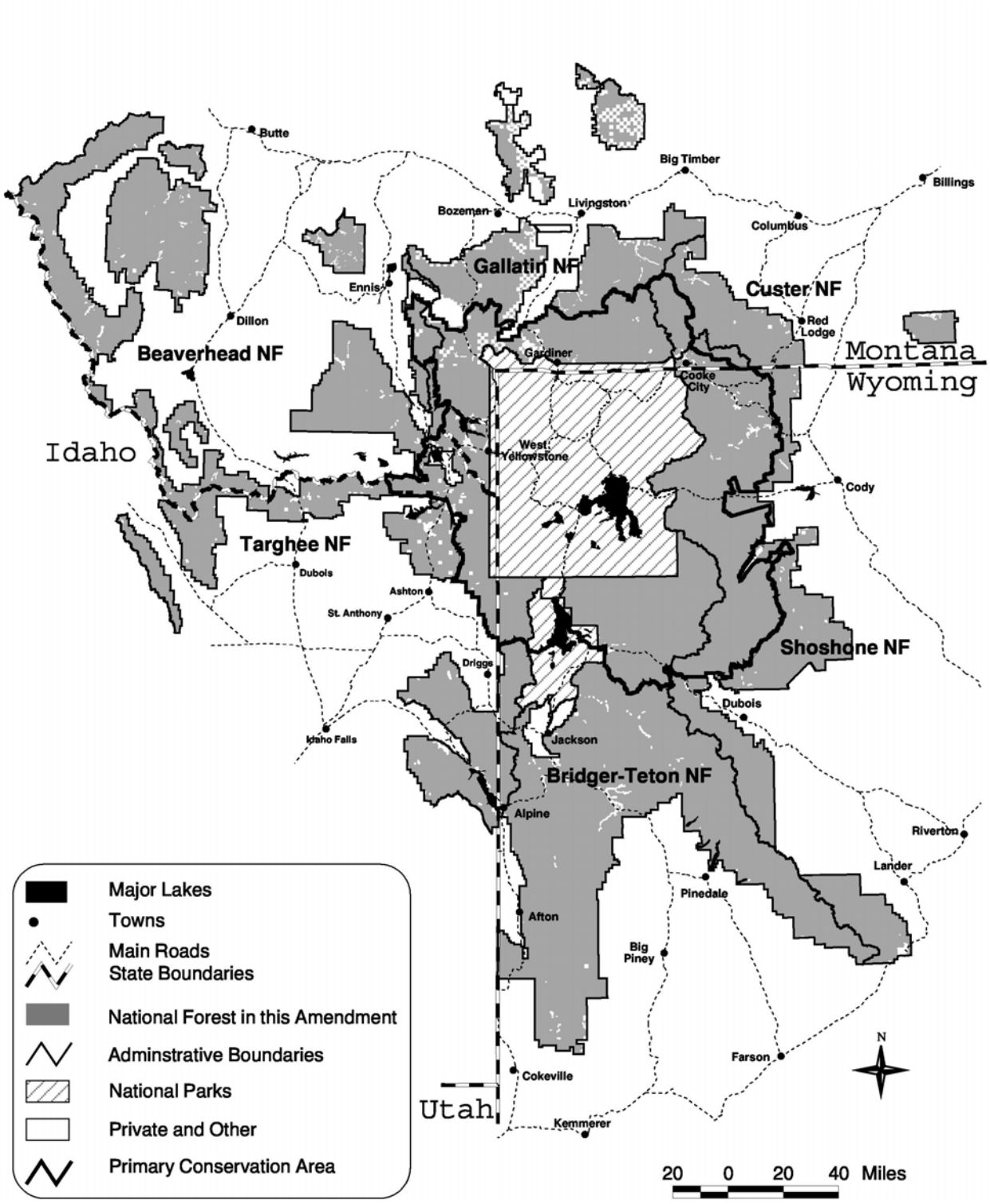
- Ensure conservation of habitat to sustain the recovered Yellowstone grizzly bear population
- Update the management and monitoring of grizzly bear habitat to incorporate recent interagency recommendations and agreements, as described in the Conservation Strategy
- Improve consistency among Greater Yellowstone Area national forests in managing grizzly bear habitat
- Ensure the adequacy of regulatory mechanisms for grizzly bear habitat protection upon delisting as identified in the Recovery Plan

[2] The 1993 Recovery Plan is a revised and updated version of the original Recovery Plan, published in 1982. Throughout this document, any reference to the Recovery Plan is to the 1993 version, unless otherwise stated.

[3] The Yellowstone Ecosystem Subcommittee has approved new analysis protocols, developed by the Interagency Grizzly Bear Study Team, for estimating total population and mortality limits from all causes (IGBST 2005). This new method is a more comprehensive mortality management approach and is derived from a more accurate model for establishing sustainable mortality limits for grizzly bear populations. The U.S. Fish and Wildlife Service will incorporate this new methodology into the Grizzly Bear Recovery Plan and append this to the Conservation Strategy before making its final determination on the Rule to delist the grizzly bear.

The six national forests included in this proposal are the Beaverhead-Deerlodge, Bridger-Teton, Caribou-Targhee, Custer (Beartooth Ranger District), Gallatin, and Shoshone National Forests with a total area of about 13 million acres within proclaimed boundaries (Figure 1).

Figure 1. The six Greater Yellowstone Area national forests and the Primary Conservation Area boundary.



Part 2 Decision

2.1 Introduction

The foundation for our decision is the analysis of alternatives documented in the Forest Plan Amendment for Grizzly Bear Habitat Conservation for the Greater Yellowstone Area National Forests Final Environmental Impact Statement and public comment during scoping and on the Draft Environmental Impact Statement. Our decision incorporates by reference the analysis of effects and management direction disclosed in the Final Environmental Impact Statement and the planning record in its entirety. All references and citations used in this Record of Decision are fully described in the Final Environmental Impact Statement.

Our decision applies only to National Forest System lands in the six Greater Yellowstone Area national forests. It does not apply to any other federal, state, or private lands, although the effects of our decision on those lands were considered. The geographic area of interest for the selected alternative is National Forest System lands inside and outside the Primary Conservation Area (Figure 1).

The forest plan amendment for grizzly bear habitat conservation establishes the framework for future decision making by outlining direction for sustaining a recovered grizzly bear population. The selected alternative is programmatic in nature and guides implementation of site-specific projects that tier to forest plans. Additional National Environmental Policy Act compliance is required for site-specific projects.

Reconsideration of other goals, objectives, land allocations, and other direction in a forest plan are not part of the selected alternative, but may be addressed when forest plans are revised. We find this amendment is not significant under the National Forest Management Act regulations as described in part 7.

2.2 The decision

We have selected Alternative 2-Modified to amend the six national forest plans. By selecting Alternative 2-Modified, we are approving management direction that maintains the integrity of grizzly bear habitat in the Greater Yellowstone Area, establishes consistent management direction, and sustains a recovered Yellowstone grizzly bear population.

Our decision strikes a balance between competing demands expressed by many people: a sustainable, recovered grizzly bear population in the Greater Yellowstone Area balanced with public enjoyment and economic reliance on these public lands. In making our decision, we used the best available science in conjunction with public comments. In addition to the habitat standards in the Conservation Strategy, our decision adds guidance to provide assurances that many grizzly bear habitat management efforts that have been ongoing will continue. These additions include guidance inside and outside the Primary Conservation Area for food storage regulations, information and education, grizzly bear/human and grizzly bear/livestock conflict management, monitoring of secure habitat outside the Primary Conservation Area, and maintenance of key grizzly bear food sources.

This decision incorporates adaptive management and monitoring and continued active government coordination through the agreement in the Conservation Strategy. This adaptive strategy offers an avenue to describe and evaluate the consequences of changing conditions and new knowledge. Monitoring and additional analyses will be used to shape future management actions within the framework of the amended forest plans.

We selected Alternative 2-Modified because it conserves grizzly bear habitat, acknowledges the social and economic values of local communities, and allows us to work with others to monitor and adapt management. Further, it meets the purpose and need and responds to the issues. For further discussion on

these issues, see part 5. Alternative 2-Modified is summarized in Figure 2 and described in detail in the appendix[4].

Figure 2. The direction and guidance in Alternative 2-Modified. Wording in italics was added to the proposed action between the Draft and Final Environmental Impact Statements to create Alternative 2-Modified in response to public comment

Goals, Standards, Guidelines, and Monitoring Items
Goal Manage grizzly bear habitat within the Primary Conservation Area to sustain the recovered Yellowstone grizzly bear population. *Outside the Primary Conservation Area in areas identified in state management plans as biologically suitable and socially acceptable for grizzly bear occupancy, accommodate grizzly bear populations to the extent that accommodation is compatible with the goals and objectives of other uses.*
Standard 1—Secure Habitat Inside the Primary Conservation Area, maintain the percent of secure habitat in Bear Management Unit subunits at or above 1998 levels. Projects that change secure habitat must follow the Application Rules.
Standard 2—Developed Sites Inside the Primary Conservation Area, maintain the number and capacity of developed sites at or below 1998 levels, with the following exceptions: any proposed increase, expansion, or change of use of developed sites from the 1998 baseline in the Primary Conservation Area is analyzed and potential detrimental and positive impacts on grizzly bears are documented through a biological evaluation or assessment. Projects that change the number or capacity of developed sites must follow the Application Rules.
Standard 3—Livestock Grazing Inside the Primary Conservation Area, do not create new active commercial livestock grazing allotments, do not increase permitted sheep animal months from the identified 1998 baseline, and phase out existing sheep allotments as opportunities arise with willing permittees.
Standard 4 *Standard 4 was dropped from Alternative 2-Modified. The intent of Standard 4—to no longer manage by Management Situation areas or use the Interagency Grizzly Bear Guidelines—is stated in this Record of Decision.*
Standard 5—Nuisance Bears Coordinate with state wildlife management agencies to apply Conservation Strategy nuisance bear standards.
Standard 6—Food Storage *Inside the Primary Conservation Area, minimize grizzly bear/human conflicts using food storage, information and education, and other management tools.*
Guideline 1—Winter Motorized Access Inside the Primary Conservation Area, use localized area restrictions to address conflicts with winter use activities, where conflicts occur during denning or after bear emergence in the spring.

[4] Standards and guidelines are numbered here and in the Final Environmental Impact Statement. Numbers were dropped in the appendix describing final direction for grizzly bear management.

Goals, Standards, Guidelines, and Monitoring Items
Guideline 2—Livestock Grazing *Inside the Primary Conservation Area, cattle allotments or portions of cattle allotments with recurring conflicts that cannot be resolved through modification of grazing practices may be retired as opportunities arise with willing permittees. Outside the Primary Conservation Area in areas identified in state management plans as biologically suitable and socially acceptable for grizzly bear occupancy, livestock allotments or portions of allotments with recurring conflicts that cannot be resolved through modification of grazing practices may be retired as opportunities arise with willing permittees.*
Guideline 3—Food Storage *Outside the Primary Conservation Area in areas identified in state management plans as biologically suitable and socially acceptable for grizzly bear occupancy, emphasize proper sanitation techniques, including food storage orders, and information and education, while working with local governments and other agencies.*
Guideline 4—Food Sources *Inside and outside the Primary Conservation Area in areas identified in state management plans as biologically suitable and socially acceptable for grizzly bear occupancy, maintain the productivity, to the extent feasible, of the four key grizzly bear food sources as identified in the Conservation Strategy. Emphasize maintaining and restoring whitebark pine stands inside and outside the Primary Conservation Area.*
Monitoring Item 1—Secure Habitat and Motorized Access Inside the Primary Conservation Area, monitor, compare to the 1998 baseline, and annually submit for inclusion in the Interagency Grizzly Bear Study Team Annual Report: secure habitat, open motorized access route density greater than one mile per square mile, and total motorized access route density greater than two miles per square mile in each Bear Management Unit subunit on the national forest. *Outside the Primary Conservation Area in areas identified in state management plans as biologically suitable and socially acceptable for grizzly bear occupancy, monitor, and submit for inclusion in the Interagency Grizzly Bear Study Team Annual Report: changes in secure habitat by national forest every two years.*
Monitoring Item 2—Developed Sites Inside the Primary Conservation Area, monitor, and annually submit for inclusion in the Interagency Grizzly Bear Study Team Annual Report: changes in the number and capacity of developed sites on the national forest, and compare with the 1998 baseline.
Monitoring Item 3—Livestock Grazing Inside the Primary Conservation Area, monitor, compare to the 1998 baseline, and annually submit for inclusion in the Interagency Grizzly Bear Study Team Annual Report: the number of commercial livestock grazing allotments on the national forest and the number of permitted domestic sheep animal months. *Inside and outside the Primary Conservation Area, monitor and evaluate allotments for recurring conflicts with grizzly bears.*
Monitoring Item 4—Habitat Effectiveness Inside the Primary Conservation Area, monitor, and *every five years* submit for inclusion in the Interagency Grizzly Bear Study Team Annual Report: changes in seasonal habitat effectiveness in each Bear Management Unit and subunit on the national forest through the application of the Cumulative Effects Model or the best available system and compare outputs to the 1998 baseline. Annually review Cumulative Effects Model databases and update as needed. When funding is available, monitor representative non-motorized trails or access points where risk of grizzly bear mortality is highest.

Goals, Standards, Guidelines, and Monitoring Items
Monitoring Item 5—Whitebark Pine *Monitor whitebark pine occurrence, productivity, and health inside and outside the Primary Conservation Area in cooperation with other agencies. Annually submit for inclusion in the Interagency Grizzly Bear Study Team Annual Report: results of whitebark pine cone production from transects or other appropriate methods, and results of other whitebark pine monitoring.*

2.3 Decision authority

The authority for this decision, under 36 CFR 219.10(f), belongs to the forest supervisors of the six Greater Yellowstone Area national forests.

Part 3 Principal reasons for the decision

Our decision to select Alternative 2-Modified for implementation is based on the three principal reasons.

1. Habitat is conserved to sustain the recovered Yellowstone grizzly bear population

2. Local communities and social and economic values are acknowledged and public safety is emphasized

3. Federal, state, local, and tribal governments work together to monitor and adapt to changing conditions and new science

The reasons for our decision are described in the following sections.

3.1 Principal reason 1 - habitat is conserved to sustain the recovered Yellowstone grizzly bear population

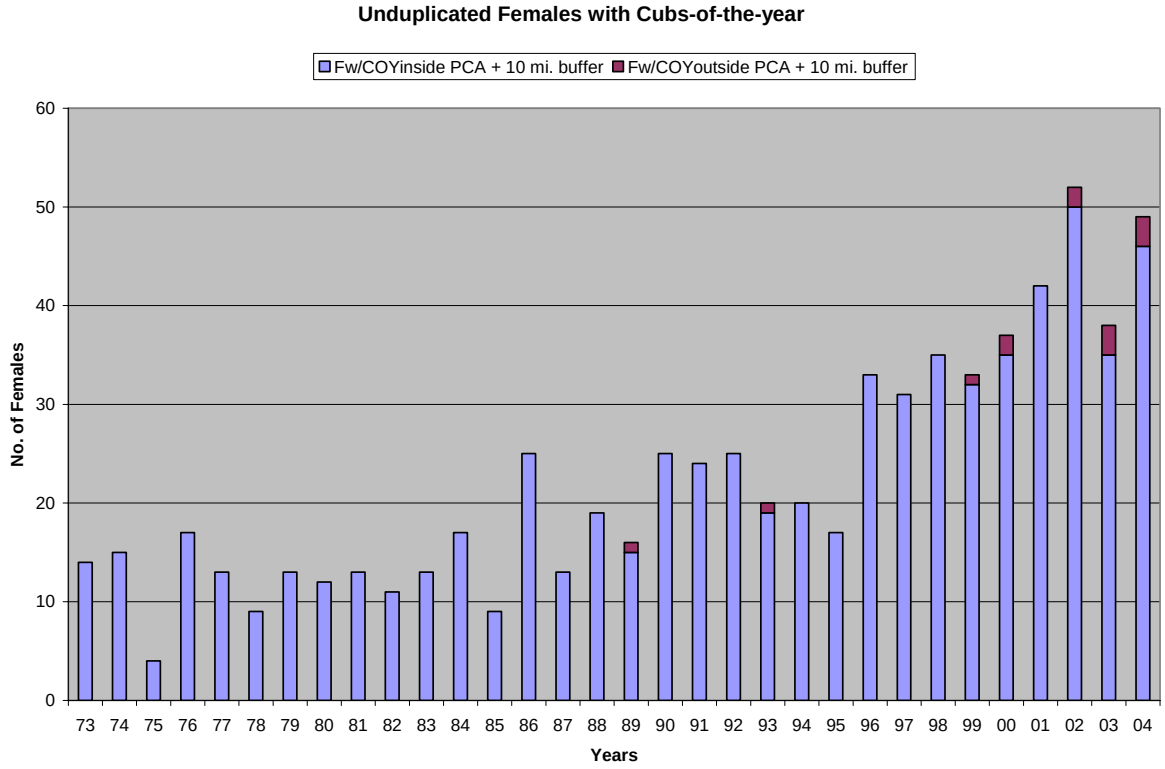
Habitat loss and uncontrolled human-caused mortality have been the primary reasons for the elimination of bears from much of their former range. How and where bears use existing habitat is primarily a function of seasonally available foods moderated or precluded by the presence of humans. The majority of grizzly bear mortality is attributable to grizzly bear/human conflicts with a common outcome of bear mortality by either interagency bear managers or by other humans. In addition to mortality concerns, it is important to provide secure habitat (areas free of motorized access) so bears are able to fully utilize the available resources. Human presence can limit bear use of habitat, create tolerance among some bears that allows for interaction at great risk to both humans and bears, or attract bears to unnatural or unsecured food sources. This increases the risks of habituation to unnatural foods and human conflict. Maintenance of adequate habitat and associated important foods, along with management of human activities within the habitat, are key for the long-term sustainability of grizzly bear populations.

Maintaining habitat to ensure the recovery of the Yellowstone grizzly bear population has been a cooperative goal of the national forests, national parks, state wildlife management agencies, and the U.S. Fish and Wildlife Service in the Greater Yellowstone Area since the listing of the grizzly bear as a threatened species in 1975. Habitat management efforts on National Forest System lands, including seasonal and permanent motorized access restrictions, closure of many sheep allotments, provisions in livestock grazing and special use permits, food storage orders, installation of bear resistant facilities, information and education materials and programs, and the development of coordinated direction for management of forest resources have been instrumental in the recovery of this bear population.

Current information indicates this population of grizzly bears is growing at approximately 4 to 7 percent or more annually. The grizzly bear has increased its distribution in the Greater Yellowstone Area by almost 50 percent since the 1970s; expansion is expected to continue. All of the current information (i.e., number of unduplicated females, distribution of reproducing females, distribution of bears, informal sightings by agency personnel, and areas where nuisance bears are being managed) indicates this population has increased in both the number of bears and the geographic area they occupy. Figure 3 and Figure 4 display the increase in number and distribution of one of the most important factors of the

grizzly bear population: females with cubs-of-the-year. Existing habitat conditions—basically unchanged since 1998—have allowed for a recovered grizzly bear population that is increasing, expanding, and exceeding established demographic recovery targets. Consequently, maintaining habitat quality and quantity at current conditions is sufficient to support the recovered population of grizzly bears.

Figure 3. Unduplicated females with cubs-of-the-year in the Greater Yellowstone Area (Haroldson 2005).



Alternative 2-Modified is tied closely to interagency agreements for habitat direction and cooperative and adaptive management reached in the Conservation Strategy. In response to public comment, Alternative 2-Modified also includes guidance to continue key ongoing Forest Service actions that have been instrumental in minimizing grizzly bear/human conflicts and promoting grizzly bear recovery. We have also formalized our commitment to maintaining the productivity, to the extent feasible, of the four key grizzly bear foods and monitoring other key habitat components.

The following are key elements of grizzly bear habitat and are addressed in terms of why Alternative 2-Modified is the selected alternative.

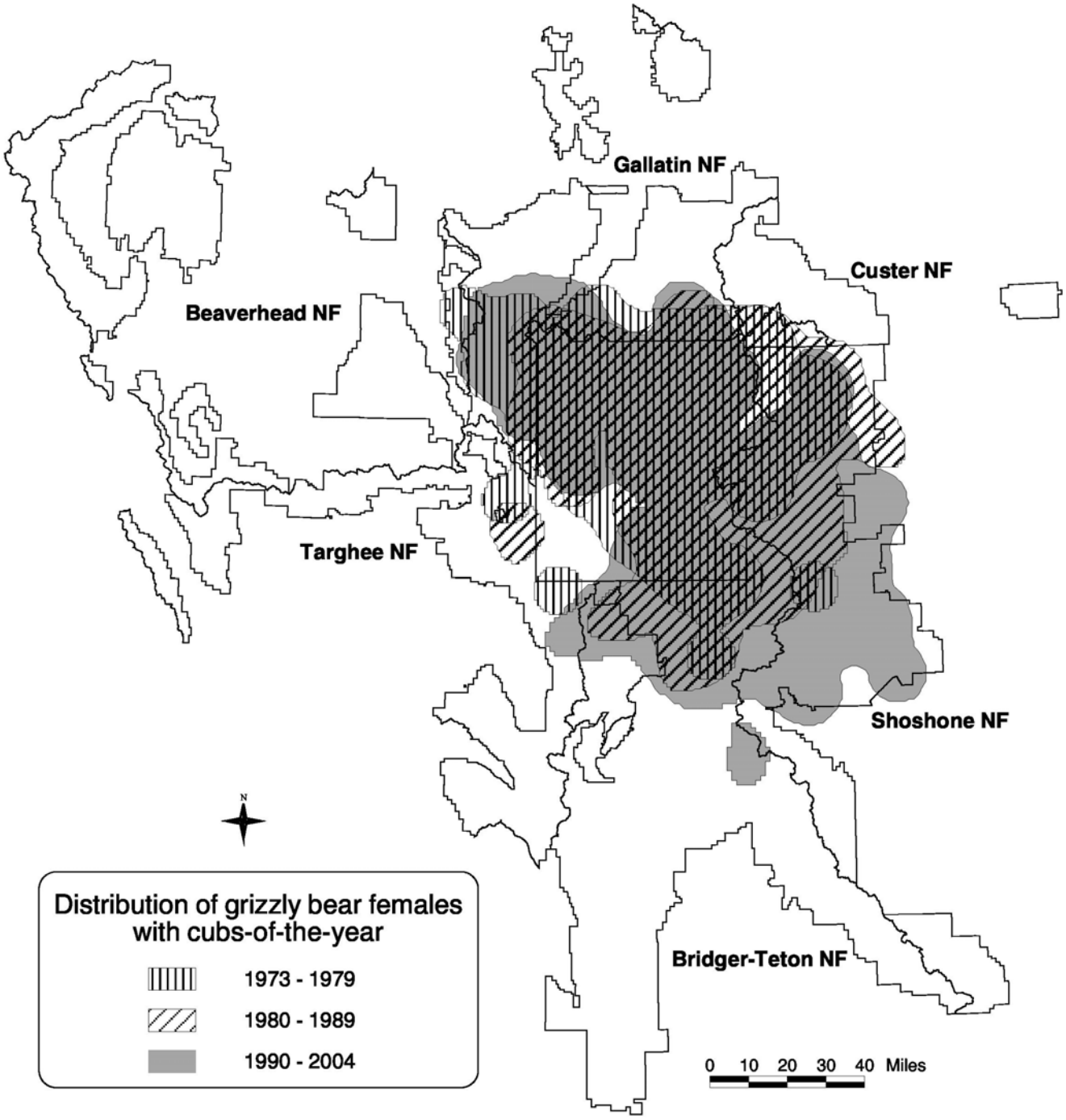
- Area necessary to sustain a recovered grizzly bear population
- Secure habitat
- Food sources
- Management of human activities
- Minimize grizzly bear/human conflicts

Area necessary to sustain a recovered grizzly bear population

Many respondents to the Draft Environmental Impact Statement suggested the area necessary to sustain the grizzly bear population should be expanded beyond the Primary Conservation Area. Some believed due to the uncertainty regarding the loss of important grizzly bear foods, especially whitebark pine, an area larger than the Primary Conservation Area should be managed for grizzly bears. Other respondents suggested the ability of bears to move between important habitats in the Greater Yellowstone Area, particularly outside the Primary Conservation Area, should be addressed. Others believed the Primary

Conservation Area is adequate and should not be expanded, while others believed the restrictions proposed under Alternative 4 outside the Primary Conservation Area were unrealistic.

Figure 4. Distribution of female grizzly bears with cubs-of-the-year for three different time periods in the Greater Yellowstone Area[5].



[5] Distribution map constructed from the initial observations of females with cubs-of-the-year using a 95 percent fixed kernel estimator (Schwartz et al. 2002 and Schwartz et al. 2005d).

The Recovery Plan identifies the Primary Conservation Area or recovery zone as the area where grizzly bears and grizzly bear habitat would be managed to achieve recovery while recognizing that grizzly bears would occur outside the recovery zone. The grizzly bear population achieved recovery under that zone designation. The Conservation Strategy identifies the Primary Conservation Area as the area adequate to sustain a recovered grizzly bear population and allows grizzly bear occupancy in biologically suitable and socially acceptable habitats, as identified by the states, outside the Primary Conservation Area.

There is little doubt the Primary Conservation Area is key to sustaining a recovered grizzly bear population. We have been and remain committed to maintaining the integrity of the Primary Conservation Area for grizzly bears. All alternatives in the Final Environmental Impact Statement provide various levels of protection to habitats inside the Primary Conservation Area. The question is how much habitat beyond the Primary Conservation Area should be managed to sustain the recovered grizzly bear population at a minimum of 400 bears as identified in the Conservation Strategy. It has been estimated that 10 to 14 percent of the 500 to 600 grizzly bears in the Greater Yellowstone Area from 1990 through 2004 lived outside the Primary Conservation Area. Approximately 21 percent of the area occupied by grizzly bears during that time was outside the Primary Conservation Area on National Forest System lands. Bears continue to expand in both range and numbers.

Alternatives 1, 2, and 3 do not specifically address the management of habitats for grizzly bears outside the Primary Conservation Area. Alternative 4 imposes restrictions on land uses outside the Primary Conservation Area where there is no way to predict when or if bears would occupy those areas. Alternative 2-Modified was developed between the Draft and Final Environmental Impact Statements in response to public comments and is consistent with the state grizzly bear management plans in providing guidance for accommodating the grizzly bear in biologically suitable and socially acceptable habitats outside the Primary Conservation Area. We believe Alternative 2-Modified will provide habitat protection in an area large enough to sustain the recovered grizzly bear population, while minimizing impacts to other forest activities. See further discussion in part 3 and the following discussions on secure habitat management inside and outside the Primary Conservation Area.

Secure habitat

Secure habitat is defined as areas greater than or equal to 10 acres in size[6] and more than 500 meters from an open or gated motorized access route or recurring helicopter flight line. This is the same definition used in the Conservation Strategy. Secure habitat is divided into long- and short-term secure habitat based on the management area categories in existing forest plans. Long-term secure habitat is within management areas where new motorized access routes will generally not be constructed. Short-term secure habitat is within management area categories that allow for forest management activities that could change secure habitat[7].

Many of the comments on the Draft Environmental Impact Statement were related to the amount of secure habitat that should be maintained for grizzly bears both inside and outside the Primary Conservation Area. Concerns were also expressed regarding the provision in Alternatives 2 and 2-Modified that allows for a temporary 1 percent reduction in secure habitat inside the Primary Conservation Area. Some suggested the 1 percent rule should be eliminated and no change allowed and others believed the percentage should be increased to allow for more management activities. Still others questioned the 1998 baseline and believed site-specific secure habitat levels should be set to meet identified population goals rather than a no net loss of secure habitat.

[6] Secure habitat for analysis used in this decision did not include areas open to cross country off-highway vehicle (OHV) travel.

[7] The long-term secure habitat subject to the 1 percent rule under Alternatives 2 and 2-Modified inside the Primary Conservation Area is defined as short-term secure habitat under Alternative 1. Under Alternative 1, short-term secure habitat inside the Primary Conservation Area could be lost due to project activities as there is no requirement to restore the secure habitat after project completion. Under Alternatives 2 and 2-Modified, any secure habitat affected by the 1 percent rule will be restored within one year after project completion and is considered long-term secure habitat.

We recognize the importance of secure habitat to long-term maintenance of the recovered grizzly bear population. This commitment to ensuring secure habitat for grizzly bears has resulted in a net reduction of over 600 miles of road inside the Primary Conservation Area on National Forest System lands from 1986 through 2002. Almost 10 percent of the existing secure habitat inside the Primary Conservation Area was created through these road closures. Maintaining habitat security requires minimizing mortality risk and displacement from human activities in a sufficient amount of habitat to allow the grizzly bear population to benefit from this secure habitat and respond with increasing numbers and distribution. Both of these bear population responses are currently ongoing in the Yellowstone population.

Secure habitat inside the Primary Conservation Area. There are 2.83 million acres of long-term secure habitat on National Forest System lands within the Primary Conservation Area, which is 83 percent of the National Forest System lands within the Primary Conservation Area (Figure 5). Under Alternative 2-Modified, 87 percent of the secure habitat on National Forest System lands inside the Primary Conservation Area will remain unchanged. Thirteen percent of the secure habitat could be affected temporarily under the 1 percent rule. Even if all subunits (the area of application for the secure habitat standard) had simultaneous projects on National Forest System lands inside the Primary Conservation Area, which is unlikely, only 29,500 acres of secure habitat could be affected at any one time. This means at least 82 percent of the habitat on National Forest System lands inside the Primary Conservation Area will always be secure. Under Alternative 2-Modified, any secure habitat temporarily affected by the 1 percent rule will be restored to secure habitat after project completion.

This level of habitat security, along with other habitat conditions inside the Primary Conservation Area in 1998, provided the base environment that led to the growth of the bear population and the achievement of all demographic recovery targets by 1998. The bear population continues to grow in range and numbers under these secure habitat conditions. The allowance of a 1 percent temporary reduction in secure habitat maintains options for resource management activities at approximately the same level as existed in 1998 as the bear population reached recovery. Therefore, we believe the 1998 baseline for secure habitat, used as the basis for the secure habitat standard in Alternative 2-Modified inside the Primary Conservation Area, is more than adequate to maintain the recovered grizzly bear population.

Figure 5. Total and secure habitat acres for areas inside the Primary Conservation Area under Alternative 2-Modified.

Area	Total acres	Long-term secure habitat acres	Acres of long-term secure habitat that will remain unchanged	Acres of long-term secure habitat subject to 1% rule
Primary Conservation Area	3,413,000	2,827,000	2,458,000	369,000

Alternatives 3 and 4 would result in 88 percent secure habitat on National Forest System lands inside the Primary Conservation Area (5 percent increase in secure habitat from existing conditions) by requiring each subunit to have a minimum of 70 percent secure habitat and by closing all existing motorized routes in inventoried roadless areas. No temporary reductions in secure habitat would be allowed. Forest management activities would not be allowed to occur at levels that existed during the recovery of the grizzly bear and some existing motorized recreation opportunities would be eliminated. We believe these strict limitations on other uses are unnecessary at this time. Bear populations continue to increase and expand without these restrictions.

Monitoring of secure habitat levels inside the Primary Conservation Area will continue under Alternative 2-Modified and the adequacy of secure habitat levels inside the Primary Conservation Area will be evaluated with other habitat and population parameters on an annual basis.

Secure habitat outside the Primary Conservation Area. The area outside the Primary Conservation Area as described in Alternative 4 is our best estimate of the biologically suitable habitat for grizzly bears on

National Forest System lands. This area was developed in response to concerns that more secure habitat should be maintained for grizzly bears outside the Primary Conservation Area and was based on the best available scientific information on suitable habitat and linkage areas outside the Primary Conservation Area. In Wyoming, this area is similar to that identified by the Wyoming Game and Fish Department as the area where grizzly bears outside the Primary Conservation Area would be managed to allow for population growth. This area includes lands identified for grizzly bear management in the Idaho and Montana state grizzly bear management plans on National Forest System lands, although these plans have not yet identified specific areas that are socially acceptable. The biologically suitable area includes 96 percent of the area occupied by grizzly bears on National Forest System lands outside the Primary Conservation Area from 1990 through 2004.

Alternative 4 results in an increase from 72 percent secure (71 percent long term) to 85 percent secure (100 percent long term) in the Alternative 4 area outside the Primary Conservation Area by requiring each analysis unit (the area of application for the secure habitat standard in Alternative 4 outside the Primary Conservation Area) to have a minimum of 70 percent secure habitat and by closing all motorized access routes (roads and trails) in inventoried roadless areas. No temporary reductions in secure habitat would be allowed. Forest management activities would be significantly reduced and many existing motorized recreation opportunities would be eliminated.

Many believe that existing forest plans—following the Interagency Grizzly Bear Guidelines— provide habitat protections outside the Primary Conservation Area for the bear as a listed species. These Guidelines, applicable under Alternative 1, do not provide habitat direction for the bear outside the Primary Conservation Area. Section 7 consultations with the U.S. Fish and Wildlife Service for activities outside the Primary Conservation Area have generally been focused on minimizing conflicts and mortality rather than prescribing habitat direction.

Management of secure habitat outside the Primary Conservation Area under Alternatives 1, 2, and 3 would be guided by existing individual forest plan direction. The same direction will apply under Alternative 2-Modified with the addition of requirements to monitor changes in secure habitat in areas determined by the states to be biologically suitable and socially acceptable for grizzly bear occupancy. Results will be reported and evaluated with other required monitoring according to the process outlined in the Conservation Strategy (see part 3.3). The following discussion focuses on how secure habitat outside the Primary Conservation Area will be managed under existing forest plan direction and why we selected Alternative 2-Modified.

The areas estimated to be biologically suitable for grizzly bears outside the Primary Conservation Area on National Forest System lands total six million acres. Nearly three-fourths of the six million acres are secure habitat. About one-half of the six million acres is long-term secure habitat because it is in a management designation that generally does not allow road building, such as wilderness or backcountry management (long-term secure) (Figure 5). The remaining secure habitat, about one-fifth of the six million acres, is short-term secure habitat. Some of the short-term secure habitat (less than one-third of the total secure habitat) could be changed due to management activities. Most of the short-term secure habitat is managed under current forest plan direction that limits the amount of new road construction, e.g., road density standards on the Bridger-Teton and Targhee National Forests and no net gain in roads on the Shoshone National Forest. Additionally, the draft revised forest plan for the Beaverhead-Deerlodge National Forest proposes road density standards for all Forest landscapes, and the draft travel management plan for the Gallatin National Forest includes a Forest-wide standard for no increase in public motorized access routes. These standards will allow only small changes in existing motorized access route density and associated secure habitat. Further, the trend over the last 17 years has been a reduction in road miles. Over 1,400 miles of road have been decommissioned in the Greater Yellowstone Area national forests, with less than 400 miles of road being constructed—a net reduction of over 1,000 miles of road. Approximately 37 percent of the short-term secure habitat in the biologically suitable area is open to leasing for oil and gas where surface occupancy is allowed. Much of this area has a very low to moderate potential for occurrence and there are only eight active leases. Refer to part 3.3 for more discussion on oil and gas leasing.

In summary, the biologically suitable area outside the Primary Conservation Area contains three million acres more secure habitat (4.3 versus 1.3 million acres) in excess of that used by bears outside the Primary Conservation Area on National Forest System lands from 1990 through 2004 (Figure 6). This area contains two million acres more long-term secure habitat (3.1 versus 0.7 million acres) in excess of that used by bears outside the Primary Conservation Area on National Forest System lands. While we recognize there is not a one-to-one relationship between the amount of secure habitat and bear population numbers, we believe the maintenance of this level of secure habitat outside the Primary Conservation Area will provide additional assurances the population will be maintained above 400 grizzly bears as required by the Conservation Strategy.

Figure 6. Total and secure habitat acres for areas outside the Primary Conservation Area on the six Greater Yellowstone Area national forests.

Area	Total acres	Secure habitat acres	Acres of long-term secure habitat[1]	Acres of short-term secure habitat[1]
Area estimated to be biologically suitable habitat for grizzly bears outside the Primary Conservation Area	5,999,000	4,331,000	3,089,000	1,242,000
Occupied grizzly bear habitat outside the Primary Conservation Area from 1990-2004	1,954,000	1,277,000	699,000	578,000

[1] Designation as long- or short-term secure habitat based on current forest plan direction.

Alternative 4 increases the amount of secure habitat outside the Primary Conservation Area with restrictions and motorized route closures (1,850 miles overall). We believe restrictions and closures over such a large area, without existing bear occupation or state defined biologically suitable or socially acceptable areas, are premature and would meet with resistance from local communities and recreation users and are unnecessary to maintain adequate secure habitat outside the Primary Conservation Area.

Alternatives 1, 2, and 3 would provide the same assurances for maintenance of secure habitat outside the Primary Conservation Area as Alternative 2-Modified because management area direction outside the Primary Conservation Area in existing forest plans will not change. Alternatives 1, 2, and 3 provide no guidance for accommodating grizzly bears outside the Primary Conservation Area in biologically suitable and socially acceptable areas nor do they require monitoring secure habitat outside the Primary Conservation Area.

We believe Alternative 2-Modified does the best job of maintaining sufficient secure habitat both inside and outside the Primary Conservation Area to support the recovered grizzly bear population at desired levels, while allowing for management activities and other uses. Secure habitat outside the Primary Conservation Area will be monitored and any reduction in secure habitat evaluated as part of the Biology and Monitoring Review process identified in the Conservation Strategy. The selected alternative provides the most flexibility in working with state wildlife management agencies and local communities to define areas that will be socially acceptable and biologically suitable for bear occupancy. We believe public acceptance of grizzly bears is a key component in the ultimate success of sustaining a recovered grizzly bear population.

One concern we heard from respondents was an interest in maintaining or improving connectivity between important habitats in the Greater Yellowstone Area. We believe the maintenance of over three million acres of long-term secure habitat, supplemented by over one million acres of short-term secure habitat outside the Primary Conservation Area, will provide the security necessary for bears to occupy

many new areas within the Greater Yellowstone Area, improving chances for movement between important habitats.

Food sources

Respondents expressed numerous concerns regarding the persistence of the four major foods for grizzly bears— ungulates, cutthroat trout, army cutworm moths, and whitebark pine seeds—in the Greater Yellowstone Area. Of greatest concern was the future health of whitebark pine stands. Most respondents believed potential declines in these foods, from disease, climate change, and other factors, would significantly impact grizzly bear populations and that larger areas with more protection should be managed for the grizzly bear to offset any declines in availability of these foods. Others suggested threats to these food sources should be studied further or the Forest Service should manage habitats to protect or enhance these important foods.

We have long recognized the importance of these foods to bears. The annual availability of these four key foods currently fluctuates widely primarily due to weather conditions and is generally independent of forest management or recreational activities. Grizzly bears have shown great adaptability to annual fluctuations in these key foods. Reproductive performance has remained constant over the years as the population has continued to grow between 4 to 7 percent annually, even with this food fluctuation (USDI FWS 2005a).

Coordinated efforts have been ongoing for over a decade to gather more information on the status of whitebark pine and to develop management strategies to ensure whitebark pine's future in the Greater Yellowstone Area. Transects for long-term monitoring have been established and a draft map displaying the distribution of whitebark pine has been completed. We have emphasized the importance of moth aggregation sites by discouraging new trails or extensive human uses in these areas. Winter ranges for ungulates have always received special management emphasis, partly for their importance to spring carcass-feeding bears. Since 1979, the Interagency Grizzly Bear Guidelines for forest management activities that were adopted by all the Greater Yellowstone Area national forests have included direction for protecting, maintaining, or enhancing important foraging areas for grizzly bears.

In response to potential declines in these important foods due to climate change or disease, grizzly bear use of moth aggregation sites, cutthroat trout spawning streams, whitebark pine cone production, and availability of winter-killed ungulate carcasses will continue to be monitored annually under the direction in the Conservation Strategy. The selected alternative provides additional guidance not included in the Conservation Strategy or Alternative 2 for maintaining the productivity of the four key grizzly bear foods inside and outside the Primary Conservation Area, with emphasis on maintaining and restoring whitebark pine. We believe this emphasis may lead to improved conditions for whitebark pine if additional funds are available for research or restoration activities. Vegetation management activities could be used to increase whitebark pine resistance to disease, regenerate stands where whitebark pine is declining, and improve habitats for ungulates. The productivity, occurrence, and health of whitebark pine will be monitored and annually submitted for inclusion in the Interagency Grizzly Bear Study Team Annual Report, which will serve as the basis for determining the need for adaptive management if significant declines in these important foods occur and/or negative grizzly bear population responses are documented.

We believe the selected alternative and the Conservation Strategy together provide the mechanisms to monitor and document any declines in the four key grizzly bear foods and respond as necessary with management changes. Alternative 2-Modified provides secure habitat for grizzly bears inside and outside the Primary Conservation Area in sufficient quantity and protection to allow the grizzly bear to increase in numbers and range, even if some of these foods decline.

Alternative 4 does not provide additional protection to food sources from the potential impacts of climate change above and beyond those adaptive management practices specified for Alternative 2-Modified. The strict limits on other uses of National Forest System lands outside the Primary Conservation Area are, we believe, counterproductive in maintaining habitats for grizzly bears. Rather, the adaptive

management approach of the selected alternative will provide for interagency and public cooperation in the maintenance and monitoring of habitat for grizzly bears outside the Primary Conservation Area.

Where needed, critical food sources including whitebark pine seed production, army cutworm moth aggregation sites, major fish spawning areas, elk parturition areas, and big game winter ranges will be maintained. Seasonal area closures will be used as necessary to provide adequate security to ensure areas are available to bears.

Management of human activities

Some respondents believed the numbers of developed sites both inside and outside the Primary Conservation Area should be reduced and those with recurring conflicts with grizzly bears should be eliminated. Others were concerned that limits on developed sites inside the Primary Conservation Area would impact future recreation uses (see part 3.2). Most comments on the livestock grazing standard (Standard 3) suggest more emphasis should be given to the grizzly bear in livestock conflict cases, both inside and outside the Primary Conservation Area. Some respondents were particularly concerned that cattle conflicts inside the Primary Conservation Area would not be solved in favor of the bear, while others felt the lack of direction for resolving conflicts with sheep and grizzly bears outside the Primary Conservation Area was inappropriate.

A primary factor in providing for the conservation of grizzly bears is the management of human activities on the landscape. Most of the conflicts with grizzly bears on National Forest System lands in the Greater Yellowstone Area that can be attributed to Forest Service management activities are associated with developed sites and livestock allotments. In response, in conjunction with willing permittees, we have closed many domestic sheep allotments inside and outside the Primary Conservation Area to benefit the grizzly bear. Portions of cattle allotments have been rested to reduce conflicts and one cattle allotment has been closed to grazing. We have included special provisions, including food storage requirements, in livestock grazing permits and special use permits for developed sites to minimize grizzly bear/human conflicts. The number and capacity of developed sites on National Forest System lands has been reduced or remained stable in most cases during the last decade. Several developed sites have been closed; some campgrounds have been modified to allow hard-sided camping only or designated as picnic areas.

Developed sites. Developed sites in grizzly bear habitat increase the potential for conflict with humans primarily due to the potential availability of human foods. Developments also reduce the effectiveness of the natural habitat near these sites. The larger the developed site and the more people using the site, the greater the potential for conflicts and reduction in the effectiveness of the adjacent habitat for bears. Food storage regulations and information and education efforts mitigate much of the potential for conflict.

Alternative 2-Modified defines and limits site development within the Primary Conservation Area and contributes to sustaining the recovered grizzly bear population. Rather than imposing the strict requirements to close developed sites with recurring conflicts in the Primary Conservation Area (Alternatives 3 and 4), we believe the direction included within Alternative 2-Modified inside the Primary Conservation Area to minimize grizzly bear/human conflicts with various management tools provides a more effective and flexible approach to solve problems on a case-by-case basis for the benefit of the bear. Food storage orders, information and education, and clauses in special use permits have been effective in solving many conflict issues at developed sites. Alternative 2-Modified includes direction for continuing these efforts inside the Primary Conservation Area. Bear populations have recovered with the existing level of developed sites inside the Primary Conservation Area and the number of bears continues to increase.

Limiting site development outside the Primary Conservation Area, as proposed under Alternative 4, is unnecessary at this time. The guidance under the selected alternative to accommodate grizzly bears in areas outside the Primary Conservation Area in cooperation with the states allows us to make adjustments in site development as needed and provides the mechanisms to accommodate site development outside the Primary Conservation Area where these developments are precluded inside the

Primary Conservation Area. Food storage and other management tools will be used at these developed sites to minimize conflicts. Although it was assumed food storage orders would remain, Alternatives 2 and 3 are silent on direction for minimizing conflicts or accommodating grizzly bears outside the Primary Conservation Area. Alternative 4 would impose limits on site development where there is no way to predict when or if bears would occupy those areas. Grizzly bear populations are expanding in range and numbers outside the Primary Conservation Area with the existing level of developed sites. Food storage orders and information and education efforts are ongoing in areas occupied by bears outside the Primary Conservation Area. Alternative 2-Modified includes guidance to ensure the continuation of these efforts to accommodate grizzly bears in areas that are biologically suitable and socially acceptable. Many of the conflicts between grizzly bears and humans occur at dispersed camping sites. Alternative 2-Modified provides the flexibility to deal with these problem areas by consolidating dispersed uses into a new or existing developed site where compliance with food storage regulations can be more easily monitored and controlled. Under Alternative 4, no increase in developed sites would be allowed, regardless of the potential benefit to bears.

Livestock grazing. Most, if not all, grizzly bears that come in contact with domestic sheep prey on sheep and conflicts are inevitable. The majority of grizzly bears that come in contact with cattle do not make kills. Conflicts between livestock and grizzly bears have resulted in the relocation, removal, or direct mortality of grizzly bears. Many of the conflicts with grizzly bears and sheep have been resolved inside the Primary Conservation Area due to the closure of many of the affected allotments. Selective removal of grizzly bears is a viable management option, particularly when adult males that are repeat offenders are involved and translocation, aversion tactics, or carcass removal efforts are ineffective.

All action alternatives prohibit the creation of new allotments and provide various levels of guidance for resolving conflicts with grizzly bears and livestock inside the Primary Conservation Area. Alternatives 3 and 4 require the closure of the four remaining sheep allotments within three years and the closure of portions of cattle allotments with recurring conflicts. Alternatives 2 and 2-Modified do not allow increases in sheep animal months and would phase out the four sheep allotments with willing permittees. In response to public comment, Alternative 2-Modified includes guidance for retiring cattle allotments with recurring conflicts that cannot be resolved through modification of grazing practices as opportunities arise with willing permittees. Permittees with allotments that experience recurring conflicts will be given the opportunity to place their livestock in a vacant allotment outside the Primary Conservation Area should one be available. The nuisance bear standards in the selected alternative will allow the removal of bears that kill livestock but removal of female grizzly bears will be minimized. Adult males are responsible for the majority of cattle depredations. No grizzly bear involved in livestock depredations will be removed unless it has been relocated at least once and continues to prey on domestic livestock. We believe Alternative 2-Modified provides the mechanisms necessary to minimize conflicts with cattle inside the Primary Conservation Area without the mandatory retirement of these allotments as prescribed under Alternatives 3 and 4. Only three of the existing 69 cattle allotments inside the Primary Conservation Area have been documented with recurring conflicts between 1992 and 2004.

Alternatives 2 and 3 do not provide guidance for resolving livestock conflicts outside the Primary Conservation Area. Alternative 2-Modified includes guidance for retiring both sheep and cattle allotments with recurring conflicts outside the Primary Conservation Area that cannot be resolved through modification of grazing practices as opportunities arise with willing permittees. Alternative 4 requires the closure of all 73 sheep allotments outside the Primary Conservation Area within three years and the closure of portions of cattle allotment with recurring conflicts. Only two cattle allotments outside the Primary Conservation Area have been documented with recurring conflicts from 1992 through 2004. For areas outside the Primary Conservation Area, the nuisance guidelines in state grizzly bear management plans would apply under all action alternatives, with direction on how to manage bears that prey on livestock.

We believe Alternative 2-Modified is the best approach for managing conflicts with grizzly bears and livestock outside the Primary Conservation Area. Many of the sheep allotments that would be closed under Alternative 4 are not occupied by grizzly bears. These blanket closures would likely increase

social intolerance for grizzly bears. Rather, the mechanisms to solve livestock depredation issues on a case-by-case basis would minimize impacts on local communities and the livestock industry.

Minimize grizzly bear/human conflicts

Many respondents had concerns regarding the need to minimize grizzly bear/human conflicts from both the impacts to grizzly bears and the risks to human safety. Grizzly bear mortality is almost solely attributable to grizzly bear/human conflicts with a common outcome of bear mortality by interagency bear managers or by other humans. Human injuries and deaths are often associated with grizzly bears that have a prior history of conflicts with humans. Human-food conditioned and human-habituated bears are usually removed from the population due to the threat they pose to humans. Efforts by the six Greater Yellowstone Area national forests, other state and federal agencies, and numerous non-governmental agencies to minimize grizzly bear/human conflicts and subsequent mortality have been key to grizzly bear recovery.

To reduce grizzly bear conflicts and deaths on National Forest System lands, we have established food storage regulations and special grizzly bear requirements in contracts and permits, provided bear resistant containers for garbage/food storage and information and education materials and programs, and issued access restrictions and regulations. Studies have demonstrated these efforts have been successful in reducing grizzly bear mortalities. Of the 270 documented grizzly bear mortalities in the Greater Yellowstone Area since 1975, only 27 are directly or indirectly attributable to Forest Service management activities or actions.

Alternative 2-Modified provides direction to continue with efforts to minimize conflicts both inside and outside the Primary Conservation Area using food storage regulations, information and education, and other management tools, including efforts to assist the public in the development of bear resistant products. Minimizing conflicts benefits both bears and people. While it was assumed these efforts would continue inside the Primary Conservation Area under Alternatives 2 and 3, no specific direction was provided. Alternative 4 requires forest wide food storage regulations, while Alternatives 3 and 4 require elimination of sites with recurring conflicts and area closures; neither specifically identifies the need to minimize conflicts through information and education efforts or use less restrictive management tools. Alternative 2-Modified provides adequate direction to ensure the continued use of proven methods to minimize conflicts without eliminating human uses. Strict requirements to eliminate human uses before trying other, less drastic approaches could work against grizzly bear expansion. Public support for grizzly bear occupancy and expansion is important for long-term persistence of the grizzly bear in the Greater Yellowstone Area. The direction in the selected alternative to work cooperatively with local governments and other agencies to minimize conflicts outside the Primary Conservation Area is especially critical to local public support.

3.2 Principal reason 2 - local communities and social and economic values are acknowledged and public safety is emphasized

Grizzly bears and bear management affect people's lifestyles, livelihoods, and values. This amendment affects 20 counties, more than 40 local communities, and more than 370,000 human residents in the Greater Yellowstone Area. Grizzly bears and bear management also affect the estimated eight million recreation visits that occur annually on the six national forests in the Greater Yellowstone Area. Approximately 60 percent of recreation users are local, but regional, national, and international visitors are attracted to the area as well. This amendment affects the business operations that are closely tied to the Greater Yellowstone Area, including outfitting and guiding services, resorts and recreation businesses, and ranching operations that have traditionally used public lands to graze livestock during the summer months.

It is a credit to all citizens, residents, businesses, and recreation users that the demographic recovery targets have been met—the grizzly bear population has recovered.

Recreation activities and grizzly bear/human interactions have been monitored and evaluated over the last 25 years by the various land management agencies, research scientists, the Interagency Grizzly Bear Committee, and non-governmental organizations. Particular efforts deemed effective in managing grizzly bear/human interactions are:

- Information and education about recreating and living in bear country
- Ensuring unnatural food sources are secure from bear use
- Limiting human development and access within bear areas
- Responding to grizzly bear/human conflicts

The public highly values their opportunities to recreate and enjoy wildlife viewing in the Greater Yellowstone Area. The current undeveloped nature, wildness, and presence of grizzly bears are part of the allure that attracts recreation visitors and are valued by many of the residents of the Greater Yellowstone Area. Alternative 2-Modified maintains the undeveloped and wild character of the Greater Yellowstone Area within the Primary Conservation Area. Additionally, Alternative 2-Modified addresses the needs of the grizzly bear outside the Primary Conservation Area and the recreation pursuits and values of the public. Alternative 4 offers the most control over human uses inside and outside the Primary Conservation Area, which supports some of the environmental interests. Alternative 2-Modified best moves the partnership between the public, local communities, and state and federal governments in a common commitment toward support of the bear and without major impacts to recreation and livestock grazing on lands currently unoccupied by grizzly bears.

Public safety

Public safety continues to be a key consideration in grizzly bear management. Alternative 2-Modified addresses this concern by managing nuisance bears and minimizing grizzly bear/human conflicts using food storage, information and education, and other management tools within the Primary Conservation Area. Outside the Primary Conservation Area in areas identified in state management plans as biologically suitable and socially acceptable for grizzly bear occupancy, Alternative 2-Modified emphasizes proper sanitation techniques, including food storage orders and information and education, while working with local governments and other agencies.

Alternative 2-Modified puts more attention on public safety than do Alternatives 1, 2, and 3 by including areas outside the Primary Conservation Area where bears may exist. Alternatives 3 and 4 include a standard to eliminate developed sites or dispersed camping, including outfitter camps, with recurring grizzly bear/human conflicts and limit use of backcountry trails in high bear-use areas. These restrictions are not necessary to include in Alternative 2-Modified because other agencies are actively responding to reported grizzly bear/human conflicts and working to resolve recurrent problems. We have the flexibility of making adjustments on a site-specific basis and will continue to use the nuisance bear standard in resolving conflicts.

Recreation, social and economic effects on local communities, and commercial livestock grazing

Other social and economic considerations relate to issues identified through public comments during scoping and on the Draft Environmental Impact Statement. These include:

- Recreation opportunities—motorized use
- Recreation opportunities—developed sites
- Recreation opportunities—winter use activities
- Social and economic effects on local communities
- Commercial livestock grazing

Recreation opportunities—motorized use. Many people expressed concerns that grizzly bear habitat standards would result in reduced motorized recreation opportunities by closing more roads and trails to motorized use. Motorized use is closely associated with reduced levels of secure habitat for grizzly bears. Since secure habitat is more than 500 meters from an open or gated motorized access route, where security is needed, permanent closures of motorized routes are often the solution.

Alternative 2-Modified and all alternatives reflect a history of motorized route (roads and trails) restrictions and closures that achieved the secure habitat that exists both inside and outside the Primary Conservation Area. Over the years, this has resulted in a net reduction of more than 1,000 miles of motorized routes on the six Greater Yellowstone Area national forests. This reduction has impacted many people who have enjoyed more freedom in exploring public lands through motorized travel. Because 83 percent of the Primary Conservation Area is secure habitat, additional motorized route closures are not proposed by Alternative 2-Modified. Alternatives 3 and 4 proposed an additional 500 miles of motorized closures within the Primary Conservation Area; we believe these closures are unnecessary at this time and would unduly impact existing motorized use. We also recognize that as individual national forests amend forest plans with regard to travel management, recreational opportunities and wildlife habitat needs will be more comprehensively evaluated than with these amendments, which focus on grizzly bear habitat management across six national forests.

Alternative 4 proposed an additional 1,400 miles of motorized route closures outside the Primary Conservation Area. We believe these additional closures are unnecessary at this time. Under Alternative 2-Modified, there are approximately 4,331,000 acres of long- and short-term secure habitat on National Forest System lands outside the Primary Conservation Area in areas estimated to be biologically suitable for grizzly bears. We believe this is an adequate base and provides opportunities for grizzly bear movement and occupancy outside the Primary Conservation Area. Alternative 2-Modified does not propose motorized route closures. The selected alternative provides more flexibility in working with state wildlife management agencies and local communities to define areas that will be socially acceptable and biologically suitable for bear occupancy. Alternative 2-Modified goes beyond Alternatives 1, 2, and 3 to address the existing and likely occupancy by grizzly bears of lands outside the Primary Conservation Area with the goal of accommodating grizzly bear populations with other land use activities.

Recreation opportunities—developed sites. Generally, the public did not seem as concerned with the standard that maintains developed Forest Service recreation sites (campgrounds, trailheads, lodges, etc.) at 1998 levels as they were with the potential effects on motorized use. The exceptions were agency comments concerned with areas that are experiencing capacity limits and public concerns regarding the effects to special use permitted resorts, ski areas, and lodges if developed sites were limited to 1998 levels.

Alternative 2-Modified retains Standard 2 as identified in the proposed action and in the Conservation Strategy. Within the Primary Conservation Area, approximately 267 developed recreation sites—nearly one-third of developed recreation sites in the six Greater Yellowstone Area national forests—will not be increased in size to accommodate more people, unless increases are mitigated. Specifically, this could affect approximately 19 lodges, resorts, dude ranches, and hotels having special use permits on the six national forests.

Agency concerns about experiencing capacity limits are currently more of an issue in areas outside the Primary Conservation Area, specifically to accommodate winter use parking on the Gallatin and Targhee National Forests and to better manage dispersed use by concentrating use in some developed sites on the Custer National Forest.

Taking steps to define and limit recreation developments within the Primary Conservation Area is appropriate and contributes to sustaining the recovered grizzly bear population. Research shows grizzly bear use is lower and foraging behavior is disrupted in areas near human developments and activities. Alternative 2-Modified retains the relatively undeveloped character within the Primary Conservation Area and people will continue to be attracted to the area for its wildlife and scenic beauty.

Alternative 2-Modified is similar to Alternatives 1 and 2 where developed sites have been maintained at or below capacity since 1998. Alternative 2-Modified allows for slight adjustments in developed site capacity based on the Application Rules and this differs from the stricter standards of Alternatives 3 and 4. Some flexibility is important to respond to situations for the benefit of the bear.

In addition, we chose not to extend the limitations on developed sites outside the Primary Conservation Area, as Alternative 4 does, because we want to reserve the opportunity to evaluate the entire spectrum

of recreation use and potential conflicts with grizzly bears and make adjustments as needed when recurring conflicts are identified at local levels. Further, we want the ability to accommodate potentially displaced recreation uses (from inside the Primary Conservation Area) in areas outside the Primary Conservation Area.

Recreation opportunities—winter use activities. Many respondents to the Draft Environmental Impact Statement raised concerns that snow machine use would be eliminated from bear denning habitat under Alternatives 3 and 4. Snow machine use is one of the primary recreation activities on the Bridger-Teton, Gallatin, Shoshone, and Targhee National Forests. As a 2002 Biological Opinion on snow machine use noted, the effects of snow machining on grizzly bears show disturbance and conflicts with grizzly bears have always been very low. We believe it is more appropriate to encourage restrictions on snow machine use on a localized basis where conflicts with denning or bear emergence in the spring are identified.

Social and economic effects on local communities. Many respondents were concerned with the effects on income, employment, and lifestyle changes related to livestock operations, ranches, people associated with the timber industry, and recreation-related businesses. National Forest System lands within the Greater Yellowstone Area contribute to the social and economic bases of more than 40 local communities. Residents and communities need to ensure proper management of bear attractants as bear populations have expanded their range and movement through private lands. Some counties have passed resolutions banning the presence of grizzly bears and are concerned about the social and economic well being of their areas.

We are committed to sustaining a recovered grizzly bear population in the Greater Yellowstone Area. This commitment is shared and managed with other agencies and organizations. Alternative 2-Modified was developed to respond to public and agency concerns about the need to provide for grizzly bears as the population expands outside the Primary Conservation Area. Grizzly bear habitat needs and minimizing human/bear conflicts are addressed. The value many people place on grizzly bears is also acknowledged in the selected alternative. While some communities will not favor additional grizzly bear management guidance outside the Primary Conservation Area, the guidance is responsive to managing bear habitat where bears are already occupying these areas and will ensure coordination with the states' roles in managing bears.

We recognize the importance of public acceptance of grizzly bears as a key component in the ultimate success in perpetuating the bear's recovery, public safety, and ease to which agencies can effectively manage for the bear. A continued dialogue with the public, including local communities and environmental organizations, will be essential as grizzlies occupy lands outside the Primary Conservation Area. Alternative 2-Modified includes guidance outside the Primary Conservation Area based upon the states' definitions of socially acceptable and biologically suitable lands for the grizzly bear.

Alternative 2-Modified does the best job of managing habitat for bear populations while ensuring close coordination with the states and local communities with regard to socially acceptable areas for bears. Alternatives 1, 2, and 3 do not address the management of lands outside the Primary Conservation Area, and Alternative 4 imposes restrictions on land uses when there is no way to predict when or if bears would occupy those areas. Local communities, residents, and recreation users are likely to be intolerant of the restrictions in Alternative 4; we believe Alternative 4 diminishes the societal acceptance of bear occupation and our ultimate goal of accommodating bears.

Livestock grazing operations. Livestock grazing on public lands is a long tradition of western culture and the use of public lands has been a key component of viable ranching operations. As has been demonstrated within the Primary Conservation Area, grizzly bears and sheep grazing are relatively incompatible, whereas cattle grazing and grizzly bears can be compatible with active management by the livestock operator and immediate response by agency officials when conflicts between bears and livestock are identified.

Alternative 2-Modified maintains the management direction within the Primary Conservation Area as identified in the Conservation Strategy. Consistent with Alternatives 1 and 2, the selected alternative will

phase out, at most, four sheep allotments. Alternatives 3 and 4 require the immediate action of closing the operations and include three cattle allotments as well. The approach in the selected alternative will work for the bear and is appropriate with our permittee partnerships.

Alternative 2-Modified diverges from Alternatives 1 and 2 by establishing a guideline for livestock grazing outside the Primary Conservation Area in areas identified in state management plans as biologically suitable and socially acceptable for grizzly bear occupancy. This direction is needed to address recurring conflicts between livestock and bears. This guideline is less restrictive than Alternative 4's, which would close 73 sheep allotments and two cattle allotments outside the Primary Conservation Area. The best approach with livestock grazing and grizzly bears is reflected with the selected alternative. We intend to minimize the economic impact on grazing operations and address local situational conflicts between bears and livestock as they occur.

Vegetation, fuels, and access

Timber management. Since implementation of the Interagency Grizzly Bear Guidelines, vegetation management has been limited to those activities that did not adversely affect grizzly bears. For all six Greater Yellowstone Area national forests, nearly 10,000 acres have been treated each year through timber harvesting since 1986; although in the three-year period from 2000 through 2002, only 1,400 acres were treated annually. The 10,000 acres represent 0.1 percent of the area of National Forest System lands in the Greater Yellowstone Area and 1 percent of the suitable acres. A review of five-year vegetation treatment plans indicates this number may have increased from the past three years, but is expected to be within the 17-year average, with vegetation treatment expected to be around 5,000 to 10,000 acres per year in order to address insect, disease, and hazardous fuels concerns.

Some respondents felt that Alternative 2 allowed too much flexibility and at least one part of the Application Rule, the 1 percent temporary reduction in secure habitat, should be dropped to allow no reduction in secure habitat. Others felt the standard for secure habitat was too restrictive and more than one project should be allowed at a time in a Bear Management Unit subunit.

Alternative 2-Modified provides about the same amount of flexibility in treating vegetation as current management (Alternative 1). Because the secure habitat standard allows a 1 percent temporary reduction in secure habitat, timber harvesting activities that took place under the Guidelines could take place in this alternative. A 1 percent change in secure habitat means, on average, about 2,000 acres of secure habitat could be temporarily changed in a Bear Management Unit subunit since subunits average around 200,000 acres. Most timber sale and mechanical treatment activities are temporary and would fit within this standard. Additionally, road decommissioning will occur within one year after project completion. Harvesting activities, other than road construction or the opening of a permanently restricted road, do not affect secure habitat. Up to about five miles of temporary road could be constructed to access areas for vegetation management under this Application Rule.

Alternatives 3 and 4 evaluated dropping the Application Rule that allows a 1 percent temporary reduction in secure habitat. It is necessary to have the 1 percent Application Rule in order to allow managers to have some flexibility in managing vegetation. Without the Application Rule, the effects of reduced timber harvest in Alternatives 3 and 4 could be severe in terms of lost jobs and income in local communities. Finally, the recovered grizzly bear population could be sustained with a 1 percent temporary reduction in secure habitat because it is temporary. Secure habitat will be restored within one year of project completion; the grizzly bear population recovered with this level of activity.

Our analysis indicates almost all harvesting activities that have taken place in the last 15 years could still take place within the secure habitat standard. During the last decade, the rate of road decommissioning has been greater than the rate of road construction both inside and outside the Primary Conservation Area, indicating the past level of harvesting activities would be consistent with the 1 percent temporary change in secure habitat.

The current level of vegetation management can proceed with the selected alternative without negatively impacting the recovered grizzly bear population. Alternative 2-Modified provides some additional flexibility in treating vegetation due to fewer timing restrictions on timber harvest. These treatments are

generally designed to protect structures, help control wildfire, prevent extensive loss of bear food sources, as well as provide timber and associated income and jobs to local communities.

Fuels and vegetation management. Nearly all of the vegetation in the Greater Yellowstone Area has burned at one time or another. All the major plant communities have adapted to fire, although some plant communities ignite and carry fire more readily than others do. Conditions under which any given vegetation community will burn vary, depending on a wide variety of parameters including temperature, humidity, and vegetation type.

Across the national forests in the Greater Yellowstone Area, the overall composition and structure of the different forest types would not be expected to change much in any alternative due to the effects of motorized access restrictions on potential vegetation treatments. Vegetation treatments would affect only about 0.1 percent of the National Forest System lands in Alternatives 1, 2, and 2-Modified. Within the suitable timber base and based on historical harvest rates in the past 17 years, about 6 percent of the area would be treated in one decade (about 98,000 acres out of the 1,500,000 acres in the suitable timber base). This can help improve conditions for some of the key forest types, such as aspen and lodgepole pine.

The selected alternative is consistent with current wildland fire management, prescribed fire, and fuels management activities. The objectives, standards, and guidelines in the selected alternative will have little effect on fire starts or acreages burned. Roads currently available will remain available for use. Dozer lines created as part of wildland fire activities will be rehabilitated as part of normal fireline operations and will not reduce secure habitat. Allowing a 1 percent temporary reduction in secure habitat can allow some treatments of vegetation to improve composition and structure of key vegetation types, although we recognize these treatments will only be a small part of the landscape. Fire, both wildland fire and prescribed fire, will continue to be the single biggest process that changes vegetation in the Greater Yellowstone Area.

Treatment of areas in the wildland urban interface is of particular concern because of communities at risk from destruction by wildland fire, such as Cooke City and West Yellowstone, Montana. Strategic placement of fuels treatments can affect the intensity and pattern of wildland fires. The same number of acres can be mechanically treated for fuels under the selected alternative as under current management. The Application Rule allows up to nearly five miles of road to be temporarily built for fuels treatment in a subunit at one time. This is more than adequate to treat fuels within 1½ miles of structures or communities.

Access management. From 1986 through 2002, over 1,400 miles of road were decommissioned in the six Greater Yellowstone Area national forests, with less than 400 miles of road being constructed—a net reduction of over 600 miles of road inside the Primary Conservation Area and 400 miles outside the Primary Conservation Area. These tended to be roads in excess of what was needed for management or recreational activities, were difficult or expensive to maintain, or both.

The trend for road decommissioning inside the Primary Conservation Area has slowed, with only 13 miles decommissioned from 2000 to 2002, as opportunities are limited for more decommissioning. Outside the Primary Conservation Area, opportunities still exist for road decommissioning.

Some respondents were concerned more roads could be closed with the selected alternative—restricting access—while other respondents felt more road closures were necessary to improve habitat for the grizzly bear.

The selected alternative will not change access, current use, traffic patterns, and road standards from current management. The secure habitat standard requires secure habitat be maintained at 1998 levels, which allows access and use to continue at those levels. Proposals to permanently increase the transportation system in the Primary Conservation Area will not occur unless mitigation is met, as described in the Application Rules. We believe the current level of access is reasonable for the enjoyment of the recreating public. Not increasing the access will “keep it the way it is”; that is, the six Greater Yellowstone Area national forests will maintain their primitive settings for the nation to enjoy, with the grizzly bear an integral part of the landscape.

Minerals management

There are no active oil and gas leases inside the Primary Conservation Area. Under current management, oil and gas development could occur but surface occupancy is allowed on only 3 percent of the National Forest System lands inside the Primary Conservation Area. Leasing decisions have yet to be made for the Gallatin National Forest and a small portion the Bridger-Teton National Forest inside the Primary Conservation Area.

Many respondents were concerned oil and gas leasing would increase if Alternative 2 were implemented and the grizzly bear delisted. The respondents felt this could lead to increased oil and gas development in the Greater Yellowstone Area. Some respondents wanted to prohibit all oil and gas development in the Primary Conservation Area or even larger areas in the Greater Yellowstone Area.

Areas available for surface occupancy will not change under the selected alternative because of the low potential and mitigation necessary. Oil and gas development inside the Primary Conservation Area will be even more unlikely with the selected alternative because of the mitigation necessary under the developed site and secure habitat standards. New proposals inside the Primary Conservation Area will need to be mitigated by closing out other types of developed sites, consolidating dispersed camping sites, or closing motorized routes to maintain the 1998 levels of developed sites and secure habitat. The Gallatin and Bridger-Teton National Forests' future oil and gas decisions will be constrained by the direction in the selected alternative

Alternative 4 was developed in response to the concern for limiting oil and gas development. It allowed us to look at the tradeoffs of not allowing any new oil and gas leases in not only the Primary Conservation Area but in a larger area as defined by Alternative 4. Not allowing any new oil and gas leases is unnecessary at this time. Outside the Primary Conservation Area, the likelihood for oil and gas development is basically the same as current management.

Even with consultation with the U.S. Fish and Wildlife Service, under Alternative 1, proposals for development would likely proceed, as a jeopardy opinion[8] is highly unlikely due to the current status of the grizzly bear population. Surface occupancy for oil and gas is allowed on approximately 37 percent of the short-term secure habitat in the area considered as the best estimate of the biologically suitable habitat outside the Primary Conservation Area. Much of this area has a very low to moderate potential for occurrence and there are only eight active leases and no active oil and gas wells. We will continue with individual leasing decisions for the six Greater Yellowstone Area national forests.

3.3 Principal reason 3 - federal, state, local, and tribal governments work together to monitor and adapt management to changing conditions and new science

We recognize the uncertainty in estimating precisely how many bears are needed and how much and what kind of habitat is required to support the grizzly bear population. This is especially difficult in relationship to potential changes in habitat due to climate change, fluctuations in annual food availability, and associated dynamics of grizzly bear social structure at various bear densities. The best approach to ensure a healthy grizzly bear population is to monitor both population and habitat parameters closely and respond with adaptive management. While the management direction in this amendment provides a firm foundation for grizzly bear habitat management, habitat management is dynamic and new information is constantly being developed. The selected alternative embraces this adaptive management approach—as conditions change, so will management direction. Future changes, based on monitoring and evaluation, will involve public collaboration.

For more than 30 years, federal, state, and other governments have been committed to the recovery of the grizzly bear in the Greater Yellowstone Area. Since 1983, the Interagency Grizzly Bear Committee has coordinated management and research actions for recovery of the grizzly bear nationwide. A subcommittee of the Interagency Grizzly Bear Committee, the Yellowstone Ecosystem Subcommittee,

[8] A jeopardy opinion is issued by the U.S. Fish and Wildlife Service when an activity or project is likely to jeopardize the continued existence of a species.

coordinates efforts specific to the Greater Yellowstone Area. The Yellowstone Ecosystem Subcommittee is comprised of representatives of the Forest Service, National Park Service, Bureau of Land Management, U.S. Fish and Wildlife Service, Wyoming Game and Fish Department, Idaho Department of Fish and Game, Montana Fish, Wildlife and Parks, county governments, and tribes. At the Yellowstone Ecosystem Subcommittee's biannual meetings, the public is invited to observe the proceedings and share comments and information about bear conservation. The Interagency Grizzly Bear Study Team, created in 1973, provides scientific information from monitoring and other research that is used by the Yellowstone Ecosystem Subcommittee and the Interagency Grizzly Bear Committee for adapting management and sustaining the recovered Yellowstone grizzly bear population.

With delisting of the grizzly bear, the Conservation Strategy, state grizzly bear management plans, National Park Service management plans, and this amendment provide the direction for coordinated and adaptive management of the grizzly bear and grizzly bear habitat.

The Forest Service has signed the Memorandum of Understanding detailing agency agreements to implement the Conservation Strategy. By signing the Memorandum of Understanding, we agree to:

- Use our authorities to maintain and enhance the recovered status of the grizzly bear in the Greater Yellowstone Area by implementing the regulatory mechanisms, interagency cooperation, population and habitat management and monitoring, and other provisions of the Conservation Strategy
- Be members of the Yellowstone Grizzly Coordinating Committee
- Support and be part of the adaptive management process as identified in the Biology and Monitoring Review section of the Conservation Strategy

Yellowstone Grizzly Coordinating Committee

As agreed upon in the Conservation Strategy, management of the delisted grizzly bear population will be coordinated by a new committee that will replace the Yellowstone Ecosystem Subcommittee. We (forest supervisors of the six Greater Yellowstone Area national forests) will be members of the new committee, which will be called the Yellowstone Grizzly Coordinating Committee. The Yellowstone Grizzly Coordinating Committee is the body that will coordinate management, promote the exchange of information about the Yellowstone grizzly bear population, and adapt to changing conditions and new science. The Yellowstone Grizzly Coordinating Committee will inform the Interagency Grizzly Bear Committee about the Yellowstone grizzly bear population for the benefit of grizzly bear conservation and management.

As part of the adaptive management process and within our authorities within the Yellowstone Grizzly Coordinating Committee, we will revise or amend the Conservation Strategy based on the best biological data and the best available science. Any such amendments will be subject to public review and comment.

Participation in Yellowstone Grizzly Coordinating Committee activities related to adaptive management includes:

- Ensuring population and habitat data are collected annually by the Interagency Grizzly Bear Study Team, as specified in the Conservation Strategy, and evaluated to assess the current status of the grizzly bear population
- Sharing information and implementing management actions in a coordinated fashion
- Identifying management, research, and financial needs to successfully implement the coordinated Conservation Strategy
- Implementing a Biology and Monitoring Review as necessary and submitting a petition for relisting as appropriate to ensure agency responsiveness to changing circumstances of the grizzly or its habitat in the Greater Yellowstone Area

Under the Conservation Strategy, a Biology and Monitoring Review is a process carried out by the Interagency Grizzly Bear Study Team. A Biology and Monitoring Review examines management of habitat, populations, or efforts of participating agencies to complete their required monitoring. Biology and Monitoring Reviews will be undertaken after the annual summary of monitoring information

presented to the Yellowstone Grizzly Coordinating Committee and in response to deviations from required population or habitat standards. Any Yellowstone Grizzly Coordinating Committee member agency can request a Biology and Monitoring Review be considered. Such consideration would be a topic for discussion by the Yellowstone Grizzly Coordinating Committee and the review would be initiated based on the decision of the Yellowstone Grizzly Coordinating Committee. The Biology and Monitoring Review process would be completed within six months and the resulting written report presented to the Yellowstone Grizzly Coordinating Committee and made available to the public. Two of the purposes of a Biology and Monitoring Review related to adaptive management are:

- To identify the reasons why particular demographic or habitat objectives have not been achieved and to recommend modifications to the Yellowstone Grizzly Coordinating Committee for changes as necessary
- To consider and establish a scientific basis for possible changes in management due to changed conditions in the ecosystem and make those recommendations to the Yellowstone Grizzly Coordinating Committee

The Yellowstone Grizzly Coordinating Committee will respond to the Biology and Monitoring Review in written form, through either the minutes of the Yellowstone Grizzly Coordinating Committee meeting or in specific Biology and Monitoring Review response documents, as necessary. The purpose of the Yellowstone Grizzly Coordinating Committee response is to address the issue(s) raised in the Biology and Monitoring Review with an explanation or management changes as necessary.

When habitat management changes have been identified through the Biology and Monitoring Review process, we (forest supervisors of the six Greater Yellowstone Area national forests) will use the forest plan amendment process to establish new direction or guidance for grizzly bear habitat to maintain the recovered grizzly bear population.

All action alternatives incorporate this adaptive management process to ensure continued coordination in sustaining the recovered grizzly bear population. Alternative 2-Modified goes beyond the direction in the Conservation Strategy by providing direction for coordination with states in implementing state management plans for grizzly bear occupancy outside the Primary Conservation Area. Additionally, the selected alternative provides direction for local public involvement in implementing food storage regulations in the areas determined to be biologically suitable and socially acceptable for grizzly bears outside the Primary Conservation Area. Additional monitoring added to the selected alternative outside the Primary Conservation Area will help provide a better picture of habitat conditions for grizzly bears in the Greater Yellowstone Area for adaptive management decisions by the Yellowstone Grizzly Coordinating Committee.

Alternative 4 provides direction for grizzly bear habitat outside the Primary Conservation Area. The strict requirements allow little room for flexibility in accommodating other uses and local considerations. The adaptive management approach described above, when coupled with using best available science in decision making, will ensure a timely response if conditions change for the grizzly bear. We will be able to make necessary adjustments in habitat monitoring and management in order to sustain a recovered grizzly bear population.

Part 4 Implementation

This forest plan amendment will be implemented no sooner than five (5) working days after the Final Rule delisting the Yellowstone grizzly population has been published in the Federal Register. If the grizzly bear is not delisted, existing forest plan direction for grizzly bears will remain in place.

The Interagency Grizzly Bear Guidelines and management situations as defined in the 1986 Guidelines no longer apply (except for Management Situation 3 on the Targhee National Forest).

If litigation occurs, implementation of the standards and guidelines depends on whether the court issues an injunction. Should the delisting of the grizzly bear be overturned, existing forest plan direction for grizzly bears would remain in place.

The Conservation Strategy emphasizes the importance of continued coordination and cooperative working relationships among management agencies to continue application of best available science and maintain effective actions to benefit the coexistence of grizzly bears and humans in the ecosystem. Through membership in the Yellowstone Grizzly Coordinating Committee, the Forest Service will work cooperatively with state wildlife management agencies and the National Park Service to meet the population goals identified in the Conservation Strategy and occupancy goals for biologically suitable and socially acceptable habitats as identified in the state grizzly bear management plans. The Wyoming Game and Fish Department has identified the biologically suitable and socially acceptable area for grizzly bears outside the Primary Conservation Area in Wyoming. Idaho's and Montana's state grizzly bear management plans have not yet identified specific areas that are socially acceptable for grizzly bear occupancy outside the Primary Conservation Area and will likely only do so on a case-by-case basis.

Further direction in special orders, cooperative agreements, and the Forest Service directives system will be followed; regional supplements to Forest Service Manual 2600, chapter 2670, will be approved before the grizzly bear is delisted and will include direction designating the grizzly bear as a sensitive species in Forest Service Regions 1 (Northern Region), 2 (Rocky Mountain Region), and 4 (Intermountain Region).

As forest plans are revised under the 2005 Forest Service planning regulations, the grizzly bear is expected to be designated a species of concern. The Forest Service provided the following statements to the U.S. Fish and Wildlife Service on March 23, 2006:

> After delisting, grizzly bears will be managed as a sensitive species on the six Yellowstone area National Forests under their amended land management plans. Under future revisions of these plans, we expect that grizzly bears will be designated as a "species of concern" (FSH 1909.12.43.22b (5)). This will ensure that components of the revised land management plans will provide the appropriate ecological conditions (i.e., habitats) necessary to continue to provide for a recovered population (FSM 1921.76c). In this way, the intent of the habitat standards in the Conservation Strategy and the amended land management plans will be perpetuated in future plans as they are revised.

Transition to the direction in this amendment

This decision does not affect or apply to existing occupancy and use authorized by permits, contracts, or other instruments implementing approved projects and activities. Using the monitoring items described in the appendix of this Record of Decision, ongoing projects other than those authorized by permits, contracts, or other instruments will be evaluated for compliance with the new direction. Any projects not in compliance with this direction will be mitigated using the Application Rules. All future projects will comply with the direction in this amendment.

4.1 Delisting

The U.S. Fish and Wildlife Service reviewed the status of the Yellowstone grizzly bear population under the Endangered Species Act and published the Proposed Rule to remove the Yellowstone Distinct

Population Segment from the federal list of endangered and threatened wildlife in the Federal Register on November 17, 2005[9].

After reviewing comments, the Final Rule regarding the proposal to delist the Yellowstone grizzly bear population will be published in the Federal Register. The Final Rule will address the status of the Yellowstone grizzly bear population according to the five factors in section 4(a)(1) of the Endangered Species Act. These factors include population and habitat status and the existence of adequate regulatory mechanisms, as described in the Conservation Strategy and other appropriate direction. This analysis will result in a determination by the U.S. Fish and Wildlife Service whether to delist the Yellowstone population or maintain protection under the Endangered Species Act. If the determination is that the bear no longer meets the Endangered Species Act's definition of threatened or endangered, the publication of the Final Rule will change the status of the Yellowstone grizzly bear population—the population will no longer be a listed species.

Part 5 Public involvement and issues

5.1 Public involvement process

The scoping period began when a Notice of Intent to prepare an environmental impact statement was published in the Federal Register on July 16, 2003. The Notice of Intent asked for public comment on the proposal from July 16 through August 15, 2003. On August 12, 2003, a revised Notice of Intent was published, extending the comment period to September 2, 2003. Additionally, as part of the public involvement process, a description of the proposed action was:

- Mailed to 3,577 individuals, organizations, and agencies in July 2003
- Published in news releases in local Greater Yellowstone Area newspapers
- Posted on the Web at http://www.fs.fed.us/r1/wildlife/igbc/Subcommittee/yes/YEamend/gb_internet.htm
- Listed on each forest's quarterly Schedule of Proposed Actions report beginning in the summer of 2003

Briefings were held with individuals and organizations, as requested. An email address was established to receive comments electronically. Nearly 55,000 responses were received, including 396 original responses and 54,505 organized campaign responses.

The Notice of Availability of the Draft Environmental Impact Statement was published in the Federal Register on August 13, 2004. The Draft Environmental Impact Statement was available on the Web and was mailed to 872 individuals, organizations, and agencies. Five open houses were held throughout the Greater Yellowstone Area. The 90-day comment period ended November 12, 2004. The Forest Service received 675 original responses and 44,984 organized campaign responses.

5.2 Summary of public comment

Public comment on the Draft Environmental Impact Statement was far-reaching, often highly detailed, and represented a wide range of values and perspectives with respect to grizzly bear management and area management in general.

Respondents expressed different views regarding the proposed forest plan amendment in the Draft Environmental Impact Statement. In general, people took one of two positions: preservation management as an objective of the Forest Service with support for continued federal protection of grizzly bears, or

[9] Federal Register Vol. 70, No. 221. Department of the Interior. Fish and Wildlife Service. Endangered and Threatened Wildlife and Plants; Designating the Greater Yellowstone Ecosystem Population of Grizzly Bears as a Distinct Population Segment; Removing the Yellowstone Distinct Population Segment of Grizzly Bears from the Federal List of Endangered and Threatened Wildlife; Proposed Rule.

multiple use management of national forests with support for delisting grizzly bears as this is seen as a positive step toward more state and local management of public lands.

Many respondents felt Alternative 2 was the best option for grizzly bears and the Greater Yellowstone Area because it allowed for multiple use management of public lands. These writers assert that the Forest Service, as mandated in the National Forest Management Act, should manage for "sustained yields of multiple use." A number of respondents valued motorized recreational use of public lands and felt Alternative 2 adequately accounted for this recreational activity. Additional multiple uses of value included livestock grazing rights and natural resource development. Other writers suggested Alternative 2 is supported by science and maintains consistency with other Forest Service plans. As one respondent stated, "More restrictive policies and standards are not required for grizzly management," and "The recovered population is no longer threatened or endangered."

Others believed that Alternative 1 is the best option because current forest plans provide suitable and adequate amounts of habitat for recovery of a viable grizzly bear population; what is not broken does not need to be fixed. "The current plans are working—they brought about the recovery." There is a perception that Alternatives 2, 3, and 4 would impose more restrictions on multiple use of public lands.

On the other hand, a number of respondents viewed Alternative 4 as the best alternative, given its emphasis on protected grizzly bear habitat. These writers state that Alternative 4 is the environmentally preferred option and is the only option to provide adequate protection for long-term grizzly bear survival.

A number of others mentioned the Forest Service should prohibit resource development and livestock grazing on public lands in the interest of preserving natural wildlife and wild and pristine areas. One respondent described the Forest Service as the "stewards of our natural, national heritage." Still another respondent expressed the philosophy of many preservation management respondents that limitations on human uses are a worthwhile sacrifice "in order for the grizzly to survive and continue its protection."

These different views frame the significant number of requests made by the public. Respondents submitted many requests for modification of alternatives regarding grizzly bear management and the proposed management of the Greater Yellowstone Area. These numerous requests relative to specific areas of management, in conjunction with all other concerns raised by the public, reveal how important Yellowstone grizzly bears and the Greater Yellowstone Area are to the public.

5.3 Government consultation

No American Indian reservations are located within the Primary Conservation Area. Several tribes have trust and treaty responsibilities and interests in the Greater Yellowstone Area.

Forest supervisors consulted with the Crow, Nez Perce, Northern Arapaho, Northern Cheyenne, Salish Kootenai, Shoshone, and Shoshone-Bannock tribes to initiate consultation regarding this forest plan amendment. Tribes were given the opportunity to provide input during the scoping period and during development of the Draft and Final Environmental Impact Statements.

5.4 Issues

As a result of the public participation process; review by other federal, state, tribal, and local government agencies; and internal reviews, significant issues were identified and are described in detail in chapter 1 in the Final Environmental Impact Statement. Some issues were used as a basis for developing alternatives. Other issues were used in development of mitigation measures, incorporated into management direction and guidance, or used to analyze effects.

Issue 1—adequate habitat standards

Many respondents requested more restrictive habitat standards or an extension of habitat standards to lands outside the Primary Conservation Area, or both, to provide additional protection for the grizzly bear, including habitat connectivity within the Greater Yellowstone Area. Some respondents requested the elimination of temporary changes in secure habitat, no new developed sites, mandatory phase out of sheep grazing, and establishing road density standards. Some felt logging would degrade habitat for the

bear. Others felt habitat standards should be extended to areas outside the Primary Conservation Area. Others requested fewer restrictions, including omitting the Plateau Bear Management Unit from habitat standards. Many respondents had concerns about 1998 as a baseline for resource management. Although the grizzly bear population achieved all demographic recovery targets by 1998 with this management regime in place, some respondents felt the baseline could be adjusted to allow either more management flexibility or increased protections for the grizzly bear. Some respondents mentioned key roadless areas for maintaining secure habitat.

Issue 2—changes in the Primary Conservation Area boundary

There were concerns about the size of the Primary Conservation Area. Some felt the size of the Primary Conservation Area is adequate because it has allowed the grizzly bear population to achieve all demographic recovery targets. Others felt the Primary Conservation Area is too small as habitats outside the Primary Conservation Area have been occupied by grizzly bears and contributed to the recovery of the grizzly bear. Others felt the Primary Conservation Area should be smaller and the numbers of bears reduced.

Issue 3—recreation opportunities

Many respondents had concerns that the habitat standards would result in reduced motorized recreation opportunities and in closing more roads. Some respondents were concerned about public safety while recreating in grizzly bear habitat. Although not part of the proposed action, concerns about food storage requirements were expressed and some respondents felt that black bear baiting should be restricted in grizzly bear habitat. There were concerns about the effects to special use permitted resorts, ski areas, and lodges if developed sites were limited to 1998 levels. Additionally, some respondents felt information and education could play an important role in how to recreate in bear country.

Issue 4—social and economic effects

Some respondents were concerned with the effects on income, employment, and lifestyle changes related to livestock operations, ranches, people associated with the timber industry, and recreation-related businesses. Some counties have passed resolutions banning the presence of grizzly bears and are concerned about the social and economic well being of their areas. Some expressed that reduced grazing could accelerate the breakup of ranches into subdivisions in the Greater Yellowstone Area if ranching were not economically viable.

Issue 5—vegetation, fuels, and access

Some respondents, including land managers, were concerned the standards would be too restrictive and would affect the ability to manage hazardous fuels; programs such as the Healthy Forests Initiative would be compromised and treatment of fuels in the wildland urban interface could be affected. Managers were concerned the proposed action (Alternative 2) would limit the administrative use of roads and motorized trails and the construction of roads and motorized trails—this potentially influences activities such as timber harvest, wildfire suppression, administrative management activities, and other uses associated with Forest Service roads and motorized trails.

Issue 6—minerals

Some respondents were concerned the habitat standards would limit oil and gas and mining and exploration programs because of limitations on developed sites and secure habitat. Others felt additional restrictions should be imposed on these programs.

Issue 7—food source stability

Some respondents said threats to food sources are not fully understood and must be further studied, suggesting major foods for bears, such as army cutworm moths, spawning cutthroat trout, whitebark pine nuts, and wild ungulate carcasses may not be available in future years because of disease or other threats. Some said fire prevention is a prime factor in the decline of whitebark pine. Some respondents felt that due to the uncertainty of the loss of these major foods, a larger area should be managed for grizzly bears.

Issue 8—connectivity and linkage between the six Greater Yellowstone Area national forests

Some respondents felt the ability for bears to move between important habitats in the Greater Yellowstone Area should be addressed. They suggested the Forest Service should increase efforts to

make the landscape in these linkage areas less lethal for bears through implementation of food storage requirements, elimination of domestic sheep, and habitat maintenance and restoration of degraded areas.

Issue 9—commercial livestock grazing

Some respondents were concerned about how much impact the habitat standards would have on livestock grazing, and in particular, what the effects would be from phasing out sheep grazing. Grizzly bear/livestock conflicts were also a concern, as well as changes in livestock operations.

Part 6 Alternatives considered

6.1 Alternatives considered in detail in the Final Environmental Impact Statement

Alternative 1—no action

Alternative 1 was the no action alternative. National Environmental Policy Act regulations require the Forest Service to identify the no action alternative and use it as a baseline for comparing the environmental consequences of the other alternatives (40 CFR 1502.14(d), and Forest Service Handbook 1909.15 Environmental Policy and Procedures, 14.1).

Under Alternative 1, current forest plans would continue to guide management of grizzly bear habitat in the recovery zone. Further direction in special orders, biological opinions issued by the U.S. Fish and Wildlife Service, cooperative agreements, and Forest Service manual and handbook direction would be followed.

The grizzly bear would retain its protected, threatened status under the Endangered Species Act and all forests would continue to consult with the U.S. Fish and Wildlife Service on all actions authorized, permitted, or carried out by the Forest Service.

Alternative 2—proposed action and preferred alternative in the Draft Environmental Impact Statement

Alternative 2 was presented as the proposed action during the scoping period and the preferred alternative in the Draft Environmental Impact Statement. The purpose of this alternative was to implement the appropriate habitat standards and monitoring protocols as documented in the Conservation Strategy.

This alternative would provide additional programmatic direction in the form of habitat standards and guidelines for management of grizzly bear habitat security, developed sites, nuisance grizzly bear management, and livestock grazing within the Primary Conservation Area. All standards applied only to the Primary Conservation Area.

Standards were based on 1998 human activity levels. By 1998, all demographic recovery criteria were met. The assumption was the levels of habitat security and other habitat conditions in 1998 provided the base environment that led to the recovery of the Yellowstone grizzly bear population.

Alternative 2-Modified—selected alternative

Alternative 2-Modified was developed in response to comments received on the Draft Environmental Impact Statement. A key concern was the lack of direction outside the Primary Conservation Area for grizzly bear habitat management. Alternative 2-Modified is similar to Alternative 2 but adds direction and guidance for management of grizzly bears related to livestock grazing, food storage, food sources, and monitoring of secure habitat, both inside and outside the Primary Conservation Area. Standard 4 of Alternative 2, stating that guidelines and management situations would no longer apply, was dropped because that direction will be described in this decision document.

Alternative 3

Alternative 3 was developed in response to comments suggesting the Forest Service provide more restrictive habitat protection for the grizzly bear inside the Primary Conservation Area. The purpose was to address the potential loss of major bear foods and further reduce the potential for grizzly bear/human conflicts and bear mortality inside the Primary Conservation Area. This alternative maintained the size of

the area where management direction would favor grizzly bears with more restrictive standards. The major differences between Alternatives 2 and 3 are that:

- No permanent or temporary reduction in secure habitat would be allowed and secure habitat would be increased
- Proposed increases in developed sites or capacity of developed sites could not be mitigated and would not be allowed
- Sheep grazing inside the Primary Conservation Area would be eliminated within three years, rather than phased out

Alternative 3 would require additional restrictions to resolve grizzly bear/human conflicts and protect important food sources, restrict off-road travel (except over-the-snow use) to designated routes, eliminate over-the-snow use in grizzly bear denning areas, and not allow new oil and gas leases.

Standards were based on 1998 human activity levels. The secure habitat and developed site standards would apply to each of the Bear Management Unit subunits on National Forest System lands inside the Primary Conservation Area.

Alternative 4—environmentally preferred

This alternative was developed in response to comments suggesting the Forest Service extend grizzly bear habitat protection beyond the Primary Conservation Area. The purpose was to address the potential future loss of major bear foods, increase the probability of habitat connectivity with other ecosystems, improve linkage and connectivity between key habitats within the six Greater Yellowstone Area national forests, and further reduce the potential for grizzly bear/human conflicts and bear mortality throughout the Greater Yellowstone Area.

This alternative increased the size of the area where management direction would favor grizzly bears with the more restrictive standards described for Alternative 3. For Alternative 4, the boundary outside the Primary Conservation Area and the standards and guidelines were developed using information obtained from scoping. Existing evaluations of suitable habitat and linkage areas for grizzly bears within the six Greater Yellowstone Area national forests were used as the basis for delineation of this boundary (Walker and Craighead 1997, Willcox and Ellenberger 2000, Merrill and Mattson 2004).

Standards were based on 1998 human activity levels inside the Primary Conservation Area and 2003 levels in areas outside the Primary Conservation Area. The secure habitat and developed site standards would have applied to each of the Bear Management Unit subunits and analysis areas on National Forest System lands inside this delineated area.

6.2 Alternatives not considered in detail

Alternative 5

Alternative 5 proposed implementation of the appropriate habitat standards and monitoring protocols as documented in the Conservation Strategy (similar to Alternative 2), plus less restrictive habitat direction for areas outside the Primary Conservation Area. These areas were described in the state management plans. The interdisciplinary team initiated detailed study of this alternative until determining it was similar to Alternative 4. Alternative 5 would extend habitat standards outside the Primary Conservation Area to nearly the same area as Alternative 4. Standards would be less restrictive than Alternative 4. A complete analysis was unnecessary because effects would have been within the range of effects for Alternatives 2 and 4.

Alternative 6

This alternative was developed in response to public comments suggesting the Forest Service reduce the area of habitat protection and the amount of restrictions for the grizzly bear. In particular, the Plateau Bear Management Unit would be removed from the Primary Conservation Area. This alternative was not given further detailed study because it did not meet the purpose and need for action, which is to ensure conservation of habitat to support continued recovery of the grizzly bear population in the Greater Yellowstone Area national forests.

During the planning process to revise the Targhee Forest Plan, public comments were received suggesting that the Plateau Bear Management Unit be removed. This suggestion was made based on the perception that the Plateau Bear Management Unit was poor quality habitat and had low grizzly bear use.

During 1993 and 1994, a technical committee appointed by the Yellowstone Ecosystem Subcommittee conducted a study to evaluate habitat capability and grizzly bear use in the Plateau Bear Management Unit. Results and recommendations from that study are summarized in the Final Environmental Impact Statement (section 2.2.2).

Other alternatives

Many public comments included variations on providing additional habitat protection for the grizzly bear through extension of habitat standards beyond the Primary Conservation Area. Some of the reasons were to address the potential future loss of major bear foods and increase the probability of habitat connectivity with other ecosystems. Some comments called for extending habitat standards either to occupied grizzly bear habitat, or to inventoried roadless areas, or to all National Forest System lands in the Greater Yellowstone Area. These alternatives were combined and are represented by Alternative 4.

Another suggestion was termination or removal of existing oil and gas leases as one variation of Alternative 4. The variation was not considered in detail because the Forest Service and Bureau of Land Management have limited opportunities to implement this alternative. For more discussion, see section 2.2.3 in the Final Environmental Impact Statement.

Part 7 Legally required findings

7.1 National Environmental Policy Act

Consideration of long- and short-term effects

The Final Environmental Impact Statement considered current effects to the significant issues and other resources and projected effects from 10 to 25 years.

Unavoidable adverse effects

Decisions made on this forest plan amendment do not represent irreversible or irretrievable commitments of resources. Any proposed disturbance to resources cannot occur without further analyses and decision documents. For a detailed discussion of effects, see chapter 3 of the Final Environmental Impact Statement.

Environmentally preferable alternative(s)

Regulations implementing the National Environmental Policy Act require agencies to specify "the alternative or alternatives which are considered to be environmentally preferable" (40 CFR 1505.2(b)). The environmentally preferable alternative causes the least damage to the biological and physical environments and best protects, preserves, and enhances historical, cultural, and natural resources. Based on the description of the alternatives considered in detail in the Final Environmental Impact Statement and this Record of Decision, we have determined that Alternative 4 best meets the goals of Section 101 of the National Environmental Policy Act and is therefore the environmentally preferable alternative for this proposed federal action.

7.2 National Forest Management Act

We find that this amendment is not significant under the National Forest Management Act regulations, based on our evaluation of the four factors described below. This finding is made pursuant to the 1982 National Forest Management Act regulations as allowed for by the 2005 National Forest Management Act regulations at 36 CFR 219.14(d)(2).

The 1982 National Forest Management Act regulations direct that "based on an analysis of the objectives, guidelines, and other contents of the Forest Plan, the Forest Supervisor shall determine whether a proposed amendment would result in a significant change in the plan. If the change resulting

from the proposed amendment is determined to be significant, the Forest Supervisor shall follow the same procedure as that required for development and approval of a Forest Plan [i.e., conduct a plan revision]. If the change resulting from the amendment is determined not to be significant for the purposes of the planning process, the Forest Supervisor may implement the amendment following appropriate public notification and satisfactory completion of National Environmental Policy Act procedures" (36 CFR 219.10(f) (1982). The test we are using to determine significance for the forest plan amendment includes four factors.

Timing

Identify when the change is to take place. Determine whether the change is necessary during or after the plan period (the first decade) or whether the change is to take place after the next scheduled revision of the forest plan.

Figure 7 displays the approval dates for the forest plans for the six forests as well as the proposed completion dates for their revisions. The amendment takes place late in the life of the plans and according to the FSH 1909.12, chapter 5.32, "the later the change, the less likely it is to be significant for the current forest plan." Although this amendment occurs late in the lifespan of the forest plans, these changes are necessary to ensure conservation of habitat to sustain the recovered Yellowstone grizzly bear population.

Location and size

Determine the location and size of the area involved in the change. Define the relationship of the affected area to the overall planning area.

In reviewing the Final Environmental Impact Statement, we concluded that although the six Greater Yellowstone Area national forests (the planning area) include a very large area—approximately 13 million acres—the standards and some guidelines apply only to the Primary Conservation Area, which is 28 percent of the planning area. Other guidelines will apply to areas determined to be socially acceptable and biologically suitable for grizzly bears, which could include an additional 50 percent of the planning area outside the Primary Conservation Area.

Goals, objectives, and outputs

Determine whether the change alters long-term relationships between the levels of goods and services projected by the forest plan. Consider whether an increase in one type of output would trigger an increase or decrease in another. Determine where there is a demand for goods or services not discussed in the forest plan.

Amendment of the plans for grizzly bear habitat conservation as outlined in Alternative 2-Modified will not alter the level of goods and services provided on the six national forests in the Greater Yellowstone Area. We have considered effects on key goods and services that are provided by the Greater Yellowstone Area national forests, including recreation, livestock grazing, timber harvest, fire management, and minerals. We determined the levels of goods and services can continue at present levels and the amendments will not alter long-term relationships between the levels of goods and services projected by the forest plan.

Management prescription

Determine whether the change in a management prescription is only for a specific situation or whether it would apply to future decisions throughout the planning areas. Determine whether the change alters the desired future condition of the land and resources or the anticipated goods and services to be produced.

This action does not change management prescriptions or alter management area boundaries. It does not alter the desired future condition of the land and resources or the anticipated goods and services to be produced.

Figure 7. Land and resource management plans to be amended.

National forest	Forest Service region	Land and resource management plan to be amended	Year plan approved	Year scheduled for plan revision completion[1]
Beaverhead-Deerlodge	Region 1	Beaverhead Forest Plan	1986	2006
Bridger-Teton	Region 4	Bridger-Teton National Forest Land and Resource Management Plan	1990	2007
Caribou-Targhee	Region 4	1997 Revised Forest Plan—Targhee National Forest	1997	2010
Custer	Region 1	Custer National Forest and Grasslands Land and Resource Management Plan (amendment applies only to the Beartooth Ranger District)	1986	2009
Gallatin	Region 1	Gallatin National Forest Plan	1987	2009
Shoshone	Region 2	Shoshone National Forest Land and Resource Management Plan	1986	2007

[1] USDA Forest Service 2005d.

7.3 Endangered Species Act

The Endangered Species Act creates an affirmative obligation ". . . that all federal departments and agencies shall seek to conserve endangered and threatened (and proposed) species" of fish, wildlife, and plants. This obligation is further clarified in a National Interagency Memorandum of Agreement (August 30, 2000) which states our shared mission to ". . . enhance conservation of imperiled species while delivering appropriate goods and services provided by the lands and resources."

Based upon a consultation agreement with the USFWS and in accordance with Forest Service direction for listed species, we completed biological assessments for all listed species. For all listed species, except the grizzly bear and the gray wolf, we determined the preferred alternative would have "no effect" on these species. The determination for the gray wolf was that the preferred alternative was "not likely to jeopardize the continued existence" of the gray wolf. The determination for the grizzly bear was "not likely to adversely effect." Biological assessments were submitted to the USFWS as a courtesy, but are not required for "no effect" determinations. The USFWS provided written review as required by Section 7 of the ESA for the gray wolf and grizzly bear.

7.4 National Historic Preservation Act

This forest plan amendment is a programmatic action and does not authorize site-specific activities. Projects undertaken in response to the direction in the amendment will comply fully with the laws and regulations that ensure protection of cultural resources.

It is our determination that the forest plan amendment complies with the National Historic Preservation Act and other statutes that pertain to the protection of cultural resources.

7.5 Invasive Species (Executive Order 13112)

Executive Order 13112 directs federal agencies not to authorize any activities that would increase the spread of invasive species. The forest plan amendment is a programmatic action and does not authorize site-specific activities.

We have determined the forest plan amendment complies with Executive Order 13112.

7.6 Environmental Justice (Executive Order 12898)

Executive Order 12898 directs federal agencies to identify and address, as appropriate, any disproportionately high and adverse human health or environmental effects on minority populations and low-income populations.

We have determined from the analyses disclosed in the Final Environmental Impact Statement that the forest plan amendment complies with Executive Order 12898.

7.7 Prime Farmland, Rangeland, and Forest Land

We have determined from the analyses disclosed in the Final Environmental Impact Statement that prime farmland, rangeland, and forest land will not be affected because the selected alternative is a programmatic action and does not authorize site-specific activities.

7.8 Equal Employment Opportunity, Effects on Minorities, Women

The Final Environmental Impact Statement describes the impacts to social and economic factors in chapter 3. The selected alternative will not have a disproportionate impact on any minority or low-income communities. We have determined the selected alternative will not differentially affect the civil rights on any citizens, including women and minorities.

7.9 Wetlands and Floodplains (Executive Orders 11988 and 11990)

The selected alternative is a programmatic action and does not authorize site-specific activities. We have determined the selected alternative will not have adverse impacts on wetlands and floodplains and will comply with Executive Orders 11988 and 11990.

7.10 Other policies

The existing body of national direction for managing national forests remains in effect.

Part 8 Administrative review

This decision is subject to review pursuant to 36 CFR 217.3. Any appeals must be postmarked or received by the Appeal Reviewing Officer within 45 days of the date the legal notice is published in the Cody Enterprise, the lead newspaper of record. Courtesy notices will be published in other newspapers, but the publication date in the Cody Enterprise determines the appeal period.

Appeals must be sent to:

Regional Forester
Intermountain Region USFS
324 25th Street
Ogden, UT 84401

Appeals may be hand-delivered to the above address during regular business hours, 8:00 am to 4:30 pm Monday through Friday, excluding holidays; or sent by fax to 801.625.5277; or by email to appeals-intermtn-regional-office@fs.fed.us. Emailed appeals must be submitted in rich text format (.rtf) or Word (.doc) and must include the project name in the subject line.

Any notice of appeal must be fully consistent with 36 CFR 217.9 and include at a minimum:

- A statement that the document is a Notice of Appeal filed pursuant to 36 CFR Part 217
- The name, address, and telephone number of the appellant
- Identify the decision to which the objection is being made
- Identify the document in which the decision is contained, by title and subject, date of the decision, and name and title of the Deciding Officer

- Specifically identify the portion(s) of the decision to which objection is made
- The reasons for the appeal, including issues of fact, law, regulation, or policy and, if applicable, specifically how the decision violates law, regulation, or policy
- Identification of the specific change(s) in the decision that the appellant seeks

8.1 Further information and contact person

The Forest Plan Amendment for Grizzly Bear Habitat Conservation for the Greater Yellowstone Area National Forests Final Environmental Impact Statement, Executive Summary, and this Record of Decision are available on the Web at
http://www.fs.fed.us/r1/wildlife/igbc/Subcommittee/yes/YEamend/gb_internet.htm

For further information regarding the Final Environmental Impact Statement, Record of Decision, or amendment, contact:

Mr. Kim Barber
Shoshone National Forest
808 Meadow Lane Avenue
Cody, WY 82414
Telephone 307.527.6241

8.2 Responsible officials

Bruce Ramsey — 4-18-06
Bruce Ramsey — Date
Forest Supervisor, Beaverhead-Deerlodge National Forest

Kniffy Hamilton — April 18, 2006
Carole 'Kniffy' Hamilton — Date
Forest Supervisor, Bridger-Teton National Forest

Lawrence A Timchak — 4-18-06
Lawrence A. Timchak — Date
Forest Supervisor, Caribou-Targhee National Forest

Nancy T. Curriden — April 18, 2006
Nancy T. Curriden — Date
Forest Supervisor, Custer National Forest

Rebecca Heath — April 18, 2006
Rebecca Heath — Date
Forest Supervisor, Gallatin National Forest

Rebecca Aus — April 18, 2006
Rebecca Aus — Date
Forest Supervisor, Shoshone National Forest

Appendix—Forest plan amendment for grizzly bear habitat conservation

This Forest Plan Amendment for Grizzly Bear Habitat Conservation amends forest plans on the six Greater Yellowstone Area national forests: the Beaverhead-Deerlodge, Bridger-Teton, Caribou-Targhee, Custer, Gallatin, and Shoshone National Forests.

This is

- Amendment Number 10 to the 1986 Beaverhead Forest Plan
- Amendment Number 8 to the 1990 Bridger-Teton National Forest Land and Resource Management Plan
- Amendment Number 3 to the 1997 Revised Forest Plan—Targhee National Forest
- Amendment Number 42 to the 1987 Custer National Forest and Grasslands Land and Resource Management Plan
- Amendment Number 27 to the 1987 Gallatin National Forest Plan
- Amendment Number 2006-001 to the 1986 Shoshone National Forest Land and Resource Management Plan

Introduction

The goal, standards, guidelines, and monitoring described in this amendment provide management direction to ensure conservation of grizzly bear habitat to support the recovered Yellowstone grizzly bear population inside and outside the Primary Conservation Area.

The purpose and need for this amendment is to:

- Ensure conservation of grizzly bear habitat to support the recovered Yellowstone grizzly bear population
- Update the management and monitoring of grizzly bear habitat to incorporate recent interagency recommendations and agreements, as described in the Final Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Area
- Improve consistency among Greater Yellowstone Area national forests in managing grizzly bear habitat
- Ensure the adequacy of regulatory mechanisms for grizzly bear habitat protection upon delisting as identified in the Grizzly Bear Recovery Plan

The Forest Service, as a signee of the Memorandum of Understanding detailing agency agreements to implement the Final Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Area (Conservation Strategy), uses its authorities to maintain and enhance the recovered status of the grizzly bear in the Greater Yellowstone Area. This includes implementing the regulatory mechanisms, interagency cooperation, population and habitat management and monitoring, and other provisions of the Conservation Strategy. The Forest Service is a member of the Yellowstone Grizzly Coordinating Committee and is part of the adaptive management process as identified in the Biology and Monitoring Review section of the Conservation Strategy.

Further direction in special orders, cooperative agreements, and the Forest Service directives system will be followed; regional supplements to Forest Service Manual 2600, chapter 2670, will be approved before the grizzly bear is delisted and will include direction designating the grizzly bear as a sensitive species in Forest Service Regions 1 (Northern Region), 2 (Rocky Mountain Region), and 4 (Intermountain Region).

As forest plans are revised under the 2005 Forest Service planning regulations, the grizzly bear is expected to be designated a species of concern. The Forest Service provided the following statements to the U.S. Fish and Wildlife Service on March 23, 2006:

> After delisting, grizzly bears will be managed as a sensitive species on the six Yellowstone area National Forests under their amended land management plans. Under future revisions of these plans, we expect that grizzly bears will be designated as a "species of concern" (FSH 1909.12.43.22b (5)). This will ensure that components of the revised land management plans will provide the appropriate ecological conditions (i.e., habitats) necessary to continue to provide for a recovered population

(FSM 1921.76c). In this way, the intent of the habitat standards in the Conservation Strategy and the amended land management plans will be perpetuated in future plans as they are revised.

While the management direction in this amendment provides a firm foundation for grizzly bear habitat management, the Forest Service recognizes that habitat management is dynamic and that new information is constantly being developed. The direction in this amendment embraces an adaptive management approach—as conditions change, so will management direction. Future changes, based on monitoring and evaluation, will involve public involvement and collaboration and will incorporate best available science.

How this amendment is organized

This amendment is organized into four parts.

Part 1 describes the grizzly bear habitat conservation goal, standards and Application Rules, guidelines and Application Rules, and monitoring.

Part 2 describes the 1998 baseline values for habitat standards inside the Primary Conservation Area and habitat effectiveness.

Part 3 is the nuisance bear standards from the 2003 Final Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Area.

Part 4 includes the following figures:

- Figure A-1. Criteria and definitions used in this amendment.
- Figure A-2. Map showing Bear Management Units and subunits in the Primary Conservation Area.
- Figure A-3. General Bear Management Unit subunit information inside the Primary Conservation Area.
- Figure A-4. The 1998 baseline values for secure habitat, OMARD >1 mile per square mile and TMARD >2 miles per square mile for 40 Bear Management Unit subunits in the Greater Yellowstone Area. Includes Forest Service, Bureau of Land Management, state, county, and private motorized access routes.
- Figure A-5. The 1998 baseline values for secure habitat, OMARD >1 mile per square mile and TMARD >2 miles per square mile for 40 Bear Management Unit subunits in the Greater Yellowstone Area. Includes only private roads and state and county highways.
- Figure A-6. Acres and national forest/national park overlap when applying the 1 percent rule.
- Figure A-7. The 1998 baseline for numbers of developed sites.
- Figure A-8. Number of mining claims as of 1998.
- Figure A-9. Number of commercial livestock grazing allotments and sheep animal months in 1998.
- Figure A-10. 1998 Cumulative Effects Model habitat effectiveness values by season.

Amendment part 1—Goal, standards, guidelines, and monitoring

Within the Primary Conservation Area, there are 18 Bear Management Units and 40 Bear Management Unit subunits totaling 5,894,000 acres (Figures A-2, A-3, and A-4). The major land management agencies include six national forests and two national parks.

Grizzly bear habitat conservation goal

Manage grizzly bear habitat within the Primary Conservation Area to sustain the recovered Yellowstone grizzly bear population. Outside the Primary Conservation Area in areas identified in state grizzly bear management plans as biologically suitable and socially acceptable for grizzly bear occupancy, accommodate grizzly bear populations to the extent that accommodation is compatible with the goals and objectives of other uses.

Grizzly bear habitat conservation standard for secure habitat

Inside the Primary Conservation Area, maintain the percent of secure habitat in Bear Management Unit subunits at or above 1998 levels. Projects that change secure habitat must follow the Application Rules.

Application Rules for changes in secure habitat

Permanent changes to secure habitat. A project may permanently change secure habitat if secure habitat of equivalent habitat quality (as measured by the Cumulative Effects Model or equivalent technology) is replaced in the same Bear Management Unit subunit. The replacement habitat must be maintained for a minimum of 10 years and be either in place before project implementation or concurrent with project development. Increases in secure habitat may be banked to offset the impacts of future projects of that administrative unit within that subunit.

Temporary changes to secure habitat. Projects can occur with temporary reductions in secure habitat if all the following conditions are met:

- Only one active project per Bear Management Unit subunit can occur at any one time.
- The total acreage of active projects within a given Bear Management Unit does not exceed 1 percent of the acreage in the largest subunit within that Bear Management Unit (Figure A-6). The acreage of a project that counts against the 1 percent limit is the acreage associated with the 500-meter buffer around any gated or open motorized access route or recurring low level helicopter flight line, where the buffer extends into secure habitat.
- To qualify as a temporary project, implementation will last no longer than three years.
- Secure habitat must be restored within one year after completion of the project.
- Project activities should be concentrated in time and space to the extent feasible.

Acceptable activities in secure habitat. Activities that do not require road construction, reconstruction, opening a permanently restricted road, or recurring helicopter flight lines at low elevation do not detract from secure habitat. Examples of such activities include thinning, tree planting, prescribed fire, trail maintenance, and administrative studies/monitoring. Activities should be concentrated in time and space to the extent feasible to minimize disturbance. Effects of such projects will be analyzed in the National Environmental Policy Act process.

- Helicopter use for short-term activities such as prescribed fire ignition/management, periodic administrative flights, fire suppression, search and rescue, and other similar activities do not constitute a project and do not detract from secure habitat.
- Motorized access routes with permanent barriers, decommissioned or obliterated roads, non-motorized trails, winter snow machine trails, and other motorized winter activities do not count against secure habitat.
- Project activities occurring between December 1 and February 28 do not count against secure habitat.
- Minimize effects on grizzly habitat from activities based in statutory rights, such as access to private lands under the Alaska National Interest Lands Conservation Act and the 1872 General Mining Law. Where the mitigated effects exceed the 1998 baseline within the affected subunit, compensate secure habitat to levels at or above the 1998 baseline, in this order: 1) in adjacent subunits, or 2) nearest subunits, or 3) in areas outside the Primary Conservation Area adjacent to the subunit impacted.
- Honor existing oil and gas and other mineral leases. Proposed Applications for Permit to Drill and operating plans within those leases should meet the Application Rules for changes in secure habitat. New leases, Applications for Permit to Drill, and operating plans must meet the secure habitat and developed site standards.

Grizzly bear habitat conservation standard for developed sites

Inside the Primary Conservation Area, maintain the number and capacity of developed sites at or below 1998 levels, with the following exceptions: any proposed increase, expansion, or change of use of developed sites from the 1998 baseline in the Primary Conservation Area (Figure A-7) will be analyzed and potential detrimental and positive impacts on grizzly bears will be documented through biological evaluation or assessment. Projects that change the number or capacity of developed sites must follow the Application Rules.

Application Rules for developed sites

Mitigation of detrimental impacts must occur within the affected subunit and be equivalent to the type and extent of impact. Mitigation measures must be in place before implementation of the project or included as an integral part of the completion of the project.

- New sites must be mitigated within that subunit to offset any increases in human capacity, habitat loss, and increased access to surrounding habitats. Consolidation and/or elimination of dispersed campsites is adequate mitigation for increases in human capacity at developed campgrounds if the new site capacity is equivalent to the dispersed camping eliminated.
- Administrative site expansions are exempt from human capacity mitigation expansion if such developments are necessary for enhancement of management of public lands and other viable alternatives are not available. Temporary construction work camps for highway construction or other major maintenance projects are exempt from human capacity mitigation if other viable alternatives are not available. Food storage facilities and management, including camp monitors, must be in place to ensure food storage compliance. All other factors resulting in potential detrimental impacts to grizzly bears must be mitigated as identified for other developed sites.
- To benefit the grizzly bear, capacity, season of use, and access to surrounding habitats of existing developed sites may be adjusted. The improvements may then be banked to mitigate equivalent impacts of future developed sites within that subunit.
- Minimize effects on grizzly habitat from activities based in statutory rights, such as the 1872 General Mining Law. Where the mitigated effects exceed the 1998 baseline within that subunit, provide mitigation to levels at or below the 1998 baseline in this order: 1) adjacent subunits, or 2) the nearest subunit, or 3) in areas outside the Primary Conservation Area adjacent to the subunit impacted. Mitigation for Mining Law site impacts must follow standard developed site mitigation to offset any increases in human capacity, habitat loss, and increased access to surrounding habitats.
- Honor existing oil and gas and other mineral leases. Proposed Applications for Permit to Drill and operating plans within those leases should meet the developed site standard. New leases, Applications for Permit to Drill, and operating plans must meet the developed site standard.
- Developments on private land are not counted against this standard.

Grizzly bear habitat conservation standard for livestock grazing

Inside the Primary Conservation Area, do not create new active commercial livestock grazing allotments, do not increase permitted sheep animal months from the 1998 baseline (Figure A-9), and phase out existing sheep allotments as opportunities arise with willing permittees.

Application Rule for livestock grazing standard

Allotments include both vacant and active commercial grazing allotments. Reissuance of permits for vacant cattle allotments may result in an increase in the number of permitted cattle, but the number of allotments must remain at or below the 1998 baseline. Allow combining or dividing existing allotments as long as acreage in allotments does not increase. Any such use of vacant cattle allotments resulting in an increase in permitted cattle numbers could be allowed only after an analysis to evaluate impacts on grizzly bears.

Grizzly bear habitat conservation guideline for livestock grazing

Inside the Primary Conservation Area, cattle allotments or portions of cattle allotments with recurring conflicts that cannot be resolved through modification of grazing practices may be retired as opportunities arise with willing permittees. Outside the Primary Conservation Area in areas identified in state management plans as biologically suitable and socially acceptable for grizzly bear occupancy, livestock allotments or portions of allotments with recurring conflicts that cannot be resolved through modification of grazing practices may be retired as opportunities arise with willing permittees.

Application Rule for livestock grazing guideline

Permittees with allotments with recurring conflicts will be given the opportunity to place livestock in a vacant allotment outside the Primary Conservation Area where there is less likelihood for conflicts with grizzly bears as these allotments become available.

Grizzly bear habitat conservation standard for nuisance bears

Coordinate with state wildlife management agencies to apply Conservation Strategy nuisance bear standards.

Grizzly bear habitat conservation standard for food storage

Inside the Primary Conservation Area, minimize grizzly bear/human conflicts using food storage, information and education, and other management tools.

Grizzly bear habitat conservation guideline for food storage

Outside the Primary Conservation Area in areas identified in state management plans as biologically suitable and socially acceptable for grizzly bear occupancy, emphasize proper sanitation techniques, including food storage orders, and information and education, while working with local governments and other agencies.

Grizzly bear habitat conservation guideline for winter motorized access

Inside the Primary Conservation Area, use localized area restrictions to address conflicts with winter use activities, where conflicts occur during denning or after bear emergence in the spring.

Grizzly bear habitat conservation guideline for food sources

Inside and outside the Primary Conservation Area in areas identified in state management plans as biologically suitable and socially acceptable for grizzly bear occupancy, maintain the productivity, to the extent feasible, of the four key grizzly bear food sources as identified in the Conservation Strategy. Emphasize maintaining and restoring whitebark pine stands inside and outside the Primary Conservation Area.

Grizzly bear habitat conservation monitoring for secure habitat and motorized access

Inside the Primary Conservation Area, monitor, compare to the 1998 baseline, and annually submit for inclusion in the Interagency Grizzly Bear Study Team Annual Report: secure habitat, open motorized access route density (OMARD) greater than one mile per square mile, and total motorized access route density (TMARD) greater than two miles per square mile in each subunit on the national forest. Outside the Primary Conservation Area in areas identified in state management plans as biologically suitable and socially acceptable for grizzly bear occupancy, monitor, and submit for inclusion in the Interagency Grizzly Bear Study Team Annual Report: changes in secure habitat by national forest every two years.

Grizzly bear habitat conservation monitoring for developed sites

Inside the Primary Conservation Area, monitor, and annually submit for inclusion in the Interagency Grizzly Bear Study Team Annual Report: changes in the number and capacity of developed sites on the national forest, and compare with the 1998 baseline.

Grizzly bear habitat conservation monitoring for livestock grazing

Inside the Primary Conservation Area, monitor, compare to the 1998 baseline, and annually submit for inclusion in the Interagency Grizzly Bear Study Team Annual Report: the number of commercial livestock grazing allotments on the national forest and the number of permitted domestic sheep animal months. Inside and outside the Primary Conservation Area, monitor and evaluate allotments for recurring conflicts with grizzly bears.

Grizzly bear habitat conservation monitoring for habitat effectiveness

Inside the Primary Conservation Area, monitor, and every five years submit for inclusion in the Interagency Grizzly Bear Study Team Annual Report: changes in seasonal habitat effectiveness in each Bear Management Unit and subunit on the national forest through the application of the Cumulative Effects Model or the best available system and compare outputs to the 1998 baseline. Annually review Cumulative Effects Model databases and update as needed. When funding is available, monitor representative non-motorized trails or access points where risk of grizzly bear mortality is highest.

Grizzly bear habitat conservation monitoring for whitebark pine

Monitor whitebark pine occurrence, productivity, and health inside and outside the Primary Conservation Area in cooperation with other agencies. Annually submit for inclusion in the Interagency Grizzly Bear Study Team Annual Report: results of whitebark pine cone production from transects or other appropriate methods, and results of other whitebark pine monitoring.

Amendment part 2—The 1998 baseline

The 1998 baseline values for habitat standards inside the Primary Conservation Area

The 1998 baseline represents an estimate of the habitat standards within the Primary Conservation Area as of 1998. That estimate relied on the best data available of what was known to be on the ground at the time. Baseline data establish a set of information against which future improvements and /or impacts can be assessed. As new information is available, the database will be adjusted and will serve as a tracking system for monitoring improvements and evaluating habitat conditions and the need for mitigation measures in the future. Any feature(s) not included in this 1998 baseline will be reviewed to determine its status in 1998. If the feature was present in 1998, it will be added to the baseline tables or maps, otherwise the feature will be subject to the standards and Application Rules identified in this amendment.

Secure habitat and motorized access route density within the Primary Conservation Area for each Bear Management Unit subunit

Using Geographic Information System databases created by each administrative unit, the percent secure habitat, OMARD greater than one mile per square mile, and TMARD greater than two miles per square mile were estimated as of 1998 for each Bear Management Unit subunit (Figure A-4). OMARD is evaluated for each of two seasons, as access routes may be restricted in one season and not another. TMARD and secure habitat are single values by definition and do not vary by season. The contribution of private roads and state and county highways was also evaluated for each Bear Management Unit subunit (Figure A-5). These values represent a minimum percent for OMARD and TMARD, and a maximum percent for secure habitat even if all motorized access features administered by the Forest Service were obliterated or decommissioned on National Forest System lands. A standardized program (AML) that runs in the ARC/INFO software environment was used to make the calculations. The buffer command in ARC/INFO is used to buffer all relevant motorized access features by 500 meters. The area outside of this buffer is secure habitat. Motorized access route density is calculated using a moving windows process with 30-meter cells and a one-mile square window.

Developed sites on public lands within the Primary Conservation Area

Developed sites include all sites on public land developed or improved for human use or resource development such as campgrounds, trailheads, lodges, administrative sites, service stations, summer homes, restaurants, visitor centers, and permitted resource development sites such as oil and gas exploratory wells, production wells, plans of operation for minerals activities, work camps, etc. Developed sites on public lands are currently inventoried in existing Geographic Information System databases and are an input item to the Cumulative Effects Model. Figure A-7 displays the number of developed sites for each administrative unit by Bear Management Unit subunit as of 1998.

Livestock grazing on public lands within the Primary Conservation Area

There were 100 commercial livestock grazing allotments inside the Primary Conservation Area in 1998 and 23,090 permitted sheep animal months (Figure A-9). Allotments with less than 100 acres inside the Primary Conservation Area were not included. Where several allotments are managed as one, this was counted as a single allotment. Sheep animal months are calculated by multiplying the permitted number of sheep times the months of permitted use. In many cases, actual use by sheep may have been less than the permitted numbers identified for 1998.

Habitat effectiveness

Habitat effectiveness outputs from the Cumulative Effects Model as of 1998 are presented in Figure A-10. Habitat effectiveness is a relative measure of that part of the energy potentially derived from the area that is available to bears given their response to humans. The higher the number the greater the habitat

effectiveness. The high values in the estrus period are associated with cutthroat trout spawning streams, high values in early hyperphagia are a result of moth aggregation sites, and high values in late hyperphagia are primarily due to whitebark pine. Habitat effectiveness is calculated using the ICE9 software, which evaluates information contained in several Geographic Information System and tabular databases. The databases include digital maps of vegetation, ungulate winter ranges, and point, linear and dispersed human activities; coefficient tables that categorize the relative values of vegetation and human activities; and tables that identify the type, intensity, and duration of the human activities.

Amendment part 3—Nuisance bear standards

Nuisance bear standards from the 2003 Final Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Area[10]

The focus and intent of nuisance grizzly bear management inside and outside the Primary Conservation Area are predicated on strategies and actions to prevent grizzly bear/human conflicts. It is recognized that active management aimed at individual nuisance bears will be required in both areas (inside and outside the Primary Conservation Area). Management actions outside the Primary Conservation Area will be implemented according to state management plans in coordination with landowners and land management agencies. These actions will be compatible with grizzly bear population management objectives for each state for the areas outside the Primary Conservation Area.

General criteria

Location, cause of incident, severity of incident, history of bear, health/age/sex of bear, and the demographic characteristics of animals involved will all be considered in any relocation or removal. Removal of nuisance bears will be carefully considered and consistent with mortality limits for the Greater Yellowstone Area as described in the Conservation Strategy. Recognizing that conservation of female bears is essential to maintenance of a grizzly population, removal of nuisance females will be minimized.

Within the Primary Conservation Area

Within the Primary Conservation Area, management of nuisance bears will be addressed according to the following standards:

- Bears displaying food conditioning and/or habituation behaviors may be either relocated or removed based on specific details of the incident. State wildlife agencies, following consultation with other appropriate management authorities, and national parks will make this judgment after considering the cause, location, and severity of the incident or incidents.
- Bears may be relocated as many times as judged prudent by management authorities. No bear may be removed for any offense, other than unnatural aggression, without at least one relocation unless representatives of affected agencies document the reason in writing. All relocations outside the Primary Conservation Area will be governed by state management plans.
- Bears may be preemptively moved when they are in areas where they are likely to come into conflicts with site-specific human activities, but only as a last resort. Such preemptive moves will not count against the bear as nuisance moves.
- Bears preying on lawfully present livestock (cows, domestic sheep, horses, goats, llamas, etc.) on public lands will be managed according to the following criteria:
    - No grizzly bear involved in livestock depredations inside the Primary Conservation Area shall be removed unless it has been relocated at least one time and continues to cause livestock depredations. This does not apply to depredations occurring in sheep allotments inside the Primary Conservation Area in areas that were designated Management Situation 1[11] under the 1986 Interagency Grizzly Bear Guidelines.

[10] This section is included from the March 2003 Final Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Area and is for reference only. The Conservation Strategy is subject to interagency review and updating. Readers should check for the most recent version of the document.

[11] Management Situation 1 areas are described in the Final Environmental Impact Statement.

- Grizzly bears will not be removed or relocated from sheep allotments on federal land inside the Primary Conservation Area in areas that were designated Management Situation 1 under the 1986 Interagency Grizzly Bear Guidelines.

- Before any removal, except in cases of human safety, management authorities will consult by telephone or in person to judge the adequacy of the reason for removal.
- Bears displaying natural aggression are not to be removed, even if the aggression results in human injury or death, unless it is the judgment of management authorities that the particular circumstances warrant removal.
- Bears displaying unnatural aggression will be removed from the population.
- Decisions will be based on criteria for relocation and removal inside the Primary Conservation Area for management of nuisance bears in the Conservation Strategy and best biological judgment of authorities.
  - Authorized National Park Service authorities will implement removals and relocations within Yellowstone National Park and Grand Teton National Park.
  - Authorized state authorities outside Yellowstone National Park and Grand Teton National Park will implement other removals and relocations.
  - State wildlife agencies, in coordination with the appropriate federal agencies, will predetermine adequate and available sites for relocations. Relocation sites should be agreed upon before the need for relocation occurs. In order to deal with problem bears more efficiently, managers should have full access to relocation sites without having to conduct individual consultation for each relocation.
  - Livestock damage prevention and compensation are addressed in individual state management plans.
- Management of all nuisance bear situations will emphasize removal of the human cause of the conflict, when possible, or management and education actions to limit such conflicts. Relocation and removal of grizzly bears may occur if the above actions are not successful.

Specific criteria for removals

Captured grizzly bears identified for removal may be given to public research institutions or public zoological parks for appropriate non-release educational or scientific purposes as per regulations of states and national parks. Grizzly bears not suitable for release, research, or educational purposes will be removed as described in appropriate state management plans or in compliance with national park rules and regulations.

Outside of national parks, individual nuisance bears deemed appropriate for removal may be taken by a legal hunter in compliance with rules and regulations promulgated by the appropriate state wildlife agency commission, as long as such taking is in compliance with existing state and federal laws, and as long as mortality limits specified for the Greater Yellowstone Area as described in the Conservation Strategy are not exceeded. This could include licensed hunters or property owners or their agents who have obtained appropriate permits from the state. Licensed hunters will be allowed to possess bear parts for bears that are legally harvested under a state permit.

Monitoring protocol

All nuisance bear control actions, and grizzly bear/human and grizzly bear/livestock conflicts will be summarized annually in the Annual Report of the Interagency Grizzly Bear Study Team. This report will detail the cause and location of each conflict and management action and display an annual spatial distribution of conflicts that can be used by managers to identify where problems occur and to compare trends in locations, sources, land ownership, and types of conflicts.

Amendment part 4—Figures

Figure A-1. Criteria and definitions used in this amendment.

Criteria	Definition
Motorized access routes	Motorized access routes are all routes having motorized use or the potential for motorized use (restricted roads) including motorized trails, highways, and forest roads. Private roads and state and county highways are counted.
Restricted road	A restricted road is a road on which motorized vehicle use is restricted seasonally or yearlong. The road requires effective physical obstruction, generally gated.
Permanently restricted road	A permanently restricted road is a road restricted with a permanent barrier and not a gate. A permanently restricted road is acceptable within secure habitat.
Decommissioned or obliterated or reclaimed road	A decommissioned or obliterated or reclaimed road refers to a route which is managed with the long-term intent for no motorized use, and has been treated in such a manner to no longer function as a road. An effective means to accomplish this is through one or a combination of several means including recontouring to original slope, placement of logging or forest debris, planting of shrubs or trees, etc.
Secure habitat	Secure habitat is more than 500 meters from an open or gated motorized access route or recurring helicopter flight line. Secure habitat must be greater than or equal to 10 acres in size[12]. Large lakes (greater than one square mile) are not included in the calculations.
Project	A project is an activity requiring construction of new roads, reconstructing or opening a permanently restricted road, or recurring helicopter flights at low elevations. Opening a gated road for public or administrative use is not considered a project as the area behind locked, gated roads is not considered secure habitat.
Temporary project	To qualify as a temporary project under the Application Rules, project implementation will last no longer than three years.
Opening a permanently restricted road	Removing permanent barriers such that the road is accessible to motorized vehicles.
Permanent barrier	A permanent barrier refers to such features as earthen berms or ripped road surfaces to create a permanent closure.
Removing motorized routes	To result in an increase in secure habitat, motorized routes must either be decommissioned or restricted with permanent barriers, not gates. Non-motorized use is permissible.
Seasonal periods	Season 1 – March 1 through July 15 Season 2 – July 16 through November 30 Project activities occurring between December 1 and February 28 do not count against secure habitat.
Developed site	A developed site includes but is not limited to sites on public land developed or improved for human use or resource development such as campgrounds, trailheads, improved parking areas, lodges (permitted resorts), administrative sites, service stations, summer homes (permitted recreation residences), restaurants, visitor centers, and permitted resource development sites such as oil and gas exploratory wells, production wells, plans of operation for mining activities, work camps, etc.
Vacant allotments	Vacant allotments are livestock grazing allotments without an active permit, but could be restocked or used periodically by other permittees at the discretion of the land management agency to resolve resource issues or other concerns.
Recurring conflicts	Recurring grizzly bear/human or grizzly bear/livestock conflicts are defined as three or more years of recorded conflicts during the most recent five-year period.

[12] Secure habitat in this amendment does not include areas open to cross country off-highway vehicle (OHV) travel.

Figure A-2. Bear Management Units and subunits inside the Primary Conservation Area.

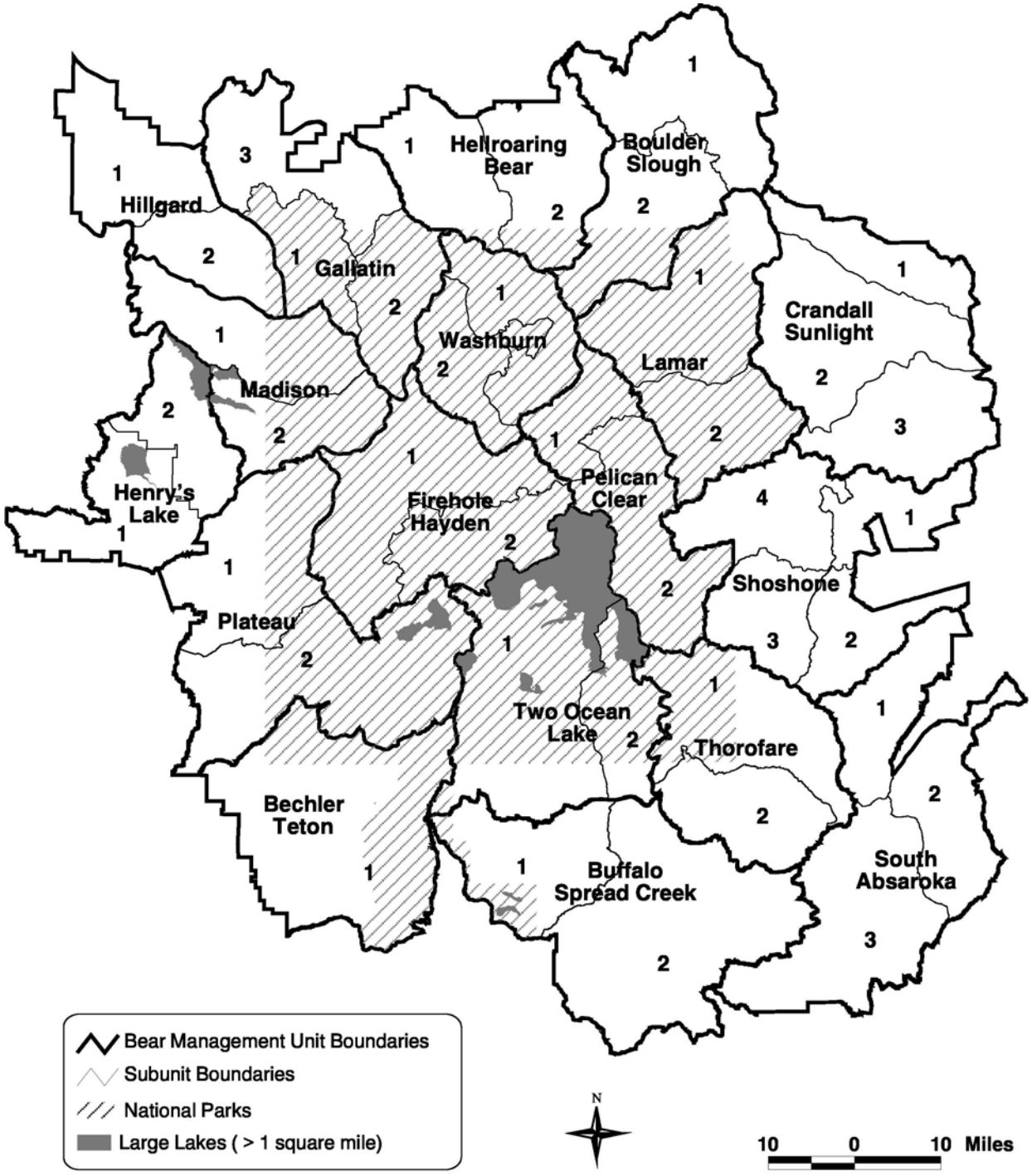


Figure A-3. General Bear Management Unit (BMU) subunit information (thousands of acres) inside the Primary Conservation Area.

Subunit name	BMU #	Acres	Land management agencies
Bechler/Teton	18	341.8	Caribou-Targhee NF, Yellowstone NP, Grand Teton NP
Boulder/Slough #1	4	180.5	Custer NF, Gallatin NF
Boulder/Slough #2	4	148.5	Custer NF, Gallatin NF, Yellowstone NP
Buffalo/Spread Creek #1	17	142.1	Bridger-Teton NF, Grand Teton NP
Buffalo/Spread Creek #2	17	325.1	Bridger-Teton NF
Crandall/Sunlight #1	6	83.2	Gallatin NF, Shoshone NF
Crandall/Sunlight #2	6	202.2	Gallatin NF, Shoshone NF
Crandall/Sunlight #3	6	142.1	Shoshone NF
Firehole/Hayden #1	10	217.0	Yellowstone NP
Firehole/Hayden #2	10	113.3	Yellowstone NP
Gallatin #1	2	81.9	Yellowstone NP
Gallatin #2	2	99.2	Yellowstone NP
Gallatin #3	2	139.5	Gallatin NF
Hellroaring/Bear #1	3	118.4	Gallatin NF, Yellowstone NP
Hellroaring/Bear #2	3	146.6	Gallatin NF, Yellowstone NP
Henrys Lake #1	12	128.6	Caribou-Targhee NF
Henrys Lake #2	12	97.9	Caribou-Targhee NF, Gallatin NF
Hilgard #1	1	128.6	Beaverhead-Deerlodge NF, Gallatin NF
Hilgard #2	1	90.2	Beaverhead-Deerlodge NF, Gallatin NF
Lamar #1	5	192.0	Yellowstone NP
Lamar #2	5	115.8	Yellowstone NP
Madison #1	11	145.3	Beaverhead-Deerlodge NF, Gallatin NF
Madison #2	11	100.5	Gallatin NF
Pelican/Clear #1	8	69.1	Yellowstone NP

Subunit name	BMU #	Acres	Land management agencies
Pelican/Clear #2	8	164.5	Yellowstone NP
Plateau #1	13	183.0	Caribou-Targhee NF, Gallatin NF, Yellowstone NP
Plateau #2	13	268.8	Caribou-Targhee NF, Yellowstone NP
Shoshone #1	7	78.1	Shoshone NF
Shoshone #2	7	84.5	Shoshone NF
Shoshone #3	7	90.2	Shoshone NF
Shoshone #4	7	121.0	Shoshone NF
South Absaroka #1	16	104.3	Shoshone NF
South Absaroka #2	16	122.2	Shoshone NF
South Absaroka #3	16	222.7	Shoshone NF
Thorofare #1	15	175.4	Bridger-Teton NF, Yellowstone NP
Thorofare #2	15	115.2	Bridger-Teton NF, Yellowstone NP
Two Ocean/Lake #1	14	310.4	Bridger-Teton NF, Yellowstone NP
Two Ocean/Lake #2	14	91.5	Bridger-Teton NF, Yellowstone NP
Washburn #1	9	113.9	Yellowstone NP
Washburn #2	9	92.2	Yellowstone NP

Figure A-4. The 1998 baseline values for secure habitat, OMARD >1 mile per square mile, and TMARD >2 miles per square mile for 40 Bear Management Unit (BMU) subunits in the Greater Yellowstone Area. Includes Forest Service, Bureau of Land Management, state, county, and private motorized access routes. Size is shown in thousands of acres[1].

Subunit name	BMU #	OMARD % > 1 mi/sq mi		TMARD % >2 mi/sq mi	% secure habitat	Size
		S1	S2			
Bechler/Teton	18	12.7	12.7	4.7	78.1	341.8
Boulder/Slough #1	4	2.2	2.2	0.1	96.6	180.5
Boulder/Slough #2	4	1.0	1.0	0	97.7	148.5
Buffalo/Spread Creek #1	17	10.1	10.2	4.1	88.3	142.1 (140.8)
Buffalo/Spread Creek #2	17	13.3	14.5	10.4	74.3	325.1
Crandall/Sunlight #1	6	11.9	16.2	4.0	81.1	83.2
Crandall/Sunlight #2	6	13.6	14.6	8.9	82.3	202.2
Crandall/Sunlight #3	6	12.8	16.6	8.2	80.4	142.1
Firehole/Hayden #1	10	6.3	6.3	1.2	88.4	217.0
Firehole/Hayden #2	10	6.3	6.3	0.9	88.4	113.3
Gallatin #1	2	1.6	1.6	0.1	96.3	81.9
Gallatin #2	2	7.8	7.8	3.8	90.2	99.2
Gallatin #3	2	41.5	42.5	16.9	55.3	139.5
Hellroaring/Bear #1	3	20.8	21.5	13.5	77.0	118.4
Hellroaring/Bear #2	3	0.6	0.6	0.2	99.5	146.6
Henrys Lake #1	12	44.7	44.7	25.9	45.4	128.6 (122.2)

Subunit name	BMU #	OMARD % > 1 mi/sq mi		TMARD % >2 mi/sq mi	% secure habitat	Size
		S1	S2			
Henrys Lake #2	12	46.1	46.1	28.1	45.7	97.9 (89.6)
Hilgard #1	1	25.1	25.1	12.5	69.8	128.6
Hilgard #2	1	16.0	16.0	10.3	71.5	90.2
Lamar #1	5	7.0	7.0	3.3	89.4	192.0
Lamar #2	5	0	0	0	100	115.8
Madison #1	11	24.2	24.5	10.2	71.5	145.3
Madison #2	11	31.7	31.7	22.3	66.5	100.5 (95.4)
Pelican/Clear #1	8	1.3	1.3	0.4	97.8	69.1
Pelican/Clear #2	8	3.0	3.0	0.2	94.1	164.5
Plateau #1	13	19.0	19.2	9.8	68.9	183.0
Plateau #2	13	6.1	6.1	2.4	88.7	268.8
Shoshone #1	7	1.5	1.5	0.9	98.5	78.1
Shoshone #2	7	1.1	1.1	0.4	98.8	84.5
Shoshone #3	7	3.4	3.4	1.3	97.0	90.2
Shoshone #4	7	3.9	4.6	2.0	94.9	121.0
South Absaroka #1	16	0.4	0.4	0	99.2	104.3
South Absaroka #2	16	0	0	0	99.9	122.2
South Absaroka #3	16	2.1	2.1	2.3	96.8	222.7

Subunit name	BMU #	OMARD % > 1 mi/sq mi		TMARD % >2 mi/sq mi	% secure habitat	Size
		S1	S2			
Thorofare #1	15	0	0	0	100	175.4
Thorofare #2	15	0	0	0	100	115.2
Two Ocean/Lake #1	14	1.8	1.8	0.1	96.3	310.4 (238.1)
Two Ocean/Lake #2	14	0	0	0	100	91.5 (80.0)
Washburn #1	9	12.4	12.4	2.9	83.0	113.9
Washburn#2	9	3.6	3.6	0.7	92.0	92.2
Mean for PCA/total acres		10.4	10.7	5.3	85.6	5,893.8 (5,782.4)

[1] Lakes >1 mile in size were removed from subunit totals, OMARD, TMARD, and secure habitat calculations. Numbers in parentheses are acres of subunit without these lakes.

Figure A-5. The 1998 baseline values for secure habitat, OMARD >1 mile per square mile, and TMARD >2 miles per square mile for 40 Bear Management Unit (BMU) subunits in the Greater Yellowstone Area. Includes only private roads and state and county highways[2]. Size is shown in thousands of acres[1,2].

Subunit name	BMU #	OMARD % > 1 mi/sq mi		TMARD % >2 mi/sq mi	% secure habitat[2]	Size
		S1	S2			
Bechler/Teton	18	0	0	0	99	341.8
Boulder/Slough #1	4	2	2	0	97	180.5
Boulder/Slough #2	4	0	0	0	100	148.5
Buffalo/Spread Creek #1	17	0	0	0	99	142.1 (140.8)
Buffalo/Spread Creek #2	17	2	2	0	95	325.1
Crandall/Sunlight #1	6	6	6	1	92	83.2
Crandall/Sunlight #2	6	8	8	1	89	202.2
Crandall/Sunlight #3	6	5	5	1	93	142.1
Firehole/Hayden #1	10	0	0	0	100	217.0
Firehole/Hayden #2	10	0	0	0	100	113.3
Gallatin #1	2	0	0	0	99	81.9
Gallatin #2	2	1	1	0	99	99.2
Gallatin #3	2	16	16	8	81	139.5
Hellroaring/Bear #1	3	9	9	4	91	118.4
Hellroaring/Bear #2	3	0	0	0	100	146.6
Henrys Lake #1	12	31	31	16	67	128.6 (122.2)

Subunit name	BMU #	OMARD % > 1 mi/sq mi		TMARD % >2 mi/sq mi	% secure habitat[2]	Size
		S1	S2			
Henrys Lake #2	12	14	14	7	85	97.9 (89.6)
Hilgard #1	1	6	6	2	91	128.6
Hilgard #2	1	2	2	3	92	90.2
Lamar #1	5	2	2	1	97	192.0
Lamar #2	5	0	0	0	100	115.8
Madison #1	11	6	6	3	94	145.3
Madison #2	11	8	8	4	90	100.5 (95.4)
Pelican/Clear #1	8	0	0	0	100	69.1
Pelican/Clear #2	8	0	0	0	100	164.5
Plateau #1	13	2	2	1	95	183.0
Plateau #2	13	0	0	0	99	268.8
Shoshone #1	7	1	1	0	99	78.1
Shoshone #2	7	0	0	0	99	84.5
Shoshone #3	7	1	1	0	98	90.2
Shoshone #4	7	1	1	0	96	121.0
South Absaroka #1	16	0	0	0	99	104.3
South Absaroka #2	16	0	0	0	100	122.2
South Absaroka #3	16	0	0	0	100	222.7

Subunit name	BMU #	OMARD % > 1 mi/sq mi		TMARD % >2 mi/sq mi	% secure habitat[2]	Size
		S1	S2			
Thorofare #1	15	0	0	0	100	175.4
Thorofare #2	15	0	0	0	100	115.2
Two Ocean/Lake #1	14	0	0	0	100	310.4 (238.1)
Two Ocean/Lake #2	14	0	0	0	100	91.5 (80.0)
Washburn #1	9	0	0	0	100	113.9
Washburn#2	9	0	0	0	100	92.2
Mean for PCA/total acres		3	3	1.3	96	5,893.8 (5,782.4)

[1] Lakes >1 square mile in size were removed from subunit totals, OMARD, TMARD, and secure habitat calculations. Numbers in parentheses are acres of subunit without these lakes.

[2] These motorized features are not subject to Forest Service management. The values in this table represent a minimum percent for OMARD and TMARD, and a maximum percent for secure habitat even if all motorized access features administered by the Forest Service were obliterated or decommissioned on public lands.

Figure A-6. Acres (in thousands) and national forest/national park overlap when applying the 1 percent rule[1].

BMU #	Largest BMU subunit	1% rule acres[2]	National forest(s) within the BMU	National parks within the BMU
18	Bechler/Teton #1	3.4	Targhee	Yellowstone, Grand Teton
4	Boulder/Slough #1	1.8	Custer, Gallatin	Yellowstone
17	Buffalo/Spread Creek #2	3.3	Bridger-Teton	Grand Teton
6	Crandall/Sunlight #2	2.0	Gallatin, Shoshone	
10	Firehole/Hayden #1	2.2		Yellowstone
2	Gallatin #3	1.4	Gallatin	Yellowstone
3	Hellroaring/Bear #2	1.5	Gallatin	Yellowstone
12	Henrys Lake #1	1.2	Gallatin, Targhee	
1	Hilgard #1	1.3	Beaverhead, Gallatin	Yellowstone
5	Lamar #1	1.9	Custer, Gallatin	Yellowstone
11	Madison #1	1.5	Gallatin	Yellowstone
8	Pelican/Clear #2	1.6		Yellowstone
13	Plateau #2	2.7	Gallatin, Targhee	Yellowstone
7	Shoshone #4	1.2	Shoshone	
16	South Absaroka #3	2.2	Shoshone	
15	Thorofare #1	1.2	Bridger-Teton	Yellowstone
14	Two Ocean/Lake #1	2.4	Bridger-Teton	Yellowstone, Grand Teton
9	Washburn #1	1.1		Yellowstone
PCA	Total 1% rule acres	34.4		
	Total 1% rule acres—BMUs with national parks only	4.9		
	Total 1% rule acres—BMUs with national forests only	6.6		
	Total 1% rule acres—BMUs with national forests plus national parks	22.9		

[1] The 1 percent rule is based on the size of the largest BMU subunit. When BMU boundaries include more than one national forest and/or national park, administrative units will need to coordinate to ensure the 1 percent rule is not exceeded.
[2] Large lakes not included in 1 percent rule acre calculations.

Figure A-7. The 1998 baseline for numbers of developed sites on public lands within each of the Bear Management Unit subunits in the Greater Yellowstone Area.

Subunit	Administrative units	Permitted summer home complexes[1]	Developed campgrounds[2]	Trailheads	Major developed sites and lodges	Administrative or maintenance sites	Other developed sites[3]	Plans of operation for minerals activities[4]
Bechler/Teton	Targhee NF Yellowstone NP Grand Teton NP	0 0 0	1 0 8	5 2 3	2 0 1	4 2 3	17 2 10	0 0 0
Boulder/Slough #1	Custer NF Gallatin NF	0 0	0 1	1 7	0 0	0 1	0 3	6 2
Boulder/Slough #2	Gallatin NF Yellowstone NP	0 0	0 1	0 3	0 0	2 2	0 1	0 0
Buffalo/Spread Creek #1	Bridger-Teton NF Grand Teton NP	0 0	1 0	1 7	0 2	0 2	1 3	0 0
Buffalo/Spread Creek #2	Bridger-Teton NF	1	4	3	3	4	5	2
Crandall/Sunlight #1	Shoshone NF Gallatin NF	0 0	2 1	5 2	1 0	1 0	5 5	0 0
Crandall/Sunlight #2	Shoshone NF Gallatin NF	0 0	5 1	4 0	1 0	2 0	5 0	1 0
Crandall/Sunlight #3	Shoshone NF Wyoming Game and Fish	0 0	2 2	3 0	0 0	1 1	2 0	0 0
Firehole/Hayden #1	Yellowstone NP	0	1	5	1	6	13	0
Firehole/Hayden #2	Yellowstone NP	0	1	3	1	2	8	0
Gallatin #1	Yellowstone NP	0	0	3	0	1	0	0
Gallatin #2	Yellowstone NP	0	2	5	1	12	1	0
Gallatin #3	Gallatin NF Yellowstone NP	0 0	2 0	10 0	0 0	0 0	7 0	0 0

Subunit	Administrative units	Permitted summer home complexes[1]	Developed campgrounds[2]	Trailheads	Major developed sites and lodges	Administrative or maintenance sites	Other developed sites[3]	Plans of operation for minerals activities[4]
Hellroaring/Bear #1	Gallatin NF Yellowstone NP	0 0	5 0	12 1	1 0	1 0	5 1	8[5] 0
Hellroaring/Bear #2	Gallatin NF Yellowstone NP	0 0	0 0	1 0	0 0	1 2	0 0	0 0
Henrys Lake #1	Targhee NF	2	3	1	0	3	10	1
Henrys Lake #2	Targhee NF Gallatin NF	0 6	0 3	1 4	0 0	1 0	1 2	1 0
Hilgard #1	Beaverhead NF Gallatin NF	0 0	0 0	0 6	0 1	3 2	0 2	0 0
Hilgard #2	Gallatin NF Yellowstone NP	0 0	0 0	4 3	0 0	1 0	1 0	0 0
Lamar #1	Yellowstone NP Gallatin NF Shoshone NF Custer NF	0 0 0 0	1 2 0 0	5 5 0 1	0 0 0 0	3 6 0 0	2 4 0 0	0 6 0 2
Lamar #2	Yellowstone NP	0	0	0	0	4	0	0
Madison #1	Gallatin NF Yellowstone NP	0 0	1 0	11 0	0 0	1 0	9 0	0 0
Madison #2	Gallatin NF Yellowstone NP	8 0	2 0	1 1	1 0	6 2	6 1	0 0
Pelican/Clear #1	Yellowstone NP	0	0	2	0	0	0	0
Pelican/Clear #2	Yellowstone NP	0	1	4	1	4	3	0
Plateau #1	Targhee NF Gallatin NF Yellowstone NP	1 0 0	0 0 0	0 1 0	0 0 0	0 0 1	1 0 0	0 0 0
Plateau #2	Targhee NF Yellowstone NP	0 0	1 0	1 0	0 0	1 4	1 0	0 0
Shoshone #1	Shoshone NF	1	2	0	0	0	6	0

Subunit	Administrative units	Permitted summer home complexes[1]	Developed campgrounds[2]	Trailheads	Major developed sites and lodges	Administrative or maintenance sites	Other developed sites[3]	Plans of operation for minerals activities[4]
Shoshone #2	Shoshone NF	0	0	1	1	0	0	0
Shoshone #3	Shoshone NF	2	0	1	1	0	0	0
Shoshone #4	Shoshone NF	3	3	3	6	0	8	0
South Absaroka #1	Shoshone NF	0	0	0	0	0	0	0
South Absaroka #2	Shoshone NF	0	0	0	0	2	0	0
South Absaroka #3	Shoshone NF	1	3	4	1	1	4	0
Thorofare #1	Bridger-Teton NF Yellowstone NP	0 0	0 0	0 0	0 0	0 4	0 0	0 0
Thorofare #2	Bridger-Teton NF Yellowstone NP	0 0	0 0	0 0	0 0	2 0	0 0	0 0
Two Ocean/Lake #1	Yellowstone NP Bridger-Teton NF Grand Teton NP	0 0 0	2 1 0	3 0 1	1 0 0	3 0 0	2 0 1	0 0 0
Two Ocean/Lake #2	Yellowstone NP Bridger-Teton NF	0 0	0 0	0 0	0 0	2 1	0 0	0 0
Washburn #1	Yellowstone NP	0	2	8	2	7	6	0
Washburn #2	Yellowstone NP	0	1	6	0	1	4	0
Primary Conservation Area	All	25	68	164	29	115	168	29

[1] Single permitted recreation residences are classified as other developed sites in this table.
[2] Four trailheads on the Bridger-Teton National Forest are combined with the associated campgrounds and are considered a single developed site.
[3] Includes community infrastructure sites and other miscellaneous facilities.
[4] Mining claims with plans of operation are considered developed sites for this baseline. Currently, not all sites have active projects.
[5] Includes one mineral materials site with an outside contractor.

Figure A-8. Number of mining claims as of 1998 in Bear Management Unit subunits in the Primary Conservation Area[1].

Subunit	Gallatin NF	Custer NF	Caribou-Targhee NF	Shoshone NF	Bridger-Teton NF
Boulder/Slough #1	8	144	---	---	---
Buffalo/Spread Creek #1	---	---	---	---	14
Buffalo/Spread Creek #2	---	---	---	---	6
Hellroaring/Bear #1	653	---	---	---	---
Henrys Lake #1	---	---	5	---	---
Henrys Lake #2	---	---	3	---	---
Lamar #1	429	42	---	---	---
Shoshone #3	---	---	---	16	---
South Absaroka #2	---	---	---	28	---
South Absaroka #3	---	---	---	6	---
Total	1,090	186	8	50	20

[1] Activities based in statutory rights, such as oil and gas leases and mining claims under the 1872 General Mining Law are also tracked as part of the developed site monitoring effort. Mining claims and or oil and gas leases do not in and of themselves constitute a site development, but have the potential to be developed sometime in the future. There were no oil and gas leases inside the Primary Conservation Area as of 1998, and 1,354 mining claims in ten subunits inside the Primary Conservation Area. It is important to note that one mining claim does not necessarily mean a potential for one operating plan. Claims are often staked around known mineral deposits to protect the original claim, and operating plans can sometimes encompass hundreds of claims. In addition, there are always a number of claims filed that, after detailed exploration, do not prove to have enough mineralization to be economically developed. Claims or claim groups with approved operating plans are included in the developed site baseline (Figure A-7).

Figure A-9. Number of commercial livestock grazing allotments and sheep animal months (AMs) inside the Primary Conservation Area in 1998.

Administrative unit	Cattle allotments		Sheep allotments		Sheep AMs[1]
	Active[2]	Vacant[3]	Active[1]	Vacant[3]	
Beaverhead-Deerlodge NF	2	3	0	0	0
Bridger-Teton NF	9	0	0	0	0
Caribou-Targhee NF	9	1	7	4	14,163
Custer NF	0	0	0	0	0
Gallatin NF	24	9	2	3	3,540
Shoshone NF	24	0	2	0	5,387
Grand Teton NP	1	0	0	0	0
Total in PCA	69	13	11	7	23,090

[1]Since 1998, five of the seven active sheep allotments on the Caribou-Targhee National Forest and the two active sheep allotments on the Shoshone National Forest within the Primary Conservation Area have been closed. As of 2004, there are only four active sheep allotments in side the Primary Conservation Area, totaling 7,130 AMs.

[2] One of the active cattle allotments on the Bridger-Teton National Forest was closed in late 2003.

[3]Vacant allotments are those without an active permit but could used periodically by other permittees at the discretion of the land management agency to resolve resource issues or other concerns.

Figure A-10. 1998 Habitat effectiveness (HE) values by season from the Yellowstone grizzly bear Cumulative Effects Model for each of 40 Greater Yellowstone Area grizzly Bear Management Unit subunits[1].

Subunit	Spring (March 1 - May 15) HE	Estrus (May 16 - July 15) HE	Early hyperphagia (July 16 - August 31) HE	Late hyperphagia (September 1 - November 30) HE
Bechler/Teton#1	116	64	44	274
Boulder/Slough#1	105	105	119	853
Boulder/Slough#2	123	112	111	521
Buffalo/Spread Cr#1	79	86	78	267
Buffalo/Spread Cr#2	58	98	125	863
Crandall/Sunlight#1	53	94	78	800
Crandall/Sunlight#2	52	82	124	329
Crandall/Sunlight#3	53	50	156	208
Firehole/Hayden#1	96	189	162	244
Firehole/Hayden#2	45	843	66	342
Gallatin#1	139	144	198	635
Gallatin#2	104	97	105	585
Gallatin#3	78	69	89	599
Hellroaring/Bear#1	85	74	95	678
Hellroaring/Bear#2	117	99	98	628

Subunit	Spring (March 1 - May 15) HE	Estrus (May 16 - July 15) HE	Early hyperphagia (July 16 - August 31) HE	Late hyperphagia (September 1 - November 30) HE
Henrys Lake#1	41	39	32	178
Henrys Lake#2	41	41	33	225
Hilgard#1	99	68	91	614
Hilgard#2	81	97	132	902
Lamar#1	127	118	136	571
Lamar#2	132	167	180	795
Madison#1	53	115	227	390
Madison#2	41	60	147	63
Pelican/Clear#1	103	324	105	560
Pelican/Clear#2	105	2253	203	997
Plateau#1	26	49	36	109
Plateau#2	75	81	56	442
Shoshone#1	39	50	115	264
Shoshone#2	51	56	1424	387
Shoshone#3	65	57	583	484
Shoshone#4	57	78	327	392

Subunit	Spring (March 1 - May 15) HE	Estrus (May 16 - July 15) HE	Early hyperphagia (July 16 - August 31) HE	Late hyperphagia (September 1 - November 30) HE
South Absaroka#1	55	57	392	399
South Absaroka#2	41	45	339	250
South Absaroka#3	46	73	303	551
Thorofare #1	84	488	298	956
Thorofare #2	79	82	295	583
Two Ocean/Lake#1	115	1300	64	426
Two Ocean/Lake#2	117	2401	107	1079
Washburn#1	121	110	126	404
Washburn#2	99	86	85	272

[1] Weaver et al. 1986, Bevins 1997, Dixon 1997. HE values are based on productivity coefficients depicting an average year (Mattson et al. 2004). The higher the number the greater the HE.