



Snake River Activity/Operations Plan Revision

Environmental Assessment ID310-2006-EA-3398



BLM Idaho Falls District, Upper Snake Field Office
Caribou-Targhee National Forest, Palisades Ranger District

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CHAPTER 1 INTRODUCTION

1.1 Background

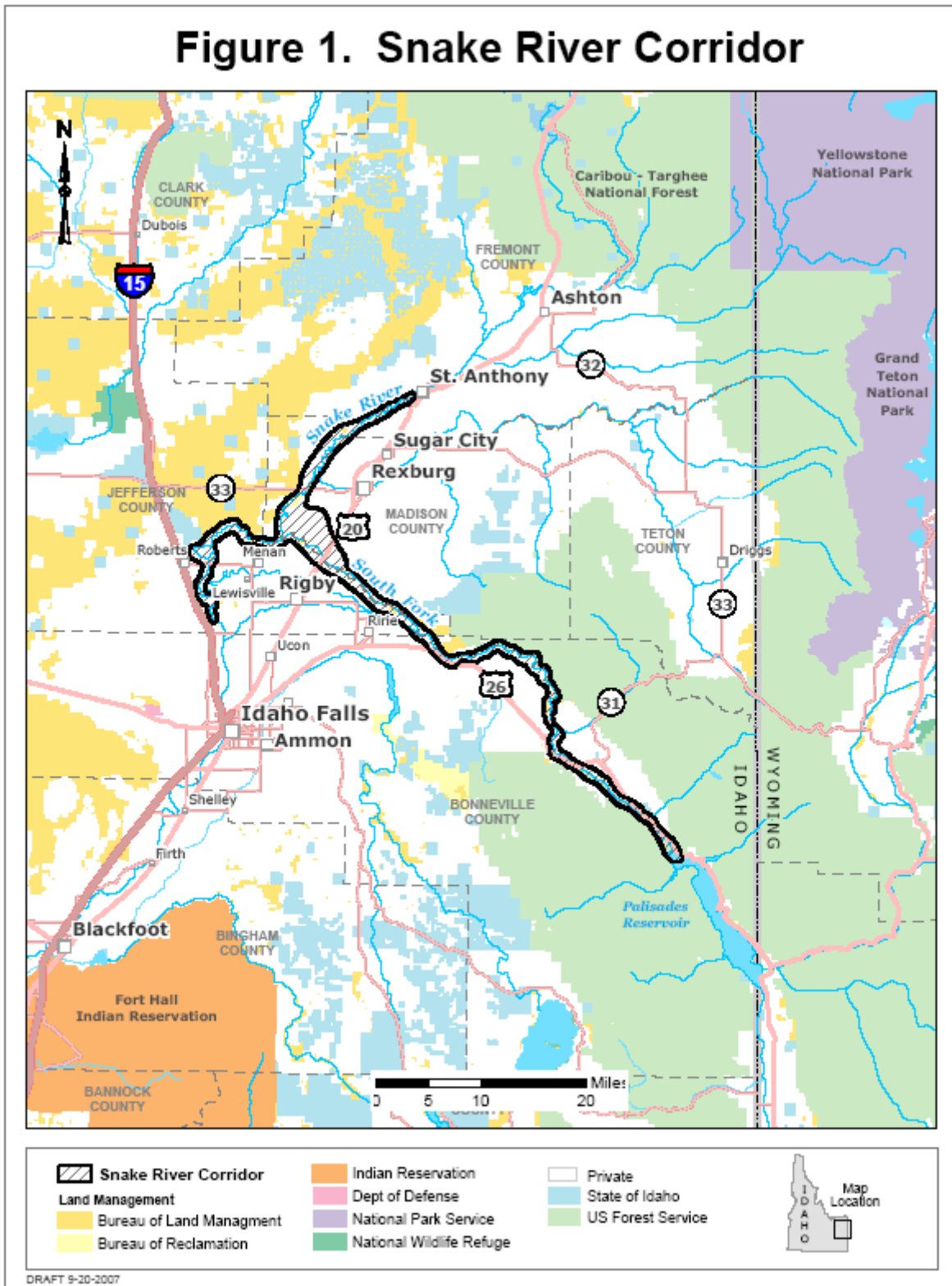
Changes in land use, fueled by population growth and increasing recreational use require the Bureau of Land Management (BLM) and United States Forest Service (USFS) to revise the 1991 Snake River Activity/Operations Plan (Snake River Plan; USDI-BLM and USDA-FS, 1991). The Snake River Planning Area covers approximately 119 miles and includes the South Fork of the Snake River (South Fork) from Palisades Dam to the confluence with the Henrys Fork of the Snake River (Henrys Fork), the Henrys Fork from the confluence to St. Anthony, and the main stem of the Snake River (Main Snake) from the confluence south to Market Lake Canal below Lewisville Knolls (see Figure 1).

The Snake River Planning Area is characterized by three sections; the upper section of the South Fork near Palisades Dam, a mountain valley; the middle section on the South Fork, a rugged canyon; and the lower section (including the Main Snake and Henrys Fork), a wide river with a broad, open flood plain. Unique geologic features, wildlife, rare plants, and cottonwood gallery forest make the planning area an important ecological area. Because of these unique qualities, the South Fork is designated by the BLM as an Area of Critical Environmental Concern (ACEC) and a Special Recreation Management Area (SRMA). The South Fork from Palisades Dam to the confluence with the Henrys Fork is considered eligible for inclusion in the Wild and Scenic River System. These designations require the BLM and USFS to manage in a way that protects important resource values while allowing for public use and enjoyment.

The majestic Snake River is the lifeblood of the Eastern Idaho region. Besides providing irrigation for millions of acres of agricultural land, the river is also an international draw for recreational opportunities, which provides an inflow of cash to local economies. The river is also a haven for dozens of bird, fish and big game species, in part because one of the largest cottonwood gallery forests in the western United States is part of the planning area.

Special designations, unique qualities, and different types of activity areas (e.g., trail systems, day-use areas, camping areas, wildlife management areas, and vegetation management areas) exist in the planning area. All of these resources must be considered in the agencies' plan revision process.

Figure 1. Snake River Corridor



1.2 Purpose and Need for the Proposed Action

Purpose of the Proposed Action

The purpose of the proposed action is to revise the 1991 Snake River Plan.

The proposed action and alternatives developed in this environmental assessment (EA) would analyze the environmental effects of implementing the revised Snake River Plan on public land administered by the Upper Snake Field Office (USFO), BLM and national forest land, administered by the Palisades Ranger District, Caribou-Targhee National Forest.

The general direction to prepare the original 1991 Snake River Plan was included in two separate agency land use plans: the BLM Medicine Lodge Resource Management Plan, 1985 (Medicine Lodge RMP) prepared for the Medicine Lodge Resource Area (USDI-BLM, 1985); and the USFS Targhee National Forest Revised Forest Plan (Targhee National Forest RFP), 1997 (USDA-FS, 1997).

References from these plans that provided direction are:

| <i>Name of Plans</i> | <i>Reference Section</i> |
|---|--------------------------|
| Targhee National Forest RFP | Standards and Guidelines |
| Targhee National Forest Open Road and Open Trail Analysis (October 1999) and Travel Plan Map (TTP). | |
| Medicine Lodge RMP | Pages 14, 15 and 16 |

In most cases, these references provide only broad guidelines to manage the river, such as protecting threatened and endangered species. They do not provide the specific directions to meet these objectives or guidelines. Therefore, there is a need to develop a specific management plan to protect or enhance the resources found along and influenced by this river. The Targhee National Forest RFP included more specific direction to manage the South Fork as an Eligible Wild and Scenic River, as well as additional Forest-wide Standards and Guidelines.

Implementation of this management plan would be in conformance with the goals and objectives established in the Medicine Lodge RMP and Targhee National Forest RFP, and as a result, no plan amendments are anticipated. However, some site specific changes identified in the Targhee National Forest RFP and the TTP may require plan amendments.

Need for the Proposed Action

Changes in recreation use, resource conflicts, changes in Idaho Department of Fish and Game (IDF&G) regulations, new species listings under the Threatened and Endangered Species Act (ESA), and population growth/urban interface have triggered the need for the BLM and USFS to revise the existing 1991 Snake River Plan. However, the BLM and USFS are not disposing of the 1991 plan, but would examine new issues that have developed over the last 10-15 years and revise the existing plan to provide a current plan of management actions for the Snake River Planning Area with the assistance of the public. The greatest changes that have developed since the 1991 document are:

1. Winter Access – Two key changes to hunting and fishing regulations that affect the South Fork occurred in 2003 and 2004, respectively. The first change was the introduction of turkeys to the South Fork river corridor in the spring of 2003, when IDF&G initiated a spring turkey hunt within the planning area. In 2004, the IDF&G opened the South Fork to year-round fishing.

Due to these changes, there would be an increase in year-round recreation on the river corridor. Because of the winter and spring recreation demand, some wintering wildlife and nesting bald eagles could be impacted. During the winter, search and rescue efforts could be more difficult to carry out in the river corridor.

2. Camping (designated/dispersed) – Designated Camp Areas: The 1991 Snake River Plan restricts camping to designated areas between Conant Boat Access and Lufkin Bottom. It specifically states that there would be no allocation of campsites or implementation of capacity limit in designated areas at this time, but individual sites and capacities may be identified in the future if the need arises. (A designated camp area is a large area where camping can occur anywhere within the area. A designated campsite is an individual, specific site location where camping can occur. For example, Lufkin Bottom is a designated camp area, but there are numerous individual campsites within the area).

After the 1991 Snake River Plan was finished, the BLM and USFS began monitoring the designated camp areas on a yearly basis. Some campsites within the designated camp areas have been closed for rehabilitation and some campsites have experienced a gradual decrease in overall condition within the designated camp areas. Increased river use could have an additional impact on the designated camp areas. See Appendix A for recreation site condition classes.

Dispersed Camping Areas: Besides camping in designated areas, there is an increased amount of dispersed camping (i.e., camping anywhere on BLM or USFS managed lands) and other recreation use in the Wolf Flats area (located upriver from Heise on the north side of the river) and along the entire river corridor.

3. Commercial Activity - Another issue facing the Snake River Planning Area is the desire for additional commercial opportunities. The BLM and USFS presently permit eight commercial fishing outfitters who operate under rules and regulations stipulated in their

permit. For example, four boats per outfitter, per day, per section are allowed (e.g., Palisades Dam to Spring Creek, Conant to Black Canyon).

The demand for increased commercial use is likely to come from existing commercial fishing outfitters, as well as from other companies wanting to offer fishing trips or different recreation opportunities (e.g., scenic float, ropes courses, photography). The agencies anticipate an increase in demand for commercial permits from groups such as non-profit groups, outdoor schools, colleges and universities, and other organizations. The BLM and USFS consider any entity that charges a fee for services a commercial user. Other uses not envisioned in the original Snake River Plan, such as commercial filming permits, also need to be considered.

Presently, different commercial services (for profit or non-profit companies) are authorized on a case-by-case basis. These different service requests may range from one or two trips per summer by non-profit commercial groups to companies that might want to offer daily trips such as scenic floats.

The BLM and USFS also anticipate requests for permits for organized groups, organized events, and competitive events.

4. Facilities (access sites) and Trails – The 1991 Snake River Plan identified recreation developments along the South Fork, both on and off the river. With demand for recreation opportunities and access increasing along the South Fork, BLM and USFS have invested heavily into ten sites like the Conant Boat Access, with a concrete ramp, large parking lot, flush toilets, and a visitor center. Other similar sites, like Palisades Creek and Spring Creek, have a concrete ramp and vault toilets. About five other sites are undeveloped boat accesses, meaning they have dirt ramps or slides into the river, no restroom facilities, and dispersed camping opportunities.

There are also five boat access sites along the Henrys Fork. Two sites, managed by other government agencies, have concrete ramps, and the remaining three are undeveloped.

There are four trails along the South Fork corridor and two trails along the Henrys Fork, and there is a significant variety between them. For example, Cress Creek Nature Trail is a fully developed, handicap accessible trail. The Canyon Rim Trail is a single track, designated-motorized trail. Stinking Springs and Little Kelly are undeveloped single track trails in the Heise Area.

5. Visitor Use – Many of the issues already named in this document are related to visitor use. About 250,000 people visit the planning area each year from all over the world. A March 26, 2004 USA Today article highlighted the Henrys Fork as one of the top ten places to fly fish. The Jackson One Fly Competition is held each year on the South Fork, taking advantage of a world-class blue ribbon trout fishery.

The issues and concerns generated during the scoping process illustrate the intense competition existing for use of the resources and the serious conflicts that management must solve or address.

This is especially true for recreation. Since the population of the counties is expected to increase, it would also be expected that demand for recreation use in the planning area would continue to grow.

1.3 Location and Setting

The Snake River Planning Area is located in Bonneville, Jefferson, Madison, and Fremont counties of Southeast Idaho. There are approximately 119 miles of river identified in the river corridor for the proposed Snake River Plan revision. The Snake River Planning Area is characterized by three sections: the South Fork from Palisades Dam to the confluence with the Henrys Fork, Henrys Fork from the confluence with the South Fork north to St. Anthony, and Main Snake from the confluence south to Market Lake Canal below Lewisville Knolls. Within the planning area, BLM manages approximately 20,000 acres, the USFS manages about 5,600 acres and the Bureau of Reclamation and Army Corps of Engineers manage about 1,000 acres. There are about 800 acres managed by the State of Idaho and 20,500 acres of intermingled private land in the planning area.

The region surrounding the Snake River Planning Area has a variety of populated areas, ranging from Idaho Falls with a population of approximately 50,000, to small towns and uninhabited forest and range lands. Many farms and ranches are located along the Snake River and their presence is a major land use.

Landscape Character

The landscape character is comprised of rugged mountains, precipitous cliffs, park-like islands in the river channel, cottonwood and willow riparian communities, Douglas-fir, aspen, and juniper/sagebrush vegetation. The river has sculpted and influenced the surrounding landscape for many years, and this continues today.

Special Designations

The corridor is designated as a BLM Area of Critical Environmental Concern (ACEC), a Special Recreation Management Area (SRMA), and a National Important Bird Area. It contains four Research Natural Areas (RNA), 39 Wilderness Study Area islands, a National Natural Landmark, a National Recreation Trail, and is eligible for Wild and Scenic River designation. See Glossary for definitions.

Two of the designations, related to the natural conditions of the areas, were established in the Medicine Lodge RMP: North Menan Butte and the Snake River ACECs.

An ACEC is an area on BLM lands where special management is required for protection or to prevent irreplaceable damage to important historical, cultural, or scenic values, fish and wildlife resources or natural systems or processes, or to protect life and provide safety from hazards.

ACEC management objectives to protect the important wildlife, scenic and recreation values of the river are as follows from the Medicine Lodge RMP (USDI-BLM, 1985):

- Maintain and perpetuate the cottonwood-riparian ecosystem.
- Initiate a lands program to block up public land ownership and identify boundaries.
- Monitor use to determine trends and effects on resource values.
- Maintain recreation opportunities and uses at a level that is compatible with preserving other resource values.
- Maintain the rivers scenic values, particularly in the South Fork Canyon (Conant Boat Access to Byington Boat Access (Heise area)).
- Develop specific activity plans for managing the recreation, wildlife and scenic values along the river system. Coordinate all plans with other land and resource managing agencies and private landowners.

The Medicine Lodge RMP designated four Research Natural Areas (RNAs) in the Snake River Planning Area. They are:

1. North Menan Butte RNA 340 acres
2. Reid Canal RNA 22 acres
3. Pine Creek RNA 25 acres
4. Squaw Creek RNA 25 acres

Use of these areas is limited to research, study, observation, monitoring and educational activities that are non-destructive and non-manipulative. All four RNAs maintain a relatively unmodified natural condition.

RNAs must be protected from activities which directly or indirectly modify ecological processes. The criterion for management of RNAs is the protection from inappropriate encroachment on the following existing conditions: geologic conditions for North Menan Butte's designation, and vegetative (riparian) conditions for Reid Canal Island, Pine Creek Island and Squaw Creek Island designations.

Wild and Scenic Rivers/Wilderness

The South Fork, from Palisades Reservoir to its confluence with the Henrys Fork (approximately 61 miles), meets the eligibility criteria for possible inclusion in the Wild and Scenic River System. Both the BLM's Medicine Lodge RMP and Targhee National Forest RFP stipulate that the river and associated land areas be managed to maintain their potential for designation until the suitability evaluation is completed and determined whether or not the river should be designated under the Wild and Scenic Rivers Act. The corridor on the National Forest is designated in the RFP in management prescription 2.9.1 South Fork Snake River Eligible Scenic River (page III-112) and 2.9.2 South Fork Snake River Eligible Recreation River (page III-113).

The suitability evaluation for rivers and streams within the USFO boundaries (including the planning area) would be completed in the BLM's USFO RMP revision. The USFO RMP revision will begin in October 2007 and will take three to five years to complete. Therefore this EA does not address this subject (see Appendix B, Wild and Scenic River Considerations).

The 39 wilderness study islands in the South Fork were recommended as unsuitable for

wilderness designation in the Medicine Lodge Wilderness Environmental Impact Statement. They would be managed under BLM's Interim Management Policy for Land under Wilderness Review, until Congress makes a final decision.

BLM Land Conservation Program

Acquisition of land through exchange, purchases, easements and donation is an important component of the BLM management strategy. The BLM acquires land or easements when it is in the public interest and consistent with publicly-approved land use plans. See Appendix C for additional information.

The BLM land conservation program complies with the Shoshone-Bannock Tribal objective of not disposing, selling, or transferring land that may adversely impact natural and cultural resources or treaty rights for hunting, fishing, or gathering.

1.4 Conformance with Applicable Land Use Plans

The Medicine Lodge RMP and Targhee National Forest RFP provide guidance for the management of natural resources on public and forest lands. The Proposed Action has been determined to be in conformance with the terms and conditions of the applicable BLM Land Use Plan as required by 43 CFR 1610.5. and the applicable RFP as required by 16 USC 1604 (i).

1.5 Relationship to Statutes, Regulations, and Local Plans

The Proposed Action is in accordance with the Title II of the Federal Land Policy and Management Act of 1976 as amended (43 U.S.C. 1712), and the Fort Bridger Treaty of 1868 (15 Stat.673).

1.6 Management Constraints and Assumptions

Constraining factors which by law, policy, regulation or circumstance, influence the Snake River management program include:

1. The South Fork from Palisades Dam to the confluence with the Henrys Fork (approximately 61 miles) is considered eligible for inclusion in the Wild and Scenic River System. Federal agencies must not adversely affect the potential of an eligible river segment for national wild and scenic river designation.
2. The 1868 Fort Bridger Treaty reserves the rights of the Shoshone-Bannock Tribes to continue traditional activities (e.g., hunting, fishing, gathering, etc.) on all unoccupied lands. The BLM and USFS have a federal trust responsibility to the Tribes to manage lands under their jurisdiction in a manner to preserve and protect those trust resources, on behalf of the Tribes. The BLM and USFS acknowledge federal trust responsibility to manage and protect Indian Trust Assets/Treaty Resources, and would work to ensure all proposed projects would be developed and analyzed with this responsibility paramount.

The United States has a solemn trust obligation to the Shoshone-Bannock Tribes. Under this obligation, the United States has a special fiduciary responsibility to consider the best interests of the Tribes pursuant to the Fort Bridger Treaty. Today, most fundamentally, the modern form of the trust obligation is the federal government's duty to protect treaty resources, which includes the off-reservation treaty rights reserved by the Tribes. This duty to protect treaty resources includes preserving the integrity of lands upon which the Tribal resources are located and the exercise of treaty rights.

To protect cultural resources, federal laws and regulations may limit uses of public lands located near or associated with archaeological sites and traditional cultural properties. These laws and regulations affect the public's recreational experience within the planning area. Searching for and removing archaeological resources from State of Idaho and public lands is not a legitimate recreational activity within the planning area. The Archaeological Resources Protection Act of 1979 (ARPA) is one authority for this constraint. This law prohibits the non-permitted excavation and removal of archaeological items from public land. This act prohibits the damaging and defacing of archaeological sites. It also mandates fines and penalties for the unauthorized removal of archaeological resources for purchase, transport or sale (43 CFR 7).

The Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) is another federal law that protects cultural resources located within the planning area. NAGPRA provides a process for museums and federal agencies to return certain Native American cultural items (human remains, funerary objects, sacred objects or objects of cultural patrimony) to lineal descendants, and culturally affiliated Indian tribes and Native Hawaiian organizations. NAGPRA includes provisions for unclaimed and culturally unidentifiable Native American cultural items, intentional and inadvertent discovery of Native American cultural items on federal and tribal lands and penalties for noncompliance and illegal trafficking. All federal agencies are subject to NAGPRA (43 CFR 10). The agencies anticipate that Native American cultural items located or discovered within the planning area would have a cultural affiliation with the Shoshone-Bannock Tribes.

Federal laws and regulations require federal agencies to determine the effect of any undertaking on properties listed or eligible for listing on the National Register of Historic Places (NRHP). The agencies would complete cultural resource inventories on BLM and USFS lands within the planning area before authorizing permits or projects within the planning area. Section 106 of the National Historic Preservation Act (NHPA) 1966 provides the authority and direction (36 CFR 800).

3. BLM Only: Comprehensive Travel and Transportation Management (CTTM) planning processes would be incorporated into development of all Resource Management Plans (RMPs) to ensure appropriate public access needs are balanced with resource management goals. As required by Executive Order 11644 (as amended by Executive Order 11989) and regulation (43 CFR 8340), each RMP would designate all public lands within the planning area as open, limited or closed to off-highway vehicle (OHV) use. For Travel Management Areas in the RMP where site specific route designations could

not be made, additional travel and transportation management plans would need to be developed that define the designated motorized and non-motorized transportation network. The Medicine Lodge RMP identified the Snake River Planning Area as “limited” to OHV use. Site specific route designations were not made in the Medicine Lodge RMP for the Snake River Planning Area. This plan revision would address site specific route designations for the planning area.

CTTM planning addresses all resource use aspects (recreational, traditional, commercial, authorized, etc.) and includes all modes (motorized, mechanized, non-motorized, and non-mechanized) of access and travel on the public lands in an interdisciplinary manner. This includes travel and transportation access needs for all the BLM-administered programs and resource management activities including, but not limited to, activities and access associated with mineral and energy development, right-of-ways and utility corridors, range management, wildlife and vegetation management, fire lands and realty, and recreation.

The goals of travel management are to:

- Provide and improve sustainable access for public needs and experiences.
 - Protect natural resource and settings
 - Promote the safety of public land users.
 - Minimize conflicts among the various users of public lands
4. USFS Only: Travel management on National Forest System lands in the Snake River Planning Area is managed under the Targhee National Forest Open Road and Open Motorized Trail Analysis (October 1999) and the current Travel Plan Map.
 5. The IDF&G and U.S. Fish and Wildlife Service (USFWS) would be consulted prior to implementing projects that may affect habitat for threatened and endangered species. If a “may affect” situation is determined through the agencies’ biological assessment (BA) process, formal consultation with the USFWS would be initiated as per Section 7 of the Endangered Species Act of 1973, as amended. Management actions needed to implement this plan would consider the objectives and recommended management actions in the Pacific States Bald Eagle Recovery Plan and a Bald Eagle Management Plan for the Greater Yellowstone Ecosystem.
 6. This plan would be consistent with State of Idaho (Department of Water Resources, Department of Parks and Recreation, Department of Health and Welfare, and Department of Lands) laws and regulations, Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbor Act. This plan would be consistent with Idaho Department of Environmental Quality’s plans to reduce pollutant loading (primarily sediment) through the total maximum daily load (TMDL) process.
 7. BLM wilderness study areas (islands) would continue to be managed in compliance with the Interim Management Policy until they are reviewed and acted upon by Congress. The Interim Management Policy directs that wilderness study areas may not be impaired for

wilderness suitability until such time as Congress releases these areas from consideration as wilderness.

8. All management actions must be in conformance with agencies' land use plans, or if not in conformance, a plan amendment would be prepared.
9. Private land holdings in the management area are not included in this plan.
10. A visitor use or visitor capacity study would be conducted in the planning area. The recreation standards in this document should be considered interim until a river study is completed and additional information becomes available.
11. Implementation of any and all components of this plan would depend entirely upon the availability of funding and staffing.
12. Executive Orders 11990 and 11988 would be followed. Executive Order 11990, Protection of Wetlands, states that agencies would take action to minimize the destruction, loss or degradation of wetlands. Agencies would also work to preserve and enhance the natural and beneficial values of wetlands. Executive Order 11988, Floodplain Management, states that agencies shall take action to restore and preserve the natural and beneficial values served by floodplains. Executive orders 12875, 13007, 13084 and 13175 regarding consultation with Indian Tribes would be followed.
13. The State of Idaho has jurisdiction of lands below the ordinary mean high water mark (i.e., dry river channels).
14. The BLM and USFS have a Memorandum of Understanding (MOU) with the Idaho Outfitters and Guides Licensing Board (IOGLB). This MOU provides procedures and guidance for coordination and cooperation among the federal agencies and IOGLB on issues involving the administration and operation of outfitters and guides on National Forest System land and BLM public land within the State of Idaho. The objective of the MOU is to establish an administrative framework for the purpose of coordinating respective permit and license procedures between the Forest Service, BLM, and the IOGLB.

The BLM and USFS have the responsibility to provide a variety of public recreation opportunities on Federal lands in the State of Idaho. The BLM and USFS permit commercial outfitters and guides to assist them in providing opportunities to visitors who choose to recreate with an outfitter. The IOGLB provides state licenses to commercial outfitters and guides in the State of Idaho.

To achieve better management of the outfitter and guide program while improving the service that outfitters provide to the public, the BLM, USFS, and IOGLB agree that it is to their mutual benefit and interest to work cooperatively to license, permit, and administer outfitter and guide operations on Federal lands within the State of Idaho.

IOGLB has set the number of outfitters licensed for the South Fork. The BLM and USFS worked cooperatively with IOGLB to permit the same number of outfitters licensed for the South Fork. The federal agencies work to be consistent with IOGLB and vice versa. Changes to allocation of licensed outfitters must be coordinated with the IOGLB.

Based upon the constraints outlined in the previous section and other considerations, the following assumptions were made to guide the development of the EA:

1. The BLM and USFS have no direct control over stream flow (i.e., reservoir releases) which may greatly affect the recreation experience, level of visitor use, and fish and wildlife habitat from season to season. The BLM and USFS may only advise agencies responsible for stream flow.

Management actions recommended here would not affect existing water rights. Recommended tributary stream minimum stream flows (e.g. Pine Creek), if pursued, would not affect any current water right holder. No minimum stream flow proposed in this document is on the South Fork, only on a few of its most important fishery tributary streams. The minimum flow water right would only be a non-consumptive water right held by the Idaho Water Resource Board. Recommended tributary minimum stream flows were not derived by this Plan; they were carried forward from the Idaho Department of Water Resources, South Fork Basin Plan (IDWRB, 1996).

2. Federal agencies, in addition to State and County governments, may exercise control over recreational use on the surface of the water if restrictions are necessary to protect resources and opportunities on adjacent federally administered lands.

This revised Snake River Plan does not deal specifically with the issue of motorized watercraft on the river. At present, motorized watercraft are managed by the State of Idaho and county governments. A visitor capacity study needs to be completed before determinations can be made as to what type of recommendations the BLM and USFS would present to the local governing agencies concerning motorized and non-motorized watercraft use within the planning area.

3. Boating safety laws and their enforcement are the primary responsibility of the State of Idaho and respective county. The BLM and USFS would work cooperatively with the State and respective county on matters related to boating safety.
4. This EA was prepared on the assumption that Land and Water Conservation (LWCF) Funds and other funding sources would become available for fee title or conservation easement acquisition. These acquisitions would continue to be purchased through willing buyer/willing seller arrangements. The purpose for the acquisition of such lands for fee title or conservation easements would be to incorporate them into the planning area. The acquired lands would be managed using the same general guidelines as those for the category of the surrounding lands. Any management actions which deviate from these guidelines would be addressed in an environmental document to be completed prior to acquisition.

Agencies would acknowledge treaty rights and federal trust responsibilities on lands where fee title is acquired with LWCF funds or other funding sources.

5. All developed sanitary facilities would comply with State and County health regulations.
6. Federal and State laws on OHV use associated with age restrictions and/or permits would be enforced.
7. OHV activity below the mean ordinary high water mark is the responsibility of the State of Idaho and respective county. The BLM and USFS would work cooperatively with the State and respective county on matters related to OHV activity within the planning area. Note: The BLM and USFS use the term off-highway vehicle (OHV) for those types of vehicles equipped to travel off main highways and roads. This would include motorcycles, ATVs, utility terrain vehicles (UTV), etc.
8. Any changes to the allocation of licensed and permitted outfitters must be coordinated with the IOGLB. Currently there are eight licensed and permitted commercial fishing outfitters on the South Fork. No changes to the allocation of permitted commercial outfitters would occur until the visitor capacity study (this will ensure that the public is able to provide comments) is completed and recommendations are presented to the IOGLB. The BLM, USFS and IOGLB would work together to make any changes to the number or rules pertaining to licensed and permitted outfitters on the South Fork.

The framework used for development of this EA consisted of three levels:

1. An interdisciplinary team comprised of BLM, USFS, IDF&G, and United States Fish and Wildlife Service (USFWS) personnel to provide the technical expertise.
2. Input from the general public and interested groups, organizations, and agencies.
3. Management, both USFS and BLM, to make the final decisions.

1.7 Issues and Concerns

The BLM and USFS initially determined five issues (i.e., winter access, camping, commercial activity, facilities and trails, and visitor use) that instigated the need for the Snake River Plan Revision. As a result of the scoping process, the agencies (BLM and USFS) received over 100 separate statements on issues (University of Idaho, 2006). These issues were derived through mail outs and media coverage. Comments were received from a variety of public interests including recreational groups, landowners along the river, conservation groups, wildlife advocates, general public, and state and other federal agencies.

With each of these current issues come questions that the agencies must answer, with the assistance of the public. Twelve issues were developed through the scoping process and input of the interdisciplinary team of BLM and USFS specialists. They are:

Issue No. 1 – Education of River Users

Concerns – River users need to be informed of:

1. Their possible impacts to riparian areas.
2. Hazards associated with irrigation diversions.
3. Management policies and goals.
4. Their possible impacts to wintering wildlife and special status species.
5. The natural hydrologic regime and how it relates to Yellowstone Cutthroat Trout and riparian management.
6. How their actions impact other users.
7. Areas open for Off Highway Vehicle (OHV) use.
8. Non-motorized public access to levees on public land, if access is gained from public land or from the river. Access is not allowed on levees located on private land, unless prior permission is established with the landowner.
9. Archaeological sites, artifacts and palaeontological resources are protected by Federal Laws and Executive Orders.
10. Human prehistory and history of the South Fork.

Issue No. 2 – Protection of Riparian Habitat

Concerns – Enhance riparian habitat through proper management of:

1. Grazing in planning area
2. OHV activities (USFS travel guidance in Forest Travel Plan).
3. Federal land developments.
4. The cutting of live or standing dead trees for firewood.
5. Designated and dispersed camping areas.
6. Facilities and trails.
7. Conservation of lands through land acquisitions and conservation easements.

Issue No. 3 – Protection of Watershed

Concerns – Protect watershed form accelerated erosion:

1. Erosion on federal lands along the river caused by recreation, grazing and other uses.
2. Rehabilitation of damaged areas where erosion has occurred for a long time.
3. Invasion and control of noxious weeds and other exotic plant species on federal lands.
4. Preservation of visual and scenic resources.
5. Erosion impacts to cultural/palaeontological resources.

Issue No. 4 – Land Ownership

Concerns - Need for federal agencies to identify boundaries between federally managed lands and private lands:

1. Delineate boundaries and post signs where needed.
2. Access to planning area through land acquisitions.
3. Monitor unauthorized uses on federal lands.

Issue No. 5 – Protection of Fish, Wildlife, and Botanical Resources

Concerns – Agencies need to maintain or enhance these resources:

1. Management of scarce mature and decadent deciduous trees for perching and nesting habitat.
2. Maintenance or enhancement of fishery habitat (spawning areas).
3. Maintenance of goose nesting areas.
4. Protection and enhancement of habitat for sensitive species, waterfowl, and big game species.
5. Protection of nesting and wintering Bald Eagle habitat.
6. Potential impacts of year-round fishing.
7. Cooperation with IDF&G to protect trumpeter swans, eagles, waterfowl, elk, and deer from becoming overly stressed during winter months.

Issue No. 6 – Management of Off Highway Vehicles (OHVs)

Concerns – Agencies need to manage OHVs to an acceptable use within the planning area:

1. Provision of OHV trails where conflict with other resources would be minimal.
2. Regulation of OHV activities to prevent unacceptable damage.
3. Limitation of OHV use to existing roads/boat launch sites.
4. Jurisdiction clarification of OHV use below mean ordinary high water mark; need authority to regulate if necessary.

Issue No. 7 – Management of River Corridor Uses

Concerns – Agencies need to plan for future growth and enforce existing laws and regulations:

1. Improved enforcement of existing laws and regulations.
2. Agencies need to control trash left by users.
3. Agencies need to address year-round recreation.
4. Agencies need to address the increase in demand for designated and dispersed camping.
5. Agencies need to address the increase in demand for commercial activities.
6. Development of tools to deal with the increase in recreation use within the planning area (e.g., visitor use, outfitters, increase in motorized use).

Issue No. 8 – Management of Camping and Facilities

Concerns – Agencies need to provide adequate, well-maintained camping opportunities:

1. Identification of developed and dispersed camp areas (e.g., Henrys Fork, Wolf Flat, and Swan Valley).
2. Need for sanitary services along the river.
3. Need for adequate campsites for both outfitters and the general public.
4. Need for identification of designated campsites within designated camp areas from Conant Boat Access to Lufkin Bottom.

Issue No. 9 – Present and Future River Access Needs

Concern – Agencies need to look at new recreation demands:

1. The level of access provided during the winter.

2. Identification of facilities in the plan that should be further developed and those facilities that should be maintained at their current level of development.
3. Development of trails.

Issue No. 10 – Protection and Management of Threatened, Endangered, Sensitive, and Candidate Species

Concerns – Agencies must provide for adequate management of these species in light of new threats:

1. Spring turkey hunting during the bald eagle nesting season is a concern. Need to cooperate with ID F&G to alleviate human impacts to nesting bald eagles.
2. Invasion of non-native New Zealand mud snail into Utah valvata snail habitat. Need to educate the public about washing boats, waders, etc. to prevent the spread of New Zealand mud snail population.
3. Currently there are three listed species and one candidate species in the Snake River Planning Area; over 50% of sensitive species are dependent on river-associated habitat.
4. Conduct appropriate levels of inventory for identified species if not current.
5. Ensure existence of management plans adequate for protection of all identified species.

Issue No. 11 - Enforcement

Concern – Agencies need to provide adequate enforcement:

1. Improved enforcement of existing laws and regulations.

Issue No. 12 –Management of Cultural and Paleontological Resources

Concerns – Agencies need to protect and inventory cultural resources within the planning area:

1. Protection of historic properties threatened by soil and water erosion, livestock grazing, recreational use, vandalism and other agents of destruction and deterioration.
2. Interpretation of selected historic properties in the South Fork corridor.
3. Coordination with Shoshone-Bannock Tribes to identify Traditional Cultural Properties (TCPs).
4. Effects of recreation on the traditional prehistoric and historic Native American and historic Euro-American cultural landscape.

CHAPTER 2 ALTERNATIVES

Four alternatives were developed as a result of the issues and concerns identified by the public and changes since the completion of the 1991 Snake River Plan. These alternatives consist of three action alternatives and the no action alternative. The no action alternative is hereafter referred to as the existing management situation. Chapter 2 describes the four alternatives to be analyzed fully in this EA:

- Alternative A (Existing Management Situation);
- Alternative B (Emphasis on Intensive Resource Management with Less Recreation Development);

- Alternative C (Emphasis on the Development of Resources for Recreation Opportunities); and
- Alternative D (Compromise between Alternatives A, B, C – Preferred Alternative).

Alternative A is a continuation of existing management and includes direction provided by both the Medicine Lodge RMP (including new direction and policy that have been developed since the completion of the Medicine Lodge RMP) and the Targhee National Forest RFP as defined by the standards and guidelines of the plan. The three action alternatives were developed to present a range of management options. Each alternative is intended to minimize adverse impacts on cultural and natural resources while providing for compatible resource use and development opportunities consistent with current law, regulation, and policy.

The discussion of the four analyzed alternatives has two parts. One part is a narrative description of each alternative. This description discusses in detail the specifics of each alternative. The second part is a comparison between alternatives that summarizes the major differences or similarities among the alternatives.

The narrative section of each alternative is related to the identified issues and concerns. The applicable management requirements are included under each specific use or resource. Two needs common to all alternatives are (1) a visitor use or capacity study and (2) a cultural resource inventory. These studies would begin with implementation of the management plan and their findings would be made part of the activity/operations plan.

The management of a particular resource or activity by the USFS and BLM may be different because of the differences in policy or regulation. Where these differences occur, they are noted by wording such as “USFS Only” or “BLM Only.” A specific agency is not indicated where the management is the same for both the USFS and BLM unless a notation is needed for clarification.

2.1 Management Actions Common to all Four Alternatives

The following actions are common to all four alternatives addressed in this document. These management actions provide the BLM and USFS with baseline management for resources within the planning area.

2.1.1 Soils and Water Quality

To reduce erosion and sediment input to streams and rivers the following management actions would occur:

- A. Identify and monitor sources of excessive rill and gully erosion such as poorly constructed roads and trails. Create water and sediment traps by constructing water bars, dips, detention ponds, developing filter windrows and planting vegetation where such erosion occurs on BLM managed lands.

- B. Protect selected facilities, improvements, and high resource values from bank erosion through placement of tree revetments, bank barbs, tree and shrub plantings. Remove selected gravel bars from boat ramps where access needs and safety hazards occur.
- C. Federal agencies would comply with Executive Order 11988—Floodplain Management in carrying out this plan. This order states that federal agencies shall design or modify their actions in order to minimize potential harm to or within the floodplain.

2.1.2 Vegetative Management Including Livestock Grazing

A. Woodland Management

No cutting of trees for commercial or private use would be allowed (including live or standing dead trees, cordwood cutting, pole cutting and Christmas tree cutting) in the planning area. The only exception to this would be for emergency situations to protect the safety of the public.

B. Riparian-Wetland Areas

These areas would be managed to ensure that they maintain the ability to perform wetland functions such as sediment trapping, bank building and maintenance, water storage, aquifer recharge, high flow energy dissipation, maintenance of biotic diversity, and primary biotic production. Cottonwood forests are managed to ensure recruitment, maintenance and protection of cottonwood communities.

C. Noxious Weeds

The treatment of noxious weeds on federally managed lands would be directed to minimize the spread of current infestations and stop the spread of new infestations through the “Integrated Pest Management Method”.

Management Goals and Mitigation

1. Determine acreage of species infestation on USFS and BLM managed lands.
2. Treat dispersed patches of noxious weeds with the preferred treatments:
 - a. Biological Control
 - b. Mechanical Control
 - c. Chemical Control. Site specific clearances would be performed in occupied or potential habitat for Ute ladies’-tresses orchid. Dispersed patches would be treated with EPA approved chemicals in the following priority: 1) new species invasion; 2) new infestations of existing weed species; and 3) previously inventoried infestations.

D. Forage Utilization

USFS Only

Regulation pertaining to grazing for the Forest Service is found in 222, Subpart A of 36 CFR Code. This code describes authority to regulate grazing and livestock use on National Forest Land.

The Targhee National Forest RFP provides direction for forage utilization. Information in Chapter 111, page 29 of the Targhee National Forest RFP contains the following utilization criteria:

Riparian Forage Utilization

- A. Riparian Woody Plant utilization. No more than 30 percent use on riparian woody plant species (current year's growth) would be allowed. Thirty percent would be the maximum allowable use as recorded at the end of the grazing period.
- B. Riparian Vegetation Stubble Height Standard (these apply to all grazing systems).
 1. At the Hydric Green Line (HGL, see Glossary), there would be **at least four inches** of stubble height remaining on key species at the end of the grazing period, unless determined otherwise through the interdisciplinary team process. This standard applies to key species of native or nonnative hydric vegetation.
 2. In the Aquatic Influence Zone (AIZ), **at least three inches** of stubble would be left on key riparian species at the end of the grazing period.

The Targhee National Forest RFP utilization Standards and Guides would apply to alternatives A through D.

BLM Only

The grazing regulations, at the time of the 1991 plan, did not include subpart 4180 – Fundamentals of Rangeland Health and Standards and Guidelines for Grazing Administration. Therefore, the 1991 plan included broad guidance for livestock use in the planning area. BLM forage allocations for livestock use would range from 40 to 50 percent herbaceous plants and from 20 to 35 percent of browse plants. Forage allocations for wildlife use would range from 10 to 20 percent for herbaceous plants and from 15 to 20 percent for browse plants. Grazing permits and leases renewed after the addition of subpart 4180 of 43 CFR 4100 have incorporated forage and browse allocation guidelines similar to the SSM class guidelines for the reach where they are located. BLM land currently unallocated to livestock grazing would remain unallocated.

Refer to Alternatives A through D for specific management.

Management Goals and Mitigation:

1. Follow terms, conditions, and management guidelines in grazing decisions and monitor to determine compliance. Grazing permit and lease terms, conditions, and guidelines are established during the permit renewal process and are designed to achieve Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management. Should information collected subsequent to any renewal indicate changes in management are needed to ensure that an allotment is meeting or making significant progress towards meeting standards and conforming to guidelines, the permit or lease may be modified at any time. All alternatives would follow the grazing regulations in 43 CFR 4100.

2. If noncompliance with regulations or permits/decisions is discovered, resolve by appropriate means.

BLM and USFS

3. On big game ranges, big game populations would be managed by the IDF&G to assure that utilization on the selected key species would not exceed the plant's physiological tolerances to grazing. If big game utilization standards are exceeded, USFS and BLM would request IDF&G to reduce numbers via their various management strategies.

E. Canal Maintenance

BLM Only

Irrigation companies have rights-of-way for levee systems on public lands managed by the BLM. The companies would be allowed to maintain their levees at a level and degree consistent with historical use.

2.1.3 Wildlife

General Wildlife

Great Blue Heron

Great blue herons are an indicator species of the presence of mature-aged cottonwoods. Their nest areas, called rookeries, are found in the mature-aged cottonwood stands that bald eagles may use. Herons are also sensitive to human uses in and around these areas, therefore rookeries would be monitored to ensure negative impacts do not occur.

Management Goals and Mitigation:

1. Establish an 820-895 foot buffer around heron rookeries from April 1 to July

15 to minimize potential disturbance from camping and bank activities and place signing as needed.

2. Surveys would be conducted to monitor existing rookeries, identify new rookeries, and location of potential rookeries.

3. Potential rookeries (i.e., mature and overmature cottonwood stands) would be protected. A GIS accessible base map of all areas deemed to be “potential rookeries” for great blue heron would be produced to assist with management of potential rookeries.

2.1.4 Protection and Management of Threatened, Endangered, Sensitive, and Candidate Species

A. General Management

1. Analyze the effects to all listed and candidate species within the plan area through Section 7 consultation with the USFWS to ensure actions would not adversely affect the species or its habitat. Conservation measures would be implemented to protect and recover listed species.

2. Support IDF&G, Idaho Conservation Data Center (IDCDC), the Governor’s Office of Species Conservation (OSC), and other agencies to sustain wildlife, fish, and plant conservation strategies in Idaho.

3. Work with state, other federal agencies, and Shoshone-Bannock Tribes to support the Ecologically Based Systems Management Project to maintain hydrologic regimes needed to maintain long-term health of the ecosystem.

4. Maintain or improve habitats that are currently or potentially suitable to sustain threatened, endangered, sensitive, and candidate species.

5. Work with state, other federal agencies, and Shoshone-Bannock Tribes to preclude listing of all wildlife, fish, or plant species that are experiencing an appreciable reduction in number, habitat availability, or habitat condition.

6. Ensure compliance with conservation agreement actions between the USFWS and BLM/USFS for listed and candidate species.

7. Follow USFS and BLM guidance for sensitive species management.

8. Special status species identified or located within the planning area would be monitored and/or inventoried as appropriate for each species.

All alternatives in this plan would incorporate actions included in the Final Biological Assessment, Idaho Falls Land Use Plan: Medicine Lodge Planning Area., January 2006. Specifically the USFO and Palisades Ranger District would

follow the following conservation measures for Ute ladies'-tresses, Utah valvata snail, and YBCU listed below:

- a. In cooperation with IDF&G, USFWS, U.S. Bureau of Reclamation (USBOR), hydroelectric power companies, and others: cooperate in gathering existing information to understand the distribution of known populations, and contribute new information as opportunities arise.
- b. Ensure that ongoing Federal actions support or do not preclude species recovery.
- c. Ensure that new Federal actions support or do not preclude species recovery.
- d. Implement adaptive management as needed to achieve conservation objectives.
- e. Support conservation easements, cooperative management efforts, and other programs on adjacent non-Federal lands to support recovery of the Snake River snails.

B. Threatened, Endangered, and Candidate Species

Gray Wolf – Experimental Nonessential Population

The Northern Rocky Mountain Population of gray wolf encompasses the eastern third of WA and OR, a small part of north-central UT and all of MT, ID and WY. This portion of the population will be removed from the List of Threatened and Endangered Species effective Mar. 28, 2008 (USDI-FWS, 2008).

Management Goals and Mitigation:

Once this portion of the population is removed from the List of Threatened and Endangered Species IDF&G would assume full management responsibility for wolves. Currently IDF&G has developed the Idaho Wolf Population Management Plan with the long-term objective to maintain a self-sustaining, viable wolf population within the state (IDF&G, 2008).

Canada Lynx – Threatened

The US Fish and Wildlife Service (USFWS) listed lynx as a threatened species on National Forest lands, but not on BLM lands in eastern Idaho. Currently, there are no Lynx Analysis units (LAUs) overlapping the river corridor planning area as identified on the Caribou-Targhee National Forest LAU map. The closest LAUs occur on the Targhee National Forest about ½ mile or more from the South Fork in the Big Hole Mountains and Palisades Backcountry. A portion of suitable

secondary lynx “linkage habitat” overlaps the river corridor for a short length of river downstream of Palisades Dam.

Management Goals and Mitigation:

The Snake River Planning Area is not within any LAU and has only a small narrow length of “linkage” habitat on the upriver end. There are no specific management goals or mitigation needed for lynx outside the Targhee National Forest RFP and the 2007 Lynx Amendment to the Forest Plan (Northern Rockies Lynx Mgmt Direction ROD). These ROD “LINK” standards and guides (USDA/USDI 2007) relate to roads, ownership and grazing and the river plan alternatives would not conflict with this direction nor create any new barriers to lynx travel outside the facilities already present, therefore no additional mitigation is needed. Only positive benefits are expected, because quality mid to late-seral vegetative conditions are planned and managed for similar to that occurring under historic disturbance regimes.

Yellow-billed Cuckoo – Candidate

On July 25, 2001 the USFWS determined that listing of the yellow-billed cuckoo (YBCU) was warranted but precluded due to higher priority listing actions (USDI-FWS, 2001). This ruling puts them on the Candidate List. Surveys conducted in 2005 identified five pairs of YBCU in the planning area (Reynolds and Hinckley, 2005).

YBCU nesting habitat along the Snake River consists of a cottonwood overstory coupled with a dense, shrubby understory. The majority of YBCU habitat is on private and BLM managed lands with limited habitat on the National Forest. All current known locations within the planning area occur on BLM-managed lands.

Management Goals and Mitigation:

1. Monitor and maintain current YBCU populations.
2. Manage cuckoo habitat by:
 - a. Conducting a baseline inventory of habitats within YBCU stronghold areas and evaluating those habitats utilizing acceptable criteria.
 - b. Mapping habitats used and type of use.
 - c. Implementing restoration projects to develop and promote additional suitable habitat needed to increase the population.
 - d. Developing and instituting a weed management program that controls invasive non-native species that compete with willow and cottonwood regeneration (e.g., tamarisk, Russian olive, false indigo, etc.) through the use of biological, mechanical and chemical controls.
3. Protect known YBCU strongholds within the planning area by limiting or restricting potentially disturbing activities within and/or adjacent to known strongholds during the reproductive season (May 1 through August 31). Potentially disturbing activities include, but are not limited to, dispersed

camping, tie-up areas for pack animals and boats, and human activity near known occupied habitat. Any restrictions implemented would be posted and monitored to ensure effectiveness.

4. Support conservation easements, cooperative management efforts, and other programs on adjacent non-federal lands to support conservation of the YBCU.
5. Maintain a two and one half mile radius weed treatment free zone from May 1 through August 31 within occupied YBCU habitats. Buffer zones may be modified by a qualified wildlife biologist following surveys.

C. Species Specific Management for Plants

Ute ladies'-tresses

There are currently eight element occurrences (EO) that represent the 22 subpopulations of Ute ladies'-tresses found on the South Fork (Idaho Conservation Data Center 2006).

Since 1997, these sites have been visited annually by BLM/FS staff to document habitat conditions and count the number of flowering plants. Since 2001, the Idaho Department of Fish and Game's Conservation Data Center (IDCDC) has established 24 habitat monitoring transects across these populations. 2007 was the fifth year that these transects were read by IDCDC. BLM/FS would continue the visitations to the sites to document habitat and population condition. Monitoring would continue as needed based on the level of threats. These threats would be evaluated through campground, OHV use and grazing use monitoring which occur on an annual basis. When a threat is identified the agency botanist would be contacted to evaluate the threats and provide mitigations. Each occupied Ute ladies'-tresses site would be visited at least once every third year. Because of the long-lived nature of the plant and its prolonged dormancy, one suggestion is that to adequately assess trends monitoring should occur consecutively for 4 or more years every 5 to 20 years (Lesica and Steele 1994, p. 211). With this information, habitat monitoring would be performed consecutively for 3-4 years with a break in monitoring for 5-10 years.

In 2005, The USFWS issued a Status Review for Ute ladies'-tresses. This review was to address a petition to de-list Ute ladies'-tresses as a Threatened species under the Endangered Species Act (ESA). The final ruling on the de-listing has not been published as the time of this document. In the event of a de-listing, monitoring is still required for five years after the de-listing has been issued. If de-listed, BLM and USFS would continue with the monitoring of these populations under their agencies' sensitive species protocol.

The U.S. Fish & Wildlife Service issued a letter of concurrence (USFWS, 1998) on grazing management and other activities under the guidelines of the Biological Assessment on *Spiranthes diluvialis* on the South Fork, Idaho (USDI-BLM, 1998). The Biological Assessment ensures protection measures for *Spiranthes diluvialis* and its potential habitat on the South Fork.

Management Goals and Mitigation:

1. Implement permanent closure of the emergency OHV closure for the Annis Island's Cottonwood allotment that was issued by the BLM, Upper Snake Field Office in 2004
2. Survey project areas that occur within known or potential habitat for occurrence of the species. Design the project to avoid or minimize impacts to the species or its habitat. If the impacts cannot be avoided or minimized then drop or relocate the project. Design may include, but is not limited to, fall, spring, and/or late winter grazing and temporary closures based on site specific needs.
3. Monitoring of known populations with known impacts would be conducted by trained personnel. Monitoring would continue as needed based on threats.
 - a. Annually evaluated through campground, OHV use and grazing use monitoring.
 - b. Each occupied Ute ladies'-tresses site would be visited at least once every third year.
 - c. Habitat monitoring would be performed consecutively for 3-4 years with a break in monitoring for 5-10 years
4. Spot checks would be done in other areas of potential habitat.
5. Noxious weeds treatment would follow the preferred treatments:
 - a. Biological Control
 - b. Mechanical Control
 - c. Chemical Control. Site specific clearances would be performed in occupied or potential habitat for Ute ladies'-tresses orchid.
6. Insecticide applications would maintain a ½ mile treatment-free buffer zone around known Ute ladies'-tresses populations.
7. Designated Camp Areas and established campsites within camp areas are inventoried, and monitored. Continued documentation of Ute ladies'-tresses based on presence or absence and location in respect to the fire ring would occur. If Ute ladies'-tresses is observed within a campsite, and use presents a hazard to the plant, the campsite (fire ring) would be moved to a location where the plant would not be impacted. If the campsite cannot be moved within a designated camp area where impacts would not occur, the campsite would be physically closed (signed or cordoned off) and fire ring removed until the next monitoring season. If the plant is not observed at that time, the campsite would be reopened.

D. Sensitive Species

A list of sensitive species for the Snake River Plan is found in Appendix F.

Forest Service “Sensitive” Species are those which have been officially designated on National Forest lands by the Intermountain Regional Forester in Ogden, Utah as those needing assistance, but which are not listed on the federal Endangered Species list.

BLM “Sensitive” Species are designated by State Directors (BLM Manual 6840) and are those species that occur on BLM public lands and for which BLM has the capability to significantly affect the conservation status of the species through management. Sensitive species receive priority over other un-listed species for both Forest Service and BLM management decisions.

Management Direction:

Management direction for two sensitive species, the Bald Eagle and Peregrine Falcon, are presented here because of their prominence in the river corridor management. For more specific direction on the other 16 sensitive species on National Forest lands refer to the wildlife biological evaluation (Alford, 2008), Targhee National Forest RFP (USDA, 1997), and Appendix F.

Bald Eagles

Effective August 8, 2007 the USFWS removed the bald eagle (*Haliaeetus leucocephalus*) in the lower 48 states of the United States from the Federal List of Endangered and Threatened Wildlife (USDI-FWS, 2007a). The Endangered Species Act (ESA) requires that the USFWS implement a system, in cooperation with the states, to monitor effectively for at least five years, the status of all species that have been recovered and no longer need protection of the ESA (USDI-FWS, 2007b). The BLM and USFS manage delisted species as Sensitive species during the monitoring period. This provides protection, at a minimum, at the level of candidate species.

In 1991 there were eight active bald eagle nests within the Snake River Planning Area. Currently there are 25 active bald eagle nesting territories in the planning area. In an effort to maintain the existing ACEC designation and preserve the natural values of the planning area, BLM would continue to follow the Greater Yellowstone Bald Eagle Management Plan (1996) guidelines with respect to the following zones found within Primary Management Parcels (PMPs):

Zone I: Occupied Nesting Zone – an area within a 400 meter (1312 ft) radius of an occupied nest.

Zone II: Primary Use Area – an area within 800 meters (2624 ft) radius of an active nest and of all known alternate nests. This area may be modified to include the area where over 75% of the adults foraging and loafing activity occurs during the nesting season.

Zone III: Home Range – This area would include all potential foraging habitat within a four km (two and one half mile) radius of active nests. This area may be modified by monitoring eagle movements during nesting and brood rearing for several years.

Management Goals and Mitigation:

1. Maintain 85% occupancy of existing active bald eagle nesting territories on federal lands and production of one young per occupied territory on a five-year average.
2. Continue to protect new and alternate nest sites as they are located by determining Primary Management Parcels (PMPs) and evaluating human activity in relation to the quality of the habitat.
3. Prohibit pesticide use within a one mile radius around nest sites. Also, there would be a no aerial spray zone (using ultra low volume applications) of two and one half miles for a foraging protection area from the nest site up and down stream with a quarter mile buffer along rivers for BLM managed lands.

Within Zones I, II, and III, prohibit all use of herbicides and pesticides which cause egg shell thinning as determined by EPA labeling for FS managed lands.

4. Maintain PMPs in a condition that would promote continued use of the nesting territory. This is accomplished by balancing the use that occurs in the territory and the quality of the habitat.

Closure of certain zones within a PMP or the PMP itself may be necessary to sustain nesting by bald eagles.

If consistent nest failure occurs the following management actions would be implemented:

- a. Encourage people to use other areas.
- b. Identify those factors that are causing the increase in rating and change management actions.

5. Maintain suitable winter habitat and low levels of disturbance for 100 to 120 bald eagles in the planning area.
6. To maintain nesting sites, Zone I within each PMP would be closed to camping and permanent development for the life of the plan and closed annually to human activities from February 1 to July 31.
7. All Zone II areas located on BLM and USFS managed lands would be closed to new uses, such as outfitter camps, permanent outhouses, permanent agency provided fire rings, pullouts, boat ramps, etc. Dispersed day-use by individuals would be allowed unless or until such activity results in disturbance of nesting eagles.

Peregrine Falcons

There are five peregrine falcon eyries within or near the planning area. Two of them are among the top six highest producing sites in Idaho out of a current 27 territories in the State (IDF&G, 2006).

Results of the first post-delisting monitoring survey conducted in 2003 indicate continued recovery of peregrines. At the time of delisting there were approximately 1,750 nesting pairs throughout the United States, Canada and Mexico, in 2003 there were 3,005 nesting pairs. Additionally, 92 percent of nests are located on natural substrates while only 32 percent were on natural substrates at the time of delisting (USDI-FWS, 2006).

Peregrine nesting sites (eyries) are established through natural occupation or by “hacking” (raising chicks in artificial nest structures). These sites would be protected so that no undue human influence would occur which may create hardship or abandonment. Currently, there are no hack sites being implemented in the area.

Management Direction, Goals and Mitigation:

The Targhee National Forest RFP changed management direction for peregrines to provide consistent management within the Caribou-Targhee National Forest. Consistent management is reflected in the management direction, goals and mitigation identified below.

BLM and USFS

1. Maintain or reduce activity levels within one mile (BLM) or two miles (USFS) of known occupied eyrie or hack sites. Evaluate new eyries or hack sites to determine restrictions that may be necessary to ensure the integrity of the eyrie or site. This applies particularly to activities, developments, or practices within one mile (two miles for USFS) of occupied or unoccupied suitable cliffs. Examples of activities which may adversely alter or eliminate habitat include blasting, mining exploration, recreational rock climbing, and low level flights. Each proposal would be evaluated on a case-by-case basis. Human activities may be restricted within one half mile (two miles for USFS) of occupied eyries between March 1 and July 31 (March 15 to July 31 for USFS) and between July 1 and October 1 (BLM Only) for hack sites.
2. Any potential hacking of peregrines would be coordinated with IDF&G, the Peregrine Fund and USFWS. The BLM and USFS would coordinate with these agencies to obtain cooperative funds for potential hacking of peregrines.
3. Eyrie locations would be kept confidential and would be maintained in a condition that would promote continued use, and the production of one young per occupied eyrie on a five year average.

4. Continue to participate in nationwide nest monitoring surveys for occupancy and production information, surveys would coincide with national monitoring schedules. To ensure continued success of peregrines additional surveys would continue to be conducted after delisting goals are met coinciding with national guidance.

USFS Only

5. For proposed projects within two miles of known falcon nests consider such items as: 1) human activities (aircraft, ground and water transportation, high noise levels, and permanent facilities) which could cause disturbance to nesting pairs and young during the nesting period March 15 to July 31; 2) activities or habitat alterations which could adversely affect prey availability.

6. Restrict climbing and other human disturbances from March 15 through July 31 to avoid adverse impacts at known falcon nest sites.

7. Within 15 miles of all known nest sites, prohibit all use of herbicides and pesticides which cause egg shell thinning as determined by risk assessment (USDA-Forest Service, September 1992).

BLM Only

8. Any use of pesticides would be according to the APHIS and should be outside the 10 mile radius around eyrie or hack sites. Smaller buffer zones that correspond to the foraging area of peregrines may be determined by a review team including one representative each from BLM, USFS, APHIS, FWS, the State conservation agency, and the land manager.

BLM and USFS

Management Goals and Mitigation for Bald Eagles and Peregrine Falcons:

1. Any proposed uses or developments potentially affecting occupied eyries on the federal lands which are not included in the final plan must be evaluated for consistency with the plan, and either formal or informal consultation with the USFWS, as required by the ESA must be done.

2. Similarly, any proposed use, development, access, recreational uses, or surface-disturbing activity contemplated or evaluated by the agencies which is not included in the plan must be evaluated for consistency with the plan and shall include consultation under ESA.

3. Report all mortalities and incidents involving harassment of peregrine falcons or bald eagles to the BLM or USFS and provide any data or documentation available.

4. In the event scenic or other regular flights begin to occur within the planning area, a request to the Federal Aviation Administration (FAA) to establish a 500 foot aircraft closure for fixed wing and helicopter above the surface of the river to prevent mortality and minimize harassment of peregrines, bald eagles, and other wildlife on a year round basis would be filed. Exceptions to this restriction are emergency rescue operations.

2.1.5 Site Specific Management Classes (SSM Classes)

It is recognized that resources, uses, and management problems differ in some reaches of the river. Therefore, different classes were considered appropriate for use in this EA. These site specific management classes (SSM Classes) for the planning area are based on the Visual Resource Management classes (VRM classes describe a degree of modification allowed in the basic elements of the landscape) and the Recreation Opportunity Spectrum identified in the Medicine Lodge RMP.

Using the site specific management class (SSM) definitions (see Appendix D), the planning area was divided into three classes, I, II, and III (see Figure 2). These definitions generally describe what activities and conditions are acceptable for each class. Since there is more than one occurrence of Class I, Class II, and Class III segments of the river identified, these have been referred to as Class IIA, Class IIB, and so on (see Table 1).

The planning area is divided into nine SSM classes. These SSM classes provide guidelines and boundaries for how the different classes are managed for recreation, facility development, recreation opportunities, and other resources uses. The nine SSM classes fall into three classifications, I, II, and III. Class I areas are managed to maintain an unmodified natural environment while Class III areas are managed to provide a greater modification of the natural environment. Class II areas are managed for an intermediate level of modification to the natural environment. Class I management applies to 25 river miles, Class II applies to 51 miles, and Class III applies to 43 miles.

Figure 2. Site Specific Management Classes

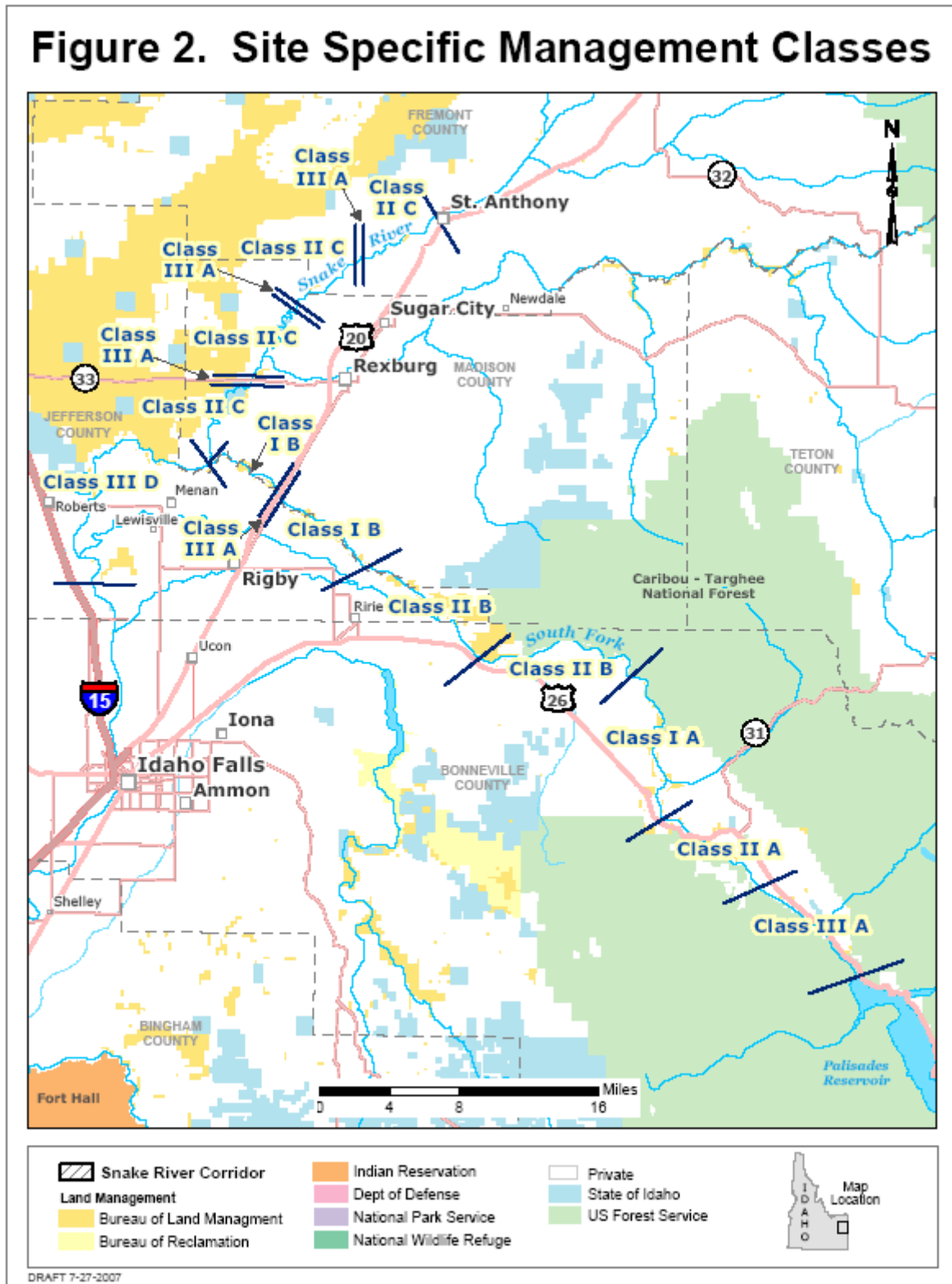


Table 1. Description of Site Specific Management Class Segments

| Description | Legal Description | Class Segment | River Miles in Class Segment |
|---|--|---------------|------------------------------|
| Palisades Dam to Irwin Powerline | T. 1N., R. 44E., Sections 18 and 19 | IIIA | 9 |
| Irwin Powerline to Conant Boat Access | T. 2N., R. 43E., Section 32 | IIA | 8 |
| Conant Boat Access through Lufkin Bottom | T. 3N., R. 42E., Sections 13 and 24 | IA | 11 |
| Lufkin Bottom to Riley Diversion | T. 3N., R. 41E., Section 16 | IIB | 12 |
| Riley Diversion to ¼ mile downstream from Twin Bridges | T. 4N., R. 40E., Section 20 | IIIB | 11 |
| From ¼ mile downstream from Twin Bridges to the confluence with the Henrys Fork (excluding Lorenzo Bridge area). | T. 5N., R. 38 E., section 23 | IB | 14 |
| Lorenzo Bridge, ¼ Mile Each Side Beaver Dick Park, ¼ Mile Each Side Hibbard Bridge, ¼ Mile Each Side Red Road Bridge, ¼ Mile Each Side | T. 5N., R. 39E., Sections 28 and 33 T. 6N., R. 39E., Sections 19 and 30 T. 7N., R. 39E., Section 34 T. 7N., R. 40E., Sections 17 and 19 | IIIC | 2 |
| Confluence with the Henrys Fork Upstream to St. Anthony | T. 7N., R. 40E., Section 1 | IIC | 31 |
| From the Confluence Downstream to Market Lake Canal (Lewisville Knolls) | T. 4N., R. 37E., Section 23 | IIID | 21 |

2.1.6 Recreation

A. Off Highway Vehicles (OHV)

USFS Only

Travel management on National Forest System lands in the Snake River Planning Area is managed under the Targhee National Forest Open road and Open Motorized Trail Analysis (October 1999) and the current Travel Plan Map.

BLM Only

Approximately 11,000 acres are closed to OHV use, including river islands and most of the land adjoining the river in the South Fork Canyon of the South Fork and the majority of the river bottoms. Approximately 1,000 acres are open to OHV use, including those desert uplands west of the Henrys Fork and Main Snake, and the Lewisville Knolls area. Approximately 8,000 acres are limited to

existing roads and trails, including the Stinking Springs area and ingress and egress for developed facilities and private property. These areas were identified in the Medicine Lodge RMP. (see Maps 1-9 in Appendix E).

All dikes and levees are closed to OHV access except for maintenance purposes.

B. Developed Facilities and Improvements

New Developments:

1. Red Road Bridge Boat Access would consist of an access road, parking area and boat ramp (day use only). BLM would work with county and other partners for new development along the Henrys Fork.

Improvements:

2. Stinking Springs and North Menan Butte trails would be improved following their site specific recreation plan. The effectiveness of the 2007 erosion control project at Stinking Springs would be monitored and if excessive erosion continues current uses and layout of the trail would be reevaluated. Kelly Island Campground would be improved to accommodate groups and larger recreation vehicles (RVs).

Maintained at the Current Levels:

Palisades Dam boat access, Spring Creek boat access, Conant boat access, Fullmer boat access, Byington boat access, and Lorenzo boat access, Warm Springs day-use, Fall Creek Campground, Cress Creek Nature Trail, and South Fork Rim Trail would be maintained at their current levels.

C. Special Recreation Permits and Special Use Permits

The basic objectives of the BLM Special Recreation Permit (SRP) and USFS Special Use Permits (SUP) systems are to satisfy recreation demand within allowable use levels in an equitable, safe and enjoyable manner while minimizing resource impacts and user conflicts. Both are issued as a means to manage visitor use, protect natural and cultural resources, and as a mechanism to accommodate commercial and competitive recreational uses.

SRP's or SUP's are required for commercial activities, organized activities, and competitive events conducted on federally managed lands. See Glossary for definitions.

Commercial Fishing Outfitted Use

Currently there are eight licensed and permitted commercial fishing outfitters on the South Fork. Any changes to the allocation of licensed and permitted outfitters would be coordinated with the IOGLB. No changes to the allocation of permitted commercial outfitters would occur until the visitor capacity study (this would ensure that the public is able to provide comments) is completed and

recommendations are presented to the IOGLB. The BLM, USFS and IOGLB would work together to make any changes to the number or rules pertaining to licensed and permitted outfitters on the South Fork.

Reserved campsites are designated in the South Fork Canyon for commercial fishing outfitters with permits. In all other river classes reserved campsites would be authorized on a case-by-case basis.

Management Goals and Mitigation:

1. No permanent caches would be permitted for a reserved outfitter camp. All reserved campsite facilities such as tables, signs, and tent frames would be removed at the end of each outfitting season.
2. No more than eight outfitters would be allowed to reserve camps in the two designated areas in the South Fork Canyon. The location of reserved camp areas or campsites would be determined by the managing agency and may be moved at the discretion of the agencies.
3. In SSM Class IA, designate two specific areas in the South Fork Canyon which would be divided into four reserved outfitter camps per area in order to accommodate all eight licensed and permitted outfitters. One of these two areas would be managed by BLM and one would be managed by the USFS. Designated outfitter camps would be identified within the rest of the planning area if needed.
4. The transfer of ownership must include the entire business. There would be no splitting of existing licenses to different individuals.
5. Campsites must maintain at least a 75 feet spacing.
6. Shoshone-Bannock Tribal members would be able to exercise their Tribal Treaty Rights at all springs, including those located in the designated outfitter camps. The agencies would work with the permitted outfitters regarding Tribal traditional uses.

Commercial Activity

All individuals conducting any commercial activity would:

- Be issued a special use permit (USFS) or special recreation use permit (BLM).
- A copy of the appropriate permit would be carried by the outfitter, guide, or permittee when engaged in commercial activity.
- Be issued a decal or sticker with a number that must be carried with them when engaged in commercial activities.
- Carry with them, at all times of commercial activity, picture identification to identify the person with their state outfitters or guides license.

2.1.7 Lands and Rights-of-Ways

Rights-of-Way (ROW) proposals would be reviewed and approved on a case-by-case basis and would be subject to constraints to protect sensitive resource values, and address issues identified in the Snake River Plan Revision.

Utility line proposals would be required to be located along the existing power line corridor or underground along the edge or within roadways. Additions or modifications to above ground utilities would only be considered within the existing utility corridors where above ground facilities presently exist. Power line construction should conform to standards identified by the Avian Power Line Interaction Committee (APLIC, 2006) to minimize Bald Eagle and other raptor collisions and electrocutions. No utility lines would be located in the South Fork Canyon (Conant to Heise).

No additional communication sites would be considered within the planning area. Co-location on existing facilities would be required.

No commercial wind energy or solar sites would be allowed in the planning area.

BLM Only

New Recreation Public Purposes (R&PP) Leases and Conveyances would not be allowed in planning area due to the conflict with BLM's Land Conservation Program, management goals, and the responsibility managing a resource with numerous special designations and threatened, endangered, and sensitive species habitat. The R&PP act authorizes the sale and lease of public lands for recreational or public purposes to state, local governments, qualified nonprofit organizations, and tribes.

2.1.8 Law Enforcement

Coordinate between the BLM, USFS, IDF&G and county law enforcement agencies for enforcement of rules and regulations within the planning area.

2.1.9 Management of Cultural and Palaeontological Resources

In 1966, Congress authorized the National Historic Preservation Act (NHPA) to help preserve our nation's historic assets, districts, buildings, structures, sites, and objects significant in American history, architecture, archaeology, and culture. The act authorized each state to establish a State Historic Preservation Office (SHPO). Each SHPO is responsible for drafting and executing a Statewide Preservation Plan, assisting Certified Local Governments (CLGs) in local preservation planning, reviewing nominations to the National Register of Historic Places (NRHP), and providing technical guidance for public education and community outreach professionals.

Section 106 of the NHPA requires federal agencies to consider the effect of any federal undertaking on historic properties and allow the Advisory Council on Historic Preservation

(ACHP) a reasonable opportunity to comment. Cultural resource inventories would be completed prior to the authorization of any proposed project or action within the planning area. Effects would be identified, documented and evaluated in the standard Archaeological Society of Idaho (ASI) report format. Survey methods would include pedestrian transects and visual, professional assessment of the Area of Potential Effects (APE). Inventory results would be submitted to the Idaho SHPO for review. If direct or indirect effects are identified on properties listed, or those eligible for listing on the National Register, an appropriate response would be implemented to protect the affected property. The ACHP would resolve any disputes between the agencies and Idaho SHPO regarding effects of an undertaking on historic properties.

Executive Order 11593 (1971) and The NHPA's Section 110 direct federal agencies to inventory public lands outside of the Section 106 process. These laws and regulations require federal agencies to nominate historic properties to the National Register. The agencies are responsible for identifying historic properties located within the planning area and nominating them to the National Register.

The agencies would conduct Section 110 cultural resource inventories on selected parcels of federal lands located within the planning area. Available funding, priorities and directives would determine the selection of inventory areas. The agencies would nominate eligible historic properties for listing on the National Register individually, as thematic groups or as a district. The BLM and USFS would work with the Shoshone-Bannock Tribes to ensure that cultural resource and environment laws are followed. Both the NEPA and NHPA require tribal consultation regarding the adverse impacts to cultural and historic resources and mitigation the affects. The Shoshone-Bannock Tribes Heritage Tribal Office (HeTO) would participate in the review of cultural resource inventory results from the planning area.

The agencies would work with the Shoshone-Bannock Tribes to identify traditional cultural properties and collect oral histories and Shoshone-Bannock ethnographies within the planning area under the Section 110 authority of the NHPA. The agencies would use information collected by Section 106 and 110 inventories to maintain and update a permanent record of cultural and palaeontological resources within the planning area.

The agencies would monitor documented cultural resources within the planning area. They would develop site visit schedules, visit properties, document changes in a site's condition and make appropriate protective recommendations. The agencies would seek participation from the Shoshone-Bannock Tribes through HeTO in the interpretation of historic properties and the creation of educational and written documentation of cultural resources in the area. They would work with law enforcement officers to discourage vandalism and unauthorized use of historic properties. The agencies would report any vandalism of archaeological sites to Idaho SHPO. ARPA rules and regulations specify procedures for reporting and evaluating vandalism and other unauthorized uses of cultural resources (43 CFR 7). NAGPRA rules provide additional guidance regarding the inadvertent discovery of Native American cultural items and materials (43 CFR 10).

Archaeologists, historians and recreation specialists would interpret selected historic properties located within the planning area. Interpretation would include the following themes: prehistoric and historic Native American, traditional Shoshone-Bannock residence, Euro-American

exploration and the Fur Trade Era, Euro-American settlement and economic activities (homesteads, farming, ranching, commerce, logging, recreation development and prospecting), transportation (roads, trails, railroads, ferries, fords and bridges), Civilian Conservation Corps (C.C.C), and Vardis Fisher (Fisher Cabin).

The agencies would work with the Shoshone-Bannock Tribes to educate river visitors about the cultural and palaeontological resources of the area. Brochures, kiosks and other media would be developed to inform visitors about the planning area's prehistory and history and the laws and regulations that protect cultural resources.

The agencies would notify and involve the Shoshone-Bannock Tribes and the Northwest Band of the Shoshone regarding Native American cultural resource issues and concerns. These concerns and issues would include, but are not limited to protection of historic properties (Native American archaeological sites), affects of proposed federal undertakings on historic properties and site interpretation. This procedure is specified in the Code of Federal Regulations (CFR) 36 CFR 296.7, 36 CFR 800 Section 101(d) (6) (B), and the April 29, 1994 Government-to-Government consultation Presidential memorandum. The actions of the agencies would reflect the protection, enhancement, and restoration of reserved Treaty Rights. The federal agencies would consult with the Shoshone-Bannock Tribes concerning cultural resource issues and concerns as mandated by NHPA, NEPA and NAGPRA. Management of the river corridor would assist in the protection of Shoshone-Bannock Tribal religious freedoms.

2.2 General Description of Each Alternative

2.2.1 Alternative A – Existing Management Situation (No Action Alternative)

The National Environmental Policy Act of 1969 (NEPA) mandates consideration of a No Action Alternative. This Alternative provides a basis for comparing the impacts of the other alternatives. This Alternative involves continuing the management activities that already occur in the planning area and is based on reasonably foreseeable actions, available inventory data, existing planning decisions and policies, and existing land use allocations and programs. These activities are now governed by the existing Medicine Lodge RMP, Targhee National Forest RFP, the Snake River Activity/Operations Plan (1991), and BLM Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management and USFS appropriate NEPA allotment decisions. Alternative A would maintain present uses by continuing present management direction and activities.

Recreation opportunities are enhanced through an aggressive visitor information program; research into recreation use, trends and preferences; and placement of additional toilet facilities.

In SSM Class IA, South Fork Canyon, public camping would be restricted to designated areas. These areas would be managed to maintain a high quality experience. Campsites not meeting monitoring protocols use would be closed until rehabilitation is complete.

Off highway vehicles (OHVs) would be restricted to designated existing roads and trails in areas limiting OHV use. Signs are placed on the ground to help the public identify open routes. On USFS lands, users follow TTP Map.

Wildlife habitat for threatened or endangered species, non-game species, waterfowl and big game species would be improved. All primary nesting zones for bald eagles would be closed to human activity from February 1 to July 31 and the primary management parcels (nest and feeding zones) would be monitored for conflicts between eagles and human use. If standards are exceeded in the bald eagle parcel, those factors causing the problems would be identified and changed. A 500 foot closure above the river's surface would continue to be pursued with the FAA for aircraft to protect both bald eagles and peregrine falcons. Peregrine falcon nesting sites, if established, are to be protected. On-going improvements to the riparian habitat and retirement of some allotments from grazing provide improved habitat for waterfowl.

Vegetative cover would be maintained at or near current levels to provide for suitable nesting and wintering habitat for bald eagles, wildlife security habitat, shade and cover for fish, and high scenic quality.

2.2.2 Alternative B – Emphasis on Intensive Resource Management with Less Recreation Development

This alternative would intensively manage the natural resources to limit impacts to riparian resources, wildlife, and threatened and endangered species. Alternative B would allow the greatest extent of resource protection within the planning area, while still allowing resource uses.

Recreation development would be constrained to protect natural resource values or to accelerate improvement in their condition. Protection of threatened and endangered species and other wildlife habitat characteristics would increase. Wildlife areas would be closed to human access during crucial seasons if needed. Boat access sites would remain open year-round, but snow removal would be prohibited. Management would focus on restoring vegetation communities to ecologically desirable levels. Area protections such as the ACEC and RNA designations would be maximized and more restrictions on uses would apply in designated areas to protect sensitive resources and values. The existing SRMA designation would remain in place to provide diverse recreational experiences. There would be an increase in the areas closed to or with limitations on OHV use.

Public camping would be restricted to designated areas within the river corridor in the riparian area to maintain a high quality experience and limit resource and recreation conflicts. Group size and allocation of campsites would be required (based on visitor capacity study).

User created access (slides) within the planning area would be closed where feasible and limited facilities would be developed or improved.

2.2.3 Alternative C – Emphasis on Development of Resources for Recreation Opportunities

Alternative C would allow the greatest extent of resource use within the planning area, while maintaining the basic protection needed to sustain resources. Alternative C places an emphasis on maximum appropriate human use/influence and the widest array of recreation opportunities. Under this alternative, constraints on opportunities for recreation for the protection of sensitive resources would be the least restrictive possible within the limits defined by law, regulation, and BLM and USFS policy. Potential impacts to sensitive resource values would be mitigated on a case-by-case basis. The alternative expands the existing access in the planning area by expanding existing sites and adding new sites for development. Opportunities for BLM “unmanaged” motorized recreational experiences would increase where fewer OHV areas are limited or closed.

Public camping would be restricted to designated areas within SSM Class IA (South Fork Canyon). In the remaining classes dispersed camping on BLM and USFS managed lands and areas would be designated if necessary to reduce user conflicts. Group size and allocation of campsites would be implemented during high periods of use (weekends and holidays) if necessary to reduce user conflicts.

User created access (slides) within the planning area would be allowed and hardened and facilities would be developed or improved. Snow removal at access sites would occur all winter or beginning in March at the boat access sites along the river corridor to allow for recreation opportunities (except Fullmer Boat Access would remain closed to vehicle access during winter months). BLM OHV routes would be designated and new opportunities for OHV trails would be pursued.

2.2.4 Alternative D – Compromise between alternatives A, B, C – Preferred Alternative

Alternative D would emphasize multiple resource use in the planning area by protecting sensitive resources and applying the most current information to allow BLM and USFS to set priorities for flexible, proactive management of public and forest lands. Recreation development would be balanced against wildlife and vegetation protection. Protection of threatened and endangered species and wildlife habitat characteristics would be maintained or increased. The planning area protections such as management of the ACEC and the SRMA would be necessary to protect sensitive resources.

Fullmer Boat Access would continue to be closed to motorized vehicle access during the winter months. The only designated OHV trail would be the Stinking Springs trail (Figure 3). All other undesignated trails would be closed to OHV use. OHV use would continue to be allowed on existing roads.

There would be no dispersed camping in either SSM Class IA (South Fork Canyon) or within riparian areas along the river corridor from the Black Canyon to Cress Creek. All campsites in these areas would be designated.

Dispersed camping would be allowed elsewhere in the planning area, although additional campsites may be designated in high use areas as needed to reduce resource impacts. Users would be required to use fire pans if fire rings are not available and human waste would be required to be removed if sanitary facilities are not available.

A visitor capacity study would be conducted to determine visitor thresholds for the planning area. A check-in or reservation system would be considered when the threshold is reached.

2.3 Comparison of Alternatives between Issues – Alternative Summary

The BLM and USFS have nine issues to address in this plan revision, each issue is discussed by alternative, followed by a short table highlighting each alternative's differences for each issue component. Issues 10-12 are not addressed in the comparison of alternatives because management actions for these issues are addressed in management actions common to all four alternatives (see section 2.1).

2.3.1 Issue No. 1 - Education of River Users

Alternative A would maintain annual meetings with outfitters and guides and annual training for hosts and recreation technicians. Alternative A would maintain minimal signing, the Boater's Guide (not including the Henrys Fork), and would have no website available.

Alternatives B, C, and D would be the same as described in Alternative A with the addition of more education development, with boat etiquette information and cultural brochures available. The BLM and USFS would coordinate with the Shoshone-Bannock Tribes, state and federal agencies pertaining to the development of education material. Outfitters and Guides would be periodically trained, and additional signing of hazards (e.g., low-head dams, irrigation diversions, etc.), land boundaries, day-use areas, and rules and regulation information would be kept small and unobtrusive. These three alternatives would include updates to the Boater's Guide, including conservation easements, fee acquisitions, the Henrys Fork and Main Snake River reaches in the guide. These alternatives would also include development of an interagency joint website for the river. This would also include a link to the US Geological Survey streamflow website and link to the Shoshone-Bannock Tribal website for information and education on Tribal culture.

In addition, Alternative D would include development of partnerships with the state, county and irrigation companies for signing, as well as partnerships with the State of Idaho for updating maps, and for working with commercial businesses to establish a link to the agency website.

Table 2. Issue No.1 - Education of River Users

| Issue Component | Alternative A | Alternative B | Alternative C | Alternative D |
|--|---|--|------------------------|--|
| 1A. Education Tools and Media | Information kiosks at all boat access sites. Boaters Guide, East Idaho Visitor Information Center, and Conant Visitor Center provide information. | Same as A., in addition Boaters Guide updated and reprinted more frequently. Boat etiquette information and cultural brochures developed. Coordinate with the Shoshone-Bannock Tribes, state and federal agencies. | Same as Alternative B. | Same as Alternative B. |
| 1B. Outfitters and Guides | Annual meeting. | Annual meeting with periodic training. | Same as Alternative B. | Same as Alternative B. |
| 1C. Camp Hosts and Recreation Technicians | Annual training. | Annual and continued training. | Same as Alternative B. | Same as Alternative B. |
| 1D. Signs | Limited signs at kiosks and along corridor. | Sign hazards, boundaries and day use areas, keeping signs small. | Same as Alternative B. | Same as Alternative B; also develop partnership with state, county and irrigation company. |
| 1E. Maps | Boater's Guide (does not include Henrys Fork) | Update guide, including conservation easements, fee acquisitions, Henrys Fork and Main Snake. Include designated trails for BLM and USFS. | Same as Alternative B. | Same as Alternative B; also develop partnership with the State of Idaho. |
| 1F. Website | None available. | Develop joint website. | Same as Alternative B. | Same as Alternative B; develop commercial business link to agency website. |

2.3.2 Issue No. 2 - Protection of Riparian Habitat

Alternative A would designate only Cress Creek and North Menan Butte Trail as non-motorized trails, while Alternative B would also include the levee trails, Lorenzo and Wolf Flats trails. Alternative C would designate all these trails, and would encourage opportunities for the designation of additional non-motorized trails. Alternative D would be similar to Alternative B, but it would allow for designation or closure of user-created trails on a case-by-case basis.

Alternative A would require users to provide human waste carryout system (e.g., sealable portable toilet, or EPA approved disposal bag - Wag Bags®) for overnight camping in the South Fork Canyon. Alternative B would require human waste carryout system for all visitors, day or overnight use along the river corridor in the riparian area. Alternative C would require human waste carryout system for all visitors in the South Fork Canyon, day or overnight use. Alternative D would require a human waste carryout system for all day and overnight users along the river corridor in the riparian area except where public facilities are available.

Under all alternatives, girdling of trees or use of chainsaws would not be allowed. All visitors to the planning area would be allowed to burn small diameter dead and downed wood in camp fires. Alternatives B and D would require all users to provide their own fire pan and carry out ash along the river corridor in the riparian area unless agency provided fire rings are available. The federal agencies would phase in installing agency provided fire rings at designated campsites, starting with the reach between Black Canyon and Heise. Other locations would be determined as needed. Alternative C would encourage visitors to bring fire pans or use agency provided fire rings where available, ashes must be packed out.

Table 3. Issue No. 2 - Protection of Riparian Habitat

| Issue Component | Alternative A | Alternative B | Alternative C | Alternative D |
|---|---|--|--|--|
| 2A. Grazing | BLM: Management according to Grazing Regulations (43 CFR 4100) USFS: Refer to Targhee National Forest RFP and NEPA information as indicated in Table 16 of this document | BLM: Same as Alternative A. In addition, identify vacant BLM allotments for change in status from available to unallocated for grazing in RMP revision. USFS: Same as Alternative A | BLM: Same as Alternative A. USFS: Same as Alternative A | BLM: Same as Alternative B. USFS: Same as Alternative A |
| 2B. Non-Motorized Trails | BLM: Designate Cress Creek and North Menan Butte. USFS: Refer to Forest and Travel Management Plan. | BLM: Same as Alternative A, plus designate levee trails, Lorenzo and Wolf Flats. USFS: Same as Alternative A. | BLM: Same as Alternative B, plus look for new trail opportunities. USFS: Same as Alternative A. | BLM: Same as Alternative B, plus designate or close user-created trails. USFS: Same as Alternative A. |
| 2C. Human Waste Disposal (All Users) | Require human waste carryout system (e.g., sealable portable toilet, or EPA approved disposal bag - Wag Bags®) for overnight camping in South Fork Canyon. | Require human waste carryout system for all day and overnight users along river corridor in riparian areas. | Require human waste carryout system for all visitors in South Fork Canyon. | Require human waste carryout system for all day and overnight users along river corridor in riparian areas except where public facilities are available. |
| 2D. Camp Fires (All Users) | Campfires allowed anywhere. Can burn dead and down wood, but no girdling of trees or use of chainsaws. | All users must provide their own fire pan and carry out ash unless agency provided fire rings are available along river corridor in riparian areas. Can burn dead and down wood, but no girdling of trees or use of chainsaws. | All users are encouraged to provide their own fire pan or utilize agency provided fire rings; pack out ashes. Can burn dead and down wood, but no girdling of trees or use of chainsaws. | Same as Alternative B. |

2.3.3 Issue No. 3 - Protection of Watershed

All four alternatives would control upland erosion where feasible and rehabilitate all physically-damaged areas (BLM Only). Alternative B would limit new development to minimize disturbance, and close and rehabilitate unauthorized boat ramps (slides) where feasible. Alternative C would identify and develop unauthorized boat ramps where sites are desirable. Alternative D would be similar to Alternative B.

Vegetation management projects would be fairly similar among the four alternatives. Alternative A would maintain the current vegetation projects (e.g., fuels treatment, riparian planting, etc). Alternative B would allow consideration of projects that benefit river restoration, habitat for wildlife, and special status species. The agencies would coordinate with the Shoshone-Bannock Tribes to identify plants of special concern to the Tribes. Ceremonial and medicinal plants have been identified in the planning area and it would be beneficial to the federal agencies and the Tribes to work towards identifying a plant list. Alternative C would allow consideration of projects benefiting recreation, while Alternative D would allow projects guided by ecological necessity and acceptable to the public that benefit river restoration, wildlife, and special status species habitat and recreation.

Treatment of noxious weeds would be managed the same through all alternatives for the USFS. Treatment methods would comply with the existing Caribou-Targhee Environmental Assessment for noxious weed management. Alternatives A, B, and D would treat non-native and noxious weeds under existing BLM treatment plans.

For both federal agencies the treatment of noxious and invasive species would emphasize biological control along the corridor. The treatment of upland areas with chemicals would occur where feasible. Alternatives A, B, and D would primarily require biological control in riparian areas, but in some riparian areas chemicals may be used. Treatment of upland areas with chemicals would take place. All chemical application would be based on condition and label direction. This would be done in accordance with all biological assessments (BA), letters of concurrences, and biological opinions (BO) rendered by the USFWS. Alternative C would be similar to Alternatives A, B, and D except that BLM would only treat noxious species.

Alternative A would not include any cooperative effort to improve awareness of undesirable aquatic species. Alternatives B, C, and D would call for establishment of partnerships with other federal and state agencies, and the Shoshone-Bannock Tribes to assess the threat of undesirable aquatic species and to improve public awareness of them. An interagency working group would develop a joint response plan for aquatic species.

Table 4. Issue No. 3 - Protection of Watershed

| Issue Component | Alternative A | Alternative B | Alternative C | Alternative D |
|---|---|--|---|---|
| 3A. Erosion Control | BLM Only: Control upland erosion and rehab any feasible, damaged areas. Limit upland erosion at Stinking Springs. BLM and USFS: Limit new development. | Same as Alternative A, except no special numerical limit for Stinking Springs. BLM and USFS: Where feasible, close and rehab unauthorized boat ramps. | Same as Alternative B. BLM and USFS: Identify and develop unauthorized boat ramps where sites are desirable. | Same as Alternative B. |
| 3B. Vegetation Management | Limited vegetation projects. | Consider projects benefiting river restoration, wildlife and special status species habitat. | Consider projects benefiting recreation. | Same as Alternatives B and C, projects guided by ecological necessity and acceptable to the public. |
| 3C. Undesirable Species and Noxious Weeds (Including plant and insect pests) | Treat under existing BLM and USFS treatment plans. Treat noxious and invasive species emphasizing biological control along corridor. Treat upland areas with chemical and some riparian areas where feasible. Follow BA, BO, and letters of concurrence requirements. | Same as Alternative A. | Same as Alternative A, but treat noxious species only (BLM Only). | Same as Alternative A. |
| 3D. Undesirable Aquatic Species | No educational outreach program. | Interagency work group develop a joint education and response plan to improve public's awareness. | Same as Alternative B. | Same as Alternative B. |

2.3.4 Issue No. 4 - Land Ownership

BLM Only: Under Alternative A, a formal method to sign the levee systems to indicate public access points would not be developed. The use of the existing boaters guide and maps would be the only method for the public to determine land ownership in the planning area. Under Alternatives B, C, and D, a formal method to sign the levee system would be developed to indicate public access points. Alternative B and C would call for the identification and posting of public access locations along the levee system, in the boaters guide, and on maps. The identification and signing of levees under Alternative D would be similar to Alternative B, but would involve additional coordination with irrigation companies (Flood Control District #1), other agencies, and the county sheriff to ensure user compliance.

All four alternatives would define unauthorized use as any action on public or forest lands that is not authorized. These uses include, but are not limited to, private fences encroaching on federal land, non-permitted livestock grazing, trails created in locations not identified in the plan, and camping in a non-designated area. All four alternatives would require periodic BLM Law Enforcement, recreation technician, USFS Forest Protection Officer, and USFS LEO patrols to ensure user compliance. Under Alternatives B, C, and D, the BLM and USFS would develop partnerships with other agencies and local groups to identify and report unauthorized uses.

All four alternatives would strive to enhance management of identified resource values and public benefits through BLM's continued work with nonprofit partners to pursue land acquisitions and conservation easements with willing land owners when funding is available. In addition, the BLM would pursue public access on conservation easements with willing land owners. Alternative D would also promote public access and the conservation easement/acquisition program on maps and in the boaters guide, and both the public and outfitters would be provided with additional education about the program.

Under Alternatives B and D, the federal agencies would continue to acquire public access on conservation easements where it does not conflict with resource values, there are minimal impacts to wildlife, and willing landowners. In addition, under both Alternatives B and D, the BLM would look for opportunities to work with other federal and state agencies and Shoshone-Bannock Tribes to obtain conservation easements and land acquisitions to protect resource values. Alternative C would also coordinate with other federal and state agencies and Shoshone-Bannock Tribes with the primary goal of benefiting recreation activities. Where feasible, all public access locations would be pursued under Alternative C in partnership with other agencies to avoid duplication of efforts. Alternative D would also use this avenue to promote more recreation opportunities, with the overall goal of enhancing management of identified resource values and public benefits.

Table 5. Issue No. 4 - Land Ownership

| Issue Component | Alternative A | Alternative B | Alternative C | Alternative D |
|---|---|---|--|---|
| 4A. Signing levees BLM Only | No signing. | Identify public access locations and map access points. | Same as Alternative B. | Same as Alternative B, plus coordinate with irrigation companies, other agencies, and county sheriff. Identify in boaters guide (corridor guide). |
| 4B. Unauthorized use | Periodic BLM LEO, USFS Forest Protection Officer and LEOs, and recreation technician patrols. | Same as Alternative A, plus develop partnerships, and work with local groups to identify and report unauthorized uses. | Same as Alternative B. | Same as Alternative B. |
| 4C. Public access | Pursue public access with willing land owners. | Consider acquiring public access where it does not conflict with resource values and there are minimal impacts to wildlife. | Acquire all public access locations where feasible. Work with other agencies to pursue access in order to avoid duplication. | Same as Alternative B, plus work with other agencies. |
| 4D. Conservation easement/Land acquisition | Pursue land acquisitions and easements when funding is available. Currently working with three non-profit partners. | Pursue land acquisitions and easements within planning area when funding is available and there are willing land owners. Continue to work with non-profit partners and look for opportunities to work with other federal and state agencies and Shoshone-Bannock Tribes | Same as Alternative B, plus pursue public access for recreation activities on acquisitions and easements. | Same as Alternative B. Promotion of program in maps and boaters guide. Education with public and outfitters about the Acquisition/Easement Program. |

2.3.5 Issue No. 5 - Protection and Enhancement of Fish, Wildlife, and Botanical Resources

Under all four alternatives, the BLM and USFS would maintain partnerships to continue reconnecting stream tributaries to the main river. Alternative D would involve additional coordination with the IDF&G and Shoshone-Bannock Tribes to determine and prioritize tributary reconnects. Alternatives B, C, and D would also call for the pursuit of new opportunities through the State of Idaho for minimum instream-flow claims on selected tributaries.

Under Alternatives A and D, the federal agencies would not remove snow from the federal boat access sites. However, the sites would remain open for use. Alternative B would be similar to Alternatives A and D, but it would prohibit snow removal by private or county entities on federal boat access sites, however the sites would remain open for use. With the exception of Fullmer Boat Access, Alternative C would provide for snow removal at the federal boat access sites dependent on funding.

Under Alternative A, the BLM would work with IDF&G to close Stinking Springs to human access during crucial periods to protect mule deer. A temporary human entry closure would be in effect from December 1 to April 30, annually. The USFS has winter travel closures identified in the Targhee Travel Plan (1999) that would carry through all four alternatives. Bald eagle nesting areas would be identified and signed in the South Fork Canyon. Federal lands would be monitored in the river management area for compliance with seasonal wildlife closures under Alternatives A and D.

Under Alternative B, a permanent human entry closure at Stinking Springs would be in effect from December 1 to April 30, annually. Other wildlife areas would be closed to human access during crucial periods if needed on both BLM and USFS lands. Bald eagle nesting areas would be signed throughout the planning area where there is pressure from human activity. Alternative C would not consider human access closures, and signing of bald eagle nesting areas would be limited to the South Fork Canyon.

Alternative D would be similar to Alternative B, but if the mule deer population improves at Stinking Springs, the authorizing officer would have the authority to remove the human entry closure and the Stinking Springs Designated Motorized Trail would remain open between April 15 and November 15 of each year. The trail would be open to all modes of travel except snow vehicles and vehicles over 50 inches wide.

Under Alternative A, the BLM and USFS would not make improvements to non-functional fish passage areas on streams tributary to the river. Although the USFS has a completed inventory of fish passage problems in the planning area, the BLM has not completed an inventory. Alternatives A, B, C, and D would require BLM to inventory all tributary streams within the planning area to identify fish passage problems. Under Alternatives B, C, and D, both the BLM and USFS would prioritize and pursue improvement of non-functional fish passage areas.

Under Alternative A, the federal agencies would not inventory diversions for fish entrainments. However, Alternatives B, C, and D would require the agencies to complete an interagency inventory and form an interagency work group to prioritize and screen diversions where feasible. In addition, the agencies would coordinate with irrigation companies and private right-of-way holders to eliminate further fish entrainment problems.

Table 6. Issue No. 5 - Protection and Enhancement of Fish, Wildlife and Botanical Resources

| Issue Component | Alternative A | Alternative B | Alternative C | Alternative D |
|--|---|--|--|--|
| 5A. Tributary stream flow | Maintain existing reconnect projects to reconnect stream tributaries to main river. | Same as Alternative A, plus pursue new opportunities for minimum instream-flow. | Same as Alternative B. | Same as Alternative B, plus work with IDF&G in determining and prioritizing tributary reconnects. |
| 5B. Winter access to boat ramps | No agency snow removal, yet boat access sites are still open for use. | Prohibit snow removal at federal boat access sites, yet boat access sites are still open for use. | Snow removal at the federal boat access sites dependent on funding, <i>except Fullmer Boat Access.</i> | Same as Alternative A. |
| 5C. Wildlife closures | Work with IDF&G to close Stinking Springs to human access during crucial periods. Monitor wildlife closures for compliance. The USFS has winter travel closures identified in the Targhee Travel Plan. Currently Heise Road is closed upriver from Table Rock. Bald Eagle | Close Stinking Springs to human entry Dec. 1 to April 30 on a permanent basis and close other wildlife areas to human access during crucial seasons if needed. State the methods of closure and predicted time frames for closures on the website and kiosks. Same as Alternative A. Sign Bald Eagle | Do not consider human access closures. Same as Alternative A. Bald Eagle | Same as Alternative B, plus if mule deer population improves, authorizing officer has the authority to remove human entry closure and the trail would remain open April 15 – November 15 to motorized access. Wildlife closure areas would be monitored for compliance. Same as Alternative A. Same as Alternative |

| Issue Component | Alternative A | Alternative B | Alternative C | Alternative D |
|---|--|--|--|---|
| | nesting areas signed in South Fork Canyon. | nesting areas in entire planning area where there is pressure. | nesting areas signed in South Fork Canyon. | B. |
| 5D. Fish passage inventory | Inventory complete for the USFS. | BLM inventory all tributary streams within the planning area. | Same as Alternative B. | Same as Alternative B. |
| Fish Passage Treatment | No plans for non functional fish passage. | Prioritize and pursue fish passage where fish passage is non functional. | Same as Alternative B. | Same as Alternative B. |
| 5E. Fish Entrainment Inventory of Diversions | None | Complete an interagency inventory of diversions for fish entrainment. Interagency work group prioritize and screen diversions where feasible. Work with irrigation companies and private right-of-way holders. | Same as Alternative B. | Same as Alternative B. |
| 5F. Inventory for plant, pollinator, neo-tropical migratory birds, and amphibian species needed. | Currently little data is known on the extent of the floristic diversity, pollinators, neo-tropical migratory birds and amphibians. | Complete floristic, pollinator, neo-tropical migratory birds and amphibian inventories. | Same as Alternative A. | Same as Alternative B, plus inventories to be completed as funding and resources allow. |

2.3.6 Issue No. 6 - Management of Off-Highway Vehicles (OHV's)

Refer to Targhee Travel Plan for detailed information on OHV management for the Palisades Ranger District, Caribou-Targhee National Forest. The Targhee Travel Plan regulates all OHV use to 50 inches wide (vehicle width) or less on USFS lands. BLM would manage OHV use consistent with the 50-inch rule.

BLM Only

Alternative A only designates Stinking Springs as an OHV trail. Any undeveloped recreation site not identified for development, improvement or maintenance would be closed to motorized use unless on designated routes. This alternative calls for periodic BLM law enforcement and recreation technician patrols. This alternative does not call for an overall planning area closure, only specific closures. Minimal signing would take place on designated routes, and trails would be identified on maps and in the boaters guide.

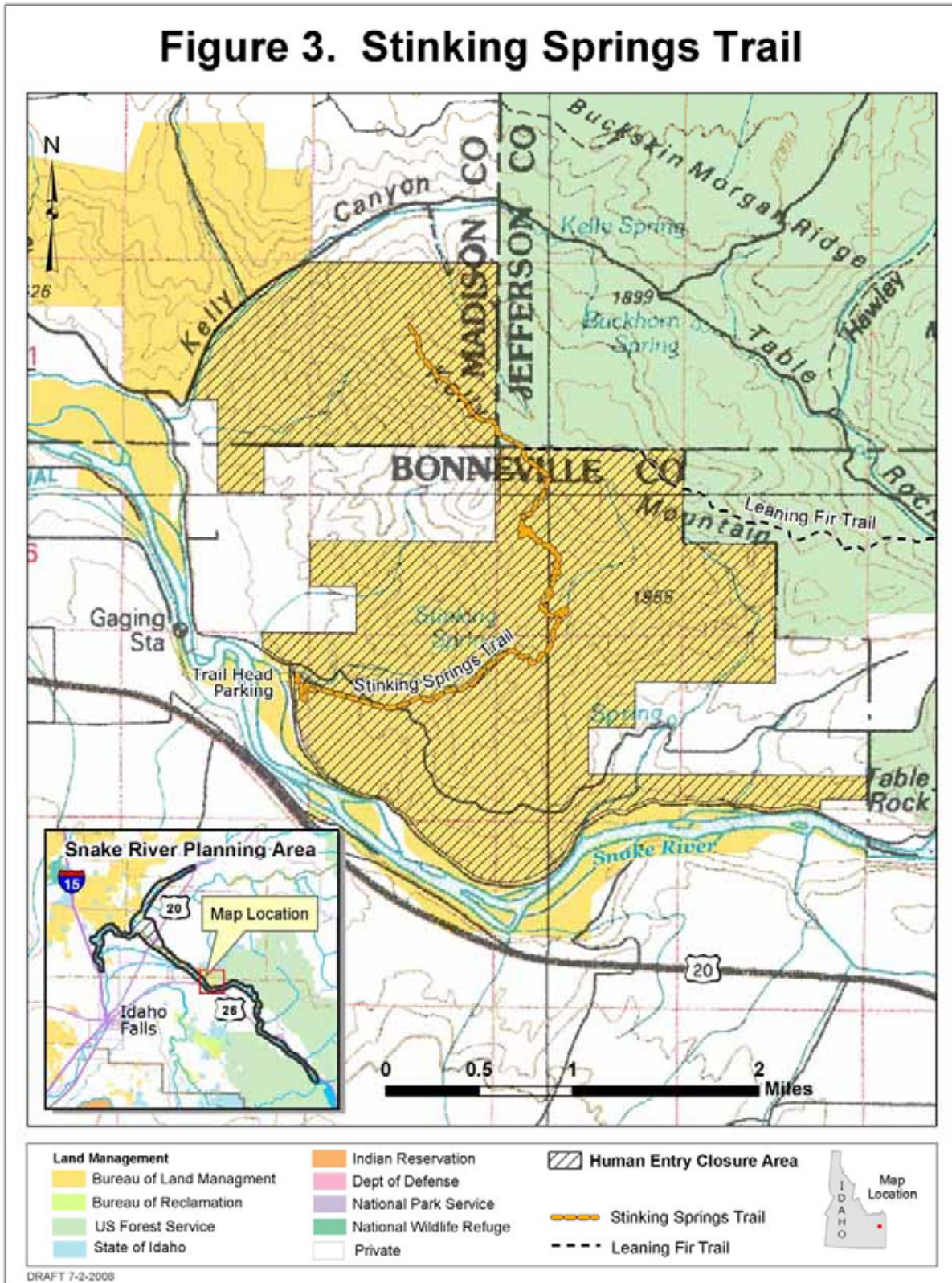
Alternative B would review all OHV trails within the planning area, working with USFWS, IDF&G, and Shoshone-Bannock Tribes to identify any big game habitat conflicts. Potential OHV areas would be identified and reviewed. Routes would be determined to be either designated or closed.

Under Alternative D the only designated OHV trail would be the Stinking Springs trail (Figure 3). All other undesignated trails would be closed to OHV use. OHV use would continue to be allowed on existing county roads. In the future, designated OHV routes may be considered and analyzed on a case-by-case basis.

Alternatives B and D would close unauthorized OHV routes and maintain more frequent patrols. All designated trails would be identified on maps, website, kiosks, and aerial photos. Local partnerships would be developed so unauthorized access would be reported. BLM would finalize designated and closed routes in the Federal Register. Information signs would be installed to explain OHV designation.

Alternative C would seek to designate and pursue new opportunities for OHV trails on a case-by-case basis that are environmentally acceptable. In future travel management planning, additional routes may be considered for designation. Under Alternative C, there would be no limitations on motorized access points on public land that provide access to the dry river channels below the high water mark

Figure 3. Stinking Springs Trail



BLM and USFS

Federal agencies would work with Idaho Department of Lands (IDL) to limit access points on public lands for motorized access to the dry river channels below the high water mark. Under these alternatives, the federal agencies would coordinate with county law enforcement on Fall Creek, Spring Creek, Heise, Twin Bridges, Lorenzo, and other problem access areas.

The table below identifies how OHV issue components change under the four alternatives on BLM lands. For USFS lands, the TTP covers these components, no changes are proposed to the current TTP.

Table 7. Issue No. 6 - Management of Off Highway Vehicles (OHV's)

| Issue Component | Alternative A | Alternative B | Alternative C | Alternative D |
|--|---|--|--|---|
| 6A. OHV Trails and Trail Closures (summer/winter) | Designate routes; close all other undesignated sites to motorized use. | Review all OHV trails with USFWS, IDF&G, and Shoshone-Bannock Tribes to identify conflicts. Identify potential areas, review for erosion. Designate or close routes. Identify designated routes on website and on aerial photos. | Same as Alternative B, plus pursue new OHV trail opportunities. | OHV would still be allowed to use existing county roads. The Stinking Springs trail would be the only designated OHV route. All other undesignated routes would be closed. In the future, designated OHV routes may be considered and analyzed on a case-by-case basis. Identify designated routes on website and on aerial photos. |
| 6B. Unauthorized Motorized Access | No overall planning area motorized closure, only a 2001 motorized closure for specific areas. Periodic BLM patrols. | Correct unauthorized use. Develop partnerships to identify and report unauthorized uses. Finalize designations in Federal Register. | Same as Alternative B. | Same as Alternative B. |
| 6C. Signing of Designated Trails | Minimal signing on designated routes. Routes are displayed on maps, boaters guide and USFS travel plan maps. | Signing on designated routes and to explain OHV designations and information. | Same as Alternative B. | Same as Alternative B plus designated routes would be signed and placed on website and aerial photographs. |
| 6D. Motorized Closures (including 4WD trucks) below | The existing plan does not address motorized use below the high | Work with IDL to eliminate motorized access points on public | No limitation on motorized access points on public land that provide | Same as Alternative B. |

| Issue Component | Alternative A | Alternative B | Alternative C | Alternative D |
|---------------------------------------|----------------------|--|---|----------------------|
| High Water Mark (BLM and USFS) | water mark. | land that provide access to the dry river channels below the high. water mark. Coordinate with counties on problem access areas (e.g., Fall Creek, Spring Creek, Heise, Lorenzo) and as others problem areas develop | access to the dry river channels below the high water mark. | |

2.3.7 Issue No. 7 - Management of River Corridor Uses

Alternatives A, B, C and D would conduct a visitor capacity study for the planning area, addressing motorized and non-motorized boat activity, and recommending options to minimize recreation conflicts. The study findings would be used to develop planning documents for the planning area by BLM and USFS.

Alternative A would not set a limit on the number of commercial permits issued, but would continue to limit the eight existing commercial fishing outfitters to their current allocation. Permits for other types of commercial activity would be issued on a case-by-case basis with no limit to the number of permits issued.

Alternatives B and D would consider commercial (i.e., commercial activities that do not require an IOGLB license), competitive use, and organized group use permits requests on a case-by-case basis until the visitor capacity study is completed and provides further direction for issuance of SRPs and SUPs. One-time or infrequent events would be considered differently from more frequent events.

At this time, these alternatives would maintain the eight commercial fishing outfitter permits (those that require IOGLB license), but may change outfitter stipulations to address public/outfitter conflicts. Specific permits may be assigned days of week (i.e., Monday-Thursday) and specific locations (i.e., below Heise, lower Henrys Fork) to avoid conflicts with other commercial and general public activity.

Any changes to the allocation of licensed and permitted outfitters must be coordinated with the IOGLB. Currently there are eight permits for commercial fishing outfitters on the South Fork. No changes to the allocation of permitted commercial outfitters would occur until the visitor capacity study (this will ensure that the public is able to provide comments) is completed and recommendations are presented to the IOGLB. The BLM, USFS and IOGLB would work together to make any changes to the number or rules pertaining to licensed and permitted outfitters on the river to address public/outfitter conflicts.

Alternative C does not limit the number of special recreation permits issued, and considers these requests on a case-by-case basis. This alternative considers outfitter stipulations to address conflicts in the same way as Alternative B, and also maintains the eight commercial fishing outfitters.

Table 8. Issue No. 7 - Management of River Corridor Uses

| Issue Component | Alternative A | Alternative B | Alternative C | Alternative D |
|---|---|---|---|-----------------------|
| 7A. Visitor Capacity Study | Conduct study for planning area, addressing motorized and non-motorized boat activity and recommending options to minimize recreation conflicts. Study findings adopted administratively by BLM and USFS. | Same as Alternative A | Same as Alternative A | Same as Alternative A |
| 7B. Special Recreation Permits and Special Use Permits | Permit commercial activity on case-by-case basis with no limit. Maintain eight commercial fishing outfitters. | Based on a visitor capacity study, the number of commercial permits issued may be adjusted. Until the study is completed, the eight commercial fishing outfitters will be maintained and additional applications for commercial permits (those commercial activities that do not require an IOGLB license) will be considered on a case-by-case basis. Commercial fishing outfitter stipulations may change to address conflicts. | Consider different commercial permits issued on a case-by-case basis, with no limit. Otherwise, similar to Alternative B. | Same as Alternative B |

2.3.8 Issue No. 8 - Management of Camping and Facilities

The first issue component is the management of recreational facilities within the planning area. Alternative A has developed a partnership with county and state agencies to manage boat access facilities and has instituted a fee program along the South Fork corridor. Alternative B would continue the partnership to manage planning area facilities. This alternative would also continue the fee program, increasing the fees (if needed) to fund projects established by the South Fork Working Group, made up of BLM, USFS, IDF&G and Bonneville, Madison and Jefferson Counties. Under this alternative the Working Group would consider other projects within the planning area not currently in the fee program (e.g., Wolf Flats and Heise Bridge (South Fork); and Trestle Bridge and Red Road Bridge (Henrys Fork)). Alternatives C and D are similar to Alternative B for this component.

The next three issue components are: condition of camping areas, campsite use, and group size. The objectives of these components are to minimize impacts to riparian vegetation, and solve sanitation and soil loss problems. Standards to meet these objectives include percent of ground cover, number of human developments (campfire rings, etc.), amount of tree damage, availability of firewood, and overall cleanliness of the campsite. In turn, the condition of individual campsite, the number of new campsites, and the overall appearance of a camping area would determine the condition class rating assigned to that particular camping area. To see the individual condition class rating definitions and the standards for each site specific management class (SSM), refer back to Appendix A.

Alternative A would use established monitoring protocols to evaluate campsites and determine closure or rehabilitation needs on a case-by-case basis. Camping use under Alternative A would be first come, first serve, and group camping size would be unlimited. Alternative B would allow for some changes to campground monitoring protocols. This alternative would call for hardening campsites (e.g., wood chips, gravel) if monitoring deems it necessary. This alternative would also call for BLM and USFS to develop a monitoring method for the quality of the recreational experience of visitors to the South Fork. Alternative B would allocate campsites and would consider a check-in system or reservations for campsites when BLM or USFS deem necessary. With the exception of some large campsites (e.g., Wolf Flats, Gravel Pits, Trestle Bridge, etc.) this alternative would limit and designate group camping size to 16 people.

Alternative C would monitor camp areas, harden campsites if necessary and monitor the quality of the recreational experience similar to Alternative B. This alternative differs from Alternative B by allowing first come, first serve campsite use and only allocating or reserving campsites during high use periods (i.e., holidays and weekends). With the exception of some large campsites (e.g., Wolf Flats, Gravel Pits, Trestle Bridge, etc.) group size would be limited to 25 people at designated sites. Alternative D would monitor campsites similar to Alternatives B and C. Alternative D would allocate campsites and group size limits would be based on the individual physical site capacity and the social threshold from the outcome of a visitor study. Alternative D would consider either a check-in or reservation system when these thresholds are reached, and assess a camping fee within the corridor if a reservation system is implemented. This alternative would limit group size based on individual campsite capacity and capacity thresholds for the planning area.

The next two issue components address camping by boat and by vehicles within the planning area, and the final component specifically addresses boat camping in the South Fork Canyon. Alternative A would allow dispersed camping by boat or vehicle throughout the planning area except in the South Fork Canyon. Designated camp areas would be identified in the South Fork Canyon and sites may be identified in the future. This alternative encourages Leave No Trace (LNT) camping practices (e.g., including bringing in fuel source (charcoal, wood, petroleum fuel), fire pans, pack it in/pack it out; etc.).

Alternative B would require camping in designated campsites and encourage the use of LNT camping practices. This alternative would designate campsites within the 11 designated camping areas within the South Fork Canyon, maintaining the number of existing campsites already identified. When camping by vehicle, campsites would be designated in high use areas as needed to limit impacts to resources and user conflicts.

Alternative C would continue to allow for at least some dispersed camping by boat and vehicle throughout the corridor. Campsites would be designated if necessary to reduce conflicts. Dispersed campers would be encouraged to use LNT camping practices. This alternative would designate campsites within the current 11 camping areas and would increase the number of camp areas in the South Fork Canyon for boaters.

Alternative D would designate campsites for boaters similar to Alternative B, with a phased approach for designation. The first priority would be the South Fork in Swan Valley and Black Canyon to Heise. Reaches below Heise and the Henrys Fork would be designated as needed to limit impacts to resources and reduce user conflicts. Boat camping in the South Fork Canyon would be similar to Alternative B, with additionally designated campsites if needed. Designated campsites would be identified for users camping by vehicle along the South Fork in the riparian areas from Black Canyon to Cress Creek with a camping limit of five days. Reaches elsewhere in the planning area would be designated as needed for camping by vehicle. Campers would be encouraged to use LNT camping practices

Table 9. Issue No. 8 - Management of Camping and Facilities

| Issue Component | Alternative A | Alternative B | Alternative C | Alternative D |
|---|---|--|---|---|
| 8A. Corridor-Wide Management of Facilities | Partnership with county and state agencies for managing boat access facilities. Fee program in place. | Maintain partnership and fee program. Fee increase at boat access sites if needed to fund future projects. Work with working group on recommending fee increases. | Same as Alternative B. Include other projects on the South Fork, Henrys Fork and Main Snake in fee program. | Same as Alternative C. |
| 8B. Corridor-Wide Condition of Camp Areas | Use existing monitoring protocols to evaluate camping areas, determine if closure/rehab is necessary. | Adjust protocols and evaluate camp areas. Harden campsites if necessary. BLM/USFS develops method to monitor the quality of the recreational experience on the South Fork. | Same as Alternative B. | Same as Alternative B. |
| 8C. Corridor-Wide Campsite Use | Camping is first come, first serve. | Allocate campsites. Consider check-in or reservation for sites when necessary. | First come, first serve. Allocate campsites only during high use periods. | Conduct capacity study to determine visitor thresholds for corridor; consider check-in or reservation system when thresholds are reached. Allocate campsites. If needed, assess fee for camping within corridor if reservation system is implemented. |
| 8D. Corridor-Wide Group Size (day use and camping) | Unlimited group size. | Limit and designate group size to 16 people. With the exception of large camp areas that can accommodate larger groups. | Limit and designate group size to 25 people. With the exception of large camp areas that can accommodate larger groups. | Group size limits would be based on the individual physical site capacity and the social threshold from the outcome of a visitor study. |

| | | | | |
|---|---|--|---|---|
| 8E. Corridor-Wide Boat Camping | Dispersed camping allowed; campers encouraged to use LNT practices. | Camping only in designated campsites; campers required to use LNT practices. | Dispersed and/or designated campsite camping; users encouraged to use LNT practices. | Similar to Alternative B. Phased process for designating campsites, starting with Swan Valley and Black Canyon to Heise. Below Heise and Henrys Fork determine as needed. |
| 8F. Corridor-Wide Vehicle Camping | Dispersed camping allowed. USFS: 5 day limit | Designate campsites in high use areas as needed. USFS and BLM: 5 day limit | Same as Alternative A. USFS and BLM: 5 day limit | Designate campsites from Black Canyon to Cress Creek along the river corridor in the riparian areas; limit camping to five days. Continue to designate campsites elsewhere as needed. |
| 8G. South Fork Canyon Boat Camping | Designated camp areas and campsites may be identified in future. | Designate campsites within 11 designated areas. Maintain number of existing campsites. | Designate campsites within 11 designated areas. Designate additional camp areas in South Fork Canyon. | Similar to Alternative B; designate additional campsites if needed. |

2.3.9 Issue No. 9 - Present and Future River Access Needs

This issue addresses the recreation development within the planning area. All facilities must meet accessibility requirements and would need periodic maintenance. The recreation developments and improvements are identified for each SSM Class.

SSM Class IIIA (Palisades Dam to Irwin Powerline): New Developments

Alternative A: New Developments

1. Gravel Pit Restroom - Consisting of two sealed vault toilets.
2. Box Canyon Restroom - Consisting of two sealed vault toilets.
3. Irwin Easement Boat Access - Consisting of a gravel road, parking area, two sealed vault toilets, concrete boat ramp, signs, fence, parking barriers, picnic tables (day use only).
4. Footbridge Parking Improvement - Consisting of fence and parking area.
5. Palisades Dam boat access and campground was not identified in the 1991 Snake River Plan. This site would be maintained at its current level.

Alternatives B, C, and D would not develop the Gravel Pit and Box Canyon restrooms. The Footbridge parking would not be developed and the site would be closed. The buildings at the Irwin Easement Boat Access would be removed and the site would be retained as a day-use area managed by the BLM (no R&PP Lease). No development of a boat ramp would occur at Irwin. In addition, Alternative D would develop parking and walk-in access to Irwin near Highway 26 within the existing right of way.

Class IIA (Irwin Powerline to Conant Boat Access)

Alternative A: New Developments

1. Squaw Creek Overlook (request would be submitted to US Geological Survey for name change of this area) - Consisting of a parking area, barriers and signs.
2. Fall Creek Overlook - Consisting of a parking area, trail, overlook pad, fence sign and one sealed vault toilet.

Alternatives B, C, and D would not develop Squaw Creek Overlook (request would be submitted to US Geological Survey for name change of this area). Alternatives B, C, and D for Fall Creek Overlook would be similar to Alternative A.

All four alternatives for the Snake River Administrative Site would be the same. The 1991 Snake River Plan identified the Snake River Administrative Site for a boat access and visitor center. Consisting of an access, double concrete ramp, parking area to accommodate 40 to 60 vehicles with boat trailers, parking barriers, two toilets, rail fence, 25 unit campground, visitor center, and signs. This option was found non-feasible and the boat access and visitor center was developed at Conant Boat Access. The Snake River Administrative Site is utilized by USFS for staff and equipment. The Snake River Administrative Site would stay in federal ownership and be utilized for administrative purposes by the BLM and USFS.

SSM Class IA (Conant Boat Access to Lufkin Bottom)

Alternative A would install temporary or permanent toilets from Conant Boat Access to Lufkin Bottom. The 1991 Snake River Plan identified this as a project, however, they were never installed due to funding and lack of feasibility. Alternatives B, C, and D would not install temporary or permanent toilets in SSM Class IA.

SSM Class IIB (Lufkin Bottom to Riley Diversion)

Alternative A: Improvements:

1. Black Canyon Archaeology Site - Consisting of fence, signs, and vehicle turnout.
2. Wolf Flats Camping Area- Consisting of a parking area, parking barriers, signs, camping spaces, sealed vault toilets, road rehabilitation and fence. Recreation plan has been developed for Wolf Flats.
3. Wolf Flats Boat Access – Consisting of parking area and boat ramp.

Alternatives B, C, and D would not develop the Black Canyon Archaeology Site. Alternative B would follow the recreation plan for the Wolf Flats Camping Area. Alternative C would follow the recreation plan with the addition of more opportunities for camping. Alternative D would be similar to Alternative B for Wolf Flats Camping Area.

Alternatives B and D would harden the ramp at Wolf Flats Boat Access, define and limit parking, create parking in the Wolf Flats Camping Area for the boat access, and install a vault toilet. Alternative C would be similar to Alternative B, but would expand the parking area near the boat access.

SSM Class IIIB (Riley Diversion to ¼ Mile Downstream from Twin Bridges)

Alternative A would consist of a boat ramp and parking for approximately 20 vehicles with trailers (day use only) at Heise Bridge Boat Access. The 1991 Snake River Plan identified these as projects, however, they were never installed due to funding.

Alternative B would harden the access road, keep the ramp open, and utilize existing parking at Heise Bridge. Alternatives C and D would be similar to B, but would call for developing the boat ramp and developing access to the levee for non-motorized use of the levee.

Alternative A would continue to close Little Kelly Canyon Area and Trail to motorized use and would sign the area. The trailhead would be used for dispersed camping. The existing trail in Little Kelly Canyon and the area west of the Kelly Canyon road would be open to hikers and horseback riders. A portion of this trail would require special maintenance and a possible reroute of the trail in order to maintain water quality and the riparian zone. Alternatives B and D would be similar to Alternative A with the addition of no camping near the creek, day-use only. Alternative C would be similar to Alternative A.

SSM Class IB (1/4 Mile Downstream from twin Bridges to the Confluence with the Henrys Fork)

There would be no developments planned for this section of the river under Alternatives A, B, C, and D.

SSM Class IIIC (Lorenzo Bridge, Beaver Dick Park, and Hibbard Bridge; ¼ Mile each side)

Alternative A: New Developments

1. Hibbard Bridge Boat Access - Consisting of a gravel boat ramp and parking for 10 vehicles with trailers (day use only).
2. Fisher Allotment – Unimproved boat access and dispersed camping.

Alternatives B and D would have no development at Hibbard Bridge, but public access would be maintained. Fisher Allotment would be similar to Alternative A. Alternative C would maintain public access and develop parking at Hibbard Bridge. Fisher Allotment would have dispersed camping, a developed boat ramp and a parking area.

SSM Class IIC (Confluence with the Henrys Fork Upstream to St. Anthony)

Under Alternative A, BLM would negotiate with any willing land owners in T. 7 N., R. 40 E. to acquire drive-in access near Trestle Bridge. If acquired, BLM would control existing camping with proper circulation and barriers. Actions to be taken would include: Construct 1/8-mile of gravel roads; place parking barriers; place two picnic tables; and signing - information, regulatory, directional.

Alternative B would harden and define roads, parking area, install signs, install vault toilet, and identify the site for day-use. No development of boat access would occur, yet boats could be launched from the bank. The St. Anthony greenbelt may connect to this recreation site in the future. Alternatives C and D would be similar to Alternative B, except camping could occur at the site.

Alternative A: Improvements

1. St. Anthony Gauging Station - Consisting of picnic tables, signs and foot path.
2. St. Anthony Bridge Walk in Access - Consisting of a foot path and signs, St. Anthony greenbelt.

Alternative B, C, and D would not have access at the St. Anthony Gauging Station, but the access at the St. Anthony Bridge would be the same as Alternative A.

SSM Class IIID (From the Confluence Downstream to Market Lake Canal)

Alternative A would consist of a parking lot for five vehicles and a foot path at Big Six Walk-in Access.

Alternative B, C, and D would not obtain public access at Big Six Canal. The parking lot and foot path would not be constructed.

User-Created Access

Alternative A would not allow user created slides/boat access. These areas would be closed and rehabilitated where feasible. Alternatives B and D would be similar to Alternative A. Alternative C would allow user-created slides/boat access and where feasible, the sites would be hardened.

Table 10. Issue No. 9 - Present and Future River Access Needs

| Issue Component | Alternative A | Alternative B | Alternative C | Alternative D |
|-----------------------------------|--|---|--|------------------------|
| 9A. Recreation Development | Recreation Developments in Plan (Map) Gravel Pit and Box Canyon Restroom. | No development of Gravel Pit and Box Canyon Restroom. | Same as Alternative B. | Same as Alternative B. |
| | Palisades Dam – not in plan | Developed boat ramp (fee program) and developed camping area. | Same as Alternative B. | Same as Alternative B. |
| | Irwin – Boat ramp, develop parking, and retain as a day-use area. | Irwin – Remove buildings and retain as a day-use area, no boat ramp. | Same as Alternative B plus develop parking within easement, near road. | Same as Alternative C. |
| | Footbridge Parking Improvement. | No Footbridge Parking and no boat ramp. | Footbridge Parking and boat ramp. | Same as Alternative B. |
| | Fall Creek Falls Overlook – interpretive sign, parking lot, trail, safety fence, toilet. | Same as Alternative A. | Same as Alternative A. | Same as Alternative A. |
| | Snake River Boat Access Admin site, boat ramp/parking area, campground. | Administrative site | Same as Alternative B. | Same as Alternative B. |
| | Wolf Flat Boat Access – Day use, not identified in the 1991 Plan. | Harden ramp, define and limit parking, create main parking at Wolf Flat camp area and toilet. | Harden ramp, create parking near ramp, toilet, signing. | Same as Alternative B. |

| Issue Component | Alternative A | Alternative B | Alternative C | Alternative D |
|--------------------------------|--|---|--|---|
| | Little Kelly | Close campsite on creek, day-use only. Non-motorized trail. | Allow dispersed camping. Non-motorized trail. | Same as Alternative B. |
| | Heise Bridge – boat ramp and parking. | Harden road and keep ramp open. Parking exists. | Harden road, develop boat ramp. Develop trailhead for levee trail, mark trail. | Same as Alternative C. |
| | Hibbard Bridge - no developments or facilities at this time. | No developments or facilities, but maintain public access. | Maintain public access and develop parking. | Same as Alternative B. |
| | Fisher Allotment (across from Hibbard) – public use, dispersed camp, unimproved boat ramp. | Same as Alternative A. | Overnight camping, develop boat ramp and parking area. | Same as Alternative A. |
| | Trestle Bridge – camping, parking area, signs, picnic. | Harden and define roads, parking area, signs, day-use. St. Anthony greenbelt may connect to this recreation site in the future. | Harden and define roads, parking area, camping and day-use, develop boat access. | Harden and define roads, parking area, signs, camping and day-use, no development of boat access – yet allow launching from bank. |
| | St. Anthony Gauging – negotiate for walk-in easement. | No access. | Same as Alternative B. | Same as Alternative B. |
| | SE side of St. Anthony Bridge – walk in access, St. Anthony Greenbelt trail. | Same as Alternative A. | Same as Alternative A. | Same as Alternative A. |
| | Big Six Canal - Obtain walk-in access and parking. | No Access. | Same as Alternative B. | Same as Alternative B. |
| 9B. User created access | Do not allow user created slides/boat access. Rehabilitate sites where feasible. | Same as Alternative A. | Allow user created slides/boat access. Harden sites and allow for additional access. | Same as Alternative A. |

CHAPTER 3 AFFECTED ENVIRONMENT

This chapter describes the present conditions within the proposed project area that would be affected by the alternatives. The information in this section serves as a general baseline for determining the impacts of the alternatives. Enough detail has been given to determine if implementation of any of the alternatives would cause impacts to the environment.

3.1 Critical Elements of the Affected Environment

Table 11 lists the critical elements of the environment which are subject to statute, regulation, or executive order.

Table 11. Critical Elements of the Affected Environment

| CRITICAL ELEMENTS OF THE HUMAN ENVIRONMENT | | | OTHER IMPORTANT ELEMENTS OF THE HUMAN ENVIRONMENT | | |
|--|--------------|----------|---|--------------|----------|
| The following elements of the human environment are subject to requirements specified in treaty, statute, regulation, or executive order and must be considered in all environmental assessments | | | The elements of the environment listed below are not included on the “critical elements” list, but are important to consider in assessing all impacts of the proposal(s). | | |
| All the following elements have been analyzed. Elements denoted by an “X” in the <i>not affected</i> column are not affected by the proposed action or alternatives and will receive no further consideration. | | | | | |
| Elements | Not Affected | Affected | Elements | Not Affected | Affected |
| Air Quality | X | | Palaeontological Resources | X | |
| Areas of Critical Environmental Concern | | X | Indian Trust Resources | X | |
| Cultural Resources | | X | Wildlife | | X |
| Environmental Justice (EO 12989) (minority and low-income populations) | X | | Availability of Access/Need to Reserve Access | | X |
| Farm Lands (prime or unique) | X | | Recreation Use, Existing and Potential | | X |
| Floodplains | | X | Other Existing and Potential Land Uses | X | |
| Invasive, Non-native Species | | X | Vegetation types, communities; vegetative permits and sales; Rangeland resources | | X |
| Migratory Birds | | X | Fisheries | | X |
| Threatened/Endangered Plants; Sensitive Plants | | X | Forest Resources | X | |
| Threatened/Endangered Fish; Sensitive Fish | | X | Soils | | X |
| Threatened/Endangered Animals; Sensitive Animals | | X | Wild Horse and Burro Designated Herd Management Areas | X | |
| Wastes, Hazardous or Solid | X | | Visual Resources | | X |
| Water Quality – Surface | | X | Economic & Social Values | X | |
| Wetlands/Riparian Zones (including uplands) | | X | Mineral Resources | X | |
| Wilderness | X | | | | |
| Wild & Scenic Rivers | X | | | | |
| Tribal Treaty Rights | X | | | | |

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3.2 Resources Present and Brought Forward for Analysis

3.2.1 Cultural Resources

The planning area is important for its human history and its continuing role in the lives and traditions of Native Americans and Euro-Americans in southeastern Idaho.

The project area is located in the northern section of the Great Basin cultural area. Archaeologists, historians, and geographers refer to this region as the eastern Snake River Plain or the Upper Snake River country. Beginning in 1958, Idaho archaeologists have documented over 14,000 years of prehistoric human occupation of the Snake River Plain. Archaeologists recognize the Early Big Game Hunting Period in Idaho (ca. 14,000-7,800 years BP) as a regional tradition of the Paleo-Indian era (Lohse, 1993). It occurs along the northern edge of the Great Basin and spans the earlier period. People of this time hunted elephants, bison, camels, and other Late Pleistocene or early Holocene large mammals. Sub-periods of the Early Big Game Hunting tradition includes Clovis-Folsom (11,000-10,600 BP) and Plano (10,600-7,800 BP).

Idaho archaeologists have recovered large, fluted Clovis projectile points within and around the eastern Snake River Plain. Some points were associated with elephant remains (Butler, 1986). In the 1970s, archaeological excavations at the Wasden Site, located about 35 miles west of the planning area, discovered Folsom projectile points in Owl Cave. Excavations at other sites of the eastern Snake River Plain have produced a record use of continuous human presence through the Archaic Period (7,800-1,300 years BP) into the Late Period (1,300 years-150 BP). In the planning area cultural materials with traditional Great Basin traits appear late in the archaeological record (Butler, 1986).

A climatic shift toward warmer and drier conditions characterizes the Archaic Period. Archaeologists believe these warming conditions produced a shift from hunting bison to hunting mountain sheep and bison (Reed and Holmer, 1987). Willey and Phillips (1958) describe a highly diversified subsistence strategy for the Archaic Period within the eastern Snake River Plain. The Late Period archaeological record is more complete than preceding regional prehistory periods and most likely represents prehistoric and proto-historic Shoshone-speaking peoples occupying the Upper Snake and Salmon River country. Shoshonean Intermountain Ware pottery tradition and use of the bow and arrow are the identifying features of this period. Small triangular projectile point types also mark this period. Rosegate corner-notched, Desert Side-notched, and Cottonwood triangular points extend throughout the period (Lohse, 1993).

Ethnographers generally associate the Shoshone-Bannock people with the planning area. The first written description of Shoshone peoples resident in Idaho appears in the journals of Lewis and Clark (1805-1806), with their encounter of Shoshone on the Lemhi River in northeastern Idaho. The diaries of the Hunt Party (1811-1812) recorded encounters with Shoshone during their trip down the Snake River to Astoria, Oregon. Flathead, Blackfoot, and other Native Americans also traveled through the planning area. Nez Perce buffalo hunters passed through the area on their way east to the Great Plains (Luttrell and Emerson, 1995). Idaho archaeologists and ethnographers debate the length of Shoshone-Bannock occupation of the Snake River Plain and planning area, however, there is no doubt that the Shoshone-Bannock controlled the planning area when the first Euro-Americans reached southern Idaho. The chronologies for the planning

area are developed from archaeological research and investigation and an alternative chronology is derived from tribal oral history. According to the Shoshone-Bannock Tribes time began when the Shoshone and Bannock people were created and our perspective is the Tribes have always lived in the aboriginal area since the beginning of time (Colter, 2007).

The Shoshone-Bannock people lived in small groups and villages along the rivers and streams of Southeastern Idaho. Their home world centered around Fort Hall on the Ross Fork of the Snake River (Murphy and Murphy, 1969). They are a people united for hunting and other food procuring efforts, but separated by language. The Shoshones are the majority. The Bannock speak a Northern Paiute dialect. The Shoshone derive their name from their language. The occasional discovery of bison skulls and bones in sand and gravel bars indicate bison once migrated along the river. The Shoshone-Bannock hunted them before white, Euro-American explorers and trappers reached the Snake River country.

Initial Euro-American interest in the planning area included trapping fur-bearing mammals, converting resident Native Americans to various denominations of Christianity and gold mining (Luttrell and Emerson, 1995). Euro-American migration and settlement of the Pacific Northwest was slow at first, but increased rapidly after 1842. In 1863, the United States Congress created the Idaho Territory from parts of the Washington, Nebraska and Dakota territories. The General Land Office (GLO) authorized the first survey of the new Territory in 1866 (Rees, 1918). The GLO completed the first surveys of townships located within the planning area between 1878 and 1880. Other surveys and resurveys of the planning area continued into the late 20th Century.

GLO surveyors documented the presence of improvements on the land at the time of the survey. GLO plats within the planning area include the presence of wagon roads, trails, sawmill channels, ferry crossings, ditches, agricultural fields, homesteads, and railroads. Plats generally describe the area landscape as agricultural lands with productive soil. The agricultural potential of the Snake River lands attracted the first Mormon settlers to the planning area in 1879 (Rees, 1918). In 1881, the Idaho Territorial Legislature openly promoted the South Fork of the Snake River as “suitable for settlement” (Strahorn, 1990).

Two early railroads crossed the planning area. The Utah and Northern was the first railroad completed in Idaho Territory (1879). In 1886, the Utah and Northern merged with the Oregon Short Line. The Union Pacific soon obtained a controlling interest in both rail lines and incorporated them into the Union Pacific Railroad system. During the settlement period, access to railroads was essential agricultural development and population growth. Idaho historian Merrill Beal describes the Utah and Northern as the exclusive catalytic agent of colonization in southern Idaho (Beal, 1962). In 1895, Richard Heise built an unpaved road from Heise Hot Springs Resort to the Oregon Short Line station at Thornton. Stagecoaches and early automobiles used the road until 1937.

From the 1870s to the present day, farming has been the dominant land use of the Snake River Plain and the planning area. Residents have constructed canal networks that allowed irrigated farming in portions of Bonneville, Jefferson, and Madison counties located in the planning area. Landowners also dry farm the benches and terraces along the planning area. Chief area agricultural products are grain, livestock, hay, fruit and field crops (French, 1914).

Previous Cultural Resource Inventories

BLM, Idaho Transportation Department (ITD), Idaho State University (ISU), and the Caribou-Targhee National Forest have conducted cultural resource inventories in the planning area. These investigations are generally project-related inventories required prior to realty actions, timber sales, hazardous fuels management projects, road construction, planned range, or recreation developments. These inventories are usually limited in geographical scope and result in the identification of few cultural resources.

The result of this sporadic survey activity is a record of few widely scattered archaeological sites located within the planning area. Significance and context required for nominating properties to the National Register of Historic Places (NRHP) is incomplete or lacking for many sites. Sites are often located in areas that are hard to reach and monitor. There is a need to establish baseline condition for many planning area sites. Federal and State agencies lack information about the effects of vandalism, livestock grazing, natural damage, and other threats to archaeological sites.

The earliest systematic archaeological survey within the planning area was one of the River Basin Surveys of the Smithsonian Institute. Surveyors investigated the potential pool of the Palisades Reservoir in the mid 1940s. The surveyors recorded five sites and considered the area suitable for Native American occupation in the spring, summer and early fall. They judged the reservoir area as “relatively unimportant during the prehistoric periods of the Columbia Basin, due to its marginal location” (Daugherty and Riddell, 1947).

In 1958, Dr. Earl Swanson, Jr. of the Idaho State College Museum (now Idaho State University and the Idaho Museum of Natural History) completed a pedestrian inventory of a proposed reservoir below Palisades Dam. The Burns Creek Reservoir would have created a lake 300 feet deep and 14 miles long. It would have inundated the river canyon between Heise and Swan Valley. Dr. Swanson and crew surveyed the South Fork of the Snake River from Fall Creek to Burns Creek. They identified and recorded 12 prehistoric Native American sites. Sites included rock shelters with pictographs, open campsites, and possible pit houses. Dr. Swanson estimated that these sites represent 8,000 years of human occupation within the planning area.

In the mid 1970s, BLM funded a Class II, or sample cultural resource inventory of the Camas-Little Grassy Planning Unit. ISU archaeologists inventoried about 14.8 percent of the planning unit. The ISU crew surveyed portions of the Henrys Fork and the Main Snake channel near the Menan Buttes. They discovered Folsom Sub-Period through Late Period diagnostic projectile points.

Archaeological Resources

USFO records identify 53 cultural properties within the planning area. Thirty-five properties are associated with prehistoric and historic Native American activities within the planning area. There are 16 historic Euro-American properties. Prehistoric and historic Native American sites include lithic scatters, rock shelters, house pits, rock art panels and boulders. There are also isolated stone tools. These campsites, work areas and discarded stone tools indicate extensive Native American use of the Snake River and its tributaries.

The planning area's Native American pictographs and petroglyphs are painted or carved human-like, animal-like, or abstract motifs. These figures are closely associated the Shoshone-Bannock people and their ancestors.

Historic sites within the planning area include cabins, roads, trails, forts, inscription rocks, ferries, resorts, and Caribou-Targhee National Forest guard stations and work camps. There are 21 properties located on BLM lands. The remaining sites are located on private, State of Idaho, and National Forest lands.

The USFO evaluates sites according to the criteria of eligibility for inclusion on the National Register of Historic Places (NRHP) as stated in 36 CFR 60.4. NRHP eligible properties reflect the qualities of American historical events, architecture, archaeology, engineering, and culture. These qualities are present in districts, sites, building, structures, and objects that possess integrity of location design, setting, materials, workmanship, feeling, and association. The four standard criteria for NRHP listing include:

- (a) Properties that are associated with events that have made a significant contribution to the broad pattern of our history;
- (b) that are associated with lives of persons significant in our past;
- (c) that embody the distinctive characteristic of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- (d) that has yielded or may be likely to yield, information important in prehistory or history.

The USFO considers 50 properties located within the planning area potentially eligible for listing on the NRHP. BLM archaeologists usually evaluate historic sites under Criteria A and D. They evaluate Native American properties under Criterion D. Nineteen of the 21 properties identified on BLM lands are potentially eligible for listing on the National Register.

Traditional Cultural Properties

The National Register of Historic Places contains a wide range of historic property types, reflecting the diversity of the nation's history and culture. Buildings, structures, and sites; groups of buildings, structures, or sites forming historic districts; landscapes; and individual objects are all included in the Register if they meet the criteria specified in the National Register's criteria for Evaluation (36 CFR 60.4). Such properties reflect many kinds of significance in architecture, history, archaeology, engineering, and culture.

There are many definitions of the word "culture;" but in the National Register programs the word is understood to mean the traditions, beliefs, practices, life ways, arts, crafts, and social institutions of any community, be it an Indian tribe, a local ethnic group, or the people of the nation as a whole.

A traditional cultural property, then, can be defined generally as one that is eligible for inclusion

in the National Register because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community.

- a location associated with the traditional beliefs of a Native American group about its origins, its cultural history, or the nature of the world;
- a rural community whose organization, buildings, and structures, or patterns of land use reflect the cultural traditions valued by its long-term residents;
- an urban neighborhood that is the traditional home of a particular cultural group, and that reflects its beliefs and practices;
- a location where Native American religious practitioners have historically gone, and are known or thought to go today, to perform ceremonial activities in accordance with traditional cultural rules of practice; and
- a location where a community has traditionally carried out economic, artistic, or other cultural practices important in maintaining its historic identity.

The agencies have not identified specific traditional cultural properties within the planning area. However, in the future the agencies would coordinate with Tribal staff on proposed projects and activities such as identifying Tribal Traditional Cultural Properties within the planning area. Shoshone-Bannock individuals have indicated that springs located along the Snake River are important to them. In interviews with Fort Hall residents, ethnographers have learned that water, land and the life sustained by these elements are sacred to the Shoshone-Bannock people. An area is sacred if it provides life's basic needs. The waters of the Fort Hall Bottoms create riparian zones that produce fish, fruiting plants and game animals. The waters also have healing powers (Allen Turner in Holmer, 1986). USFO natural resource specialists should assume that the waters and land within the planning area are also sacred to Shoshone-Bannock Tribal members.

The USFO would continue to meet and encourage Shoshone-Bannock Tribal members to identify locations within the planning area that qualify as traditional cultural properties.

Cultural Landscapes

A cultural landscape is a geographic area that includes cultural and natural resources associated with an historic event, activity, person, or group of people. Cultural landscapes can range from thousands of acres of rural land to homesteads with small front yards. They can be synthetic expressions of visual and spatial relationships that include grand estates, farmlands, public gardens and parks, college campuses, cemeteries, scenic highways, and industrial sites. Cultural landscapes are works of art, texts, and narratives of cultures and expressions of regional identity. They also exist in relationship to their ecological contexts.

Cultural landscapes portray how humans have used and adapted natural resources over time, whether through agricultural, mining, ranching and settlement activities, or traditional Native American cultural practices.

The planning area’s cultural landscape represents over 10,000 years of use by Native American cultures combined with 200 years of Euro-American exploration, settlement and economic activities that have shaped the present Snake River Plan, landscape. The planning area’s roads, farms, ranches, railroads, power lines, bridges, cabins, recreational facilities, National Forest administrative sites, and mega homes contribute to the character of this cultural landscape.

3.2.2 Livestock Grazing Management

BLM Only

The BLM administers 44 grazing allotments within the planning area. The allotments are authorized for grazing under the Medicine Lodge Resource Management Plan. The allotments typically include private as well as public lands and access is often limited. The allotments are generally small in size, averaging less than 100 acres of public land.

The BLM manages domestic livestock grazing in accordance with the Code of Federal Regulations 43 CFR 4100. The BLM authorizes allotment specific terms, conditions, and guidelines based upon the regulations and applicable resource values and concerns.

The amount of grazing authorized on BLM lands is measured in animal unit months (AUMs). An AUM is the amount of forage needed to feed one cow, one horse, or five sheep, for one month. The 44 allotments are allocated for approximately 1,800 AUMs. Of the 44 grazing allotments, 25 have active permits or leases and 19 are vacant (see Table 15).

Table 12. BLM Allotments within the Planning Area

| Allotment Name | Allotment Number | Public Acres | Public AUMs | Season of Use |
|---------------------|------------------|--------------|-------------|----------------------------|
| Allotment #7 | 04416 | 52 | 11 | 5/1 – 5/17 |
| Allred Brothers (v) | 14003 | 62 | 13 | 5/1 – 6/30 |
| Applewood | 04221 | 38 | 8 | 5/15 – 6/5 |
| Beatrice Blakely | 14042 | 90 | 92 | 5/15 – 6/5 |
| Big Bend (v) | 04170 | 44 | 9 | 5/1 – 6/30 |
| Conant Valley Ranch | 04288 | 839 | 158 | 6/1 – 10/30 |
| Cottonwood River | 04319 | 263 | 53 | 5/1 – 6/30 |
| Dale Switter (v) | 4372 | 40 | 10 | 5/1 – 11/30 |
| Donal Brown (v) | 14049 | 49 | 9 | 5/1 – 6/30 |
| Dry Canyon (v) | 04374 | 289 | 116 | 5/1 – 6/30 |
| Eagle View | 04410 | 64 | 26 | 5/1 – 6/30 |
| Fisher | 05180 | 80 | 60 | 5/1 – 5/30, 10/10 -11/9 |
| Five-Ways | 14076 | 359 | 72 | 5/1 – 6/30 |
| Floyd Sykes (v) | 4013 | 16 | 8 | 5/15 – 7/15 10/1 – 12/1 |
| Francis Beam | 14024 | 120 | 20 | 5/15 – 9/30 |
| Gerald Gallup (v) | 4130 | 155 | 32 | 6/1 – 9/1 |
| Heise Hot Springs | 04166 | 540 | 90 | 6/15 – 9/30 |
| Highway 26 | 14050 | 5 | 3 | 5/1 – 6/30 |
| Holland Canyon | 04144 | 200 | 50 | 6/1 – 6/30 |

| Allotment Name | Allotment Number | Public Acres | Public AUMs | Season of Use |
|------------------------|-------------------------|---------------------|--------------------|-----------------------------|
| Horseshoe Slough | 04337 | 55 | 11 | 5/15 – 5/31 |
| Jesse Weeks (v) | 04401 | 120 | 24 | 5/15 – 9/30 |
| Kelly Island | 04279 | 242 | 49 | 5/15 – 9/5 |
| Lathen Jacobson (v) | 04197 | 16 | 7 | 5/10 – 10/15 |
| Laudy Tomchack (v) | 04385 | 41 | 9 | 3/1 – 2/28 |
| Lawrence Blakely | 14040 | 94 | 40 | 5/1 – 6/30 |
| Little Kelly Canyon | 14039 | 667 | 122 | 5/1 – 6/15 |
| Lorenzo | 04158 | 129 | 26 | 5/1 – 6/30 |
| Lowder Slough (v) | 04270 | 59 | 20 | 5/1 – 6/30 |
| Lowell Birch (v) | 14032 | 15 | 8 | 5/1 – 9/30 |
| Lowell Horman (v) | 04271 | 9 | 2 | 5/1 – 6/30 |
| Pinnacle (v) | 04247 | 59 | 8 | 5/1 – 6/30 |
| Ranger Station | 04257 | 135 | 20 | 5/1 – 5/31 |
| Robertson | 05193 | 16 | 3 | 7/1 – 8/30 |
| Rudd (v) | 05192 | 126 | 23 | 5/16 – 9/30 |
| South Bank | 04306 | 22 | 3 | 10/1 – 11/30 |
| Stinking Springs | 14041 | 2890 | 190 | 5/1 – 5/31 |
| Sunnydell Canal (v) | 04399 | 135 | 28 | 5/1 – 6/30 |
| Swan Valley | 04367 | 330 | 83 | 10/1 – 12/1 |
| Swan Valley Bridge (v) | 04126 | 54 | 41 | 5/1 – 6/30 |
| The Point | 04390 | 113 | 120 | 5/1 – 6/30 |
| The Wall (v) | 04020 | 54 | 19 | 5/1 – 6/30 |
| Trestle | 14017 | 269 | 70 | 5/5 – 5/31 10/12 – 10/31 |
| Twin Bridges (v) | 04331 | 210 | 42 | 5/1 – 6/30 |
| William S. Holden | 04175 | 40 | 5 | 7/15 – 9/1 |
| Total | | 9205 | 1813 | |

(v) = vacant

USFS Only

Table 13. USFS Allotments within the Planning Area

| SSM Class | Allotment Name | Allotment No. | Permitted No. | Permitted Season of Use | Allotment NEPA Decision Date |
|---|--------------------------------------|---------------|---------------|-------------------------|-------------------------------|
| IA | Dry Canyon— Pine Creek C and H | 00403 | 120 cow/calf | June 1 to Sept. 30 | Big Hole Cattle EA 1998 |
| The allotment is managed under a six pasture rest rotation grazing system. One of the six units is rested each grazing season and five units are grazed. Only two of the six units are located in the planning area. The location of this allotment is between Dry Canyon and Bear Gulch. | | | | | |
| IIA | Snake River C and H | 40110T | 623 cow/calf | June 1 to Oct. 15 | Snake River Cattle EA 1996 |
| The allotment is managed under an eight pasture rest rotation grazing system. One unit is rested while seven units are grazed. Of the eight units only two lie within the South Fork corridor. The location of this allotment is between Fall Creek and Deer Creek. | | | | | |
| IIB | Burns Canyon | 00401 | 27 cow/calf | June 1 to Oct. 10 | Moody/SF/Burns EA 2002 |
| The allotment is managed under a three unit deferred grazing system. With this system all three units are grazed annually. The location for this allotment includes Burns Creek, Warms Springs and Blacks Canyon. | | | | | |
| IIB | Lookout Mountain | 54001 | 474 cow/calf | May 21 to Oct. 10 | Moody/SF/Burns EA 2002 |
| The allotment is managed under a five unit rest rotation grazing system. One unit is rested while four units are grazed. The AMP for the allotment has been updated to exclude all of the river bottom from cattle grazing except for ½ mile at the mouth of Table Rock Canyon. | | | | | |
| IIIA | Russell Creek S and G | 44001 | 1000 ewe/lamb | June 1 to Aug. 31 | Russell/Van EA 1987 |
| The allotment is managed under a rest rotation grazing system for the spring grazed units and an alternating routing system for the remainder of the allotment. The river portion is rest rotated where it is grazed every other year. This area is located on the gravel flats just below Palisades Dam. | | | | | |

3.2.3 Recreation and Visual Resources

Special Recreation Management Area

The planning area is managed by the BLM as a SRMA and was designated as an SRMA in the Medicine Lodge RMP. SRMA's are created where demands for specific structured recreation opportunities (activities, experiences, and benefits). SRMA's proactively produce recreation opportunities ensuring specific activities, experiences and benefits are realized.

The USFS manages the planning area under the Targhee National Forest RFP direction. The area is under specific management direction in prescription areas 2.9.1, South Fork Eligible Scenic River and 2.92, South Fork Eligible Recreation River. Both prescriptions relate to wild and scenic river designation and are managed with those goals in mind.

Throughout the planning area, recreation activities and opportunities are very diverse along with the experiences and beneficial outcomes. Recreation activities vary and include: fishing, boating, developed and undeveloped camping, hiking, hunting, mountain biking, motorized

recreation, and bird watching. Visitor experiences associated with these activities are diverse as well. These experiences range from developing your skills and abilities; being able to tell others about the trip; enjoying the closeness of friends and family; savoring the total sensory – sight, sound, and smell – experience of a natural landscape; feeling that this community is a special place to live; and just knowing this attraction is here, in or near my community. These activities and experiences were derived from a 2001 South Fork of the Snake River Boaters and Campers Visitor Survey (Utah State University, 2002), results of the scoping process initiated at the beginning of the Snake River Plan revision (University of Idaho, 2006), and professional knowledge of the planning area.

These activities and experiences also tie to multiple on and off site benefits, including: restored mind from unwanted stress, improved skills for outdoor enjoyment with others, improved outdoor recreation skills, stronger ties with my family and friends, enhanced awareness and understanding of nature, improved opportunity to view wildlife close-up, greater family bonding, improved local economic stability, increased desirability as a place to live or retire, increased property values, improved maintenance of physical facilities, and increased awareness and protection of natural landscapes.

The Market for the planning area would be destination for regional, national as well as international visitors. In 1997, the World Flyfishing Championships was held on the South Fork and every year a portion of the Jackson Hole One Fly Competition is held on the South Fork. The native cutthroat trout fishery, excellent dry fly fishing and a seasonal salmon fly hatch draw heavy angling attention to the South Fork. Fishermen travel from many states and abroad to fish the river.

The Natural Resource Settings matrix, Appendix H, is a conceptual framework that characterizes recreation physical, social, and administrative settings. The framework is used for planning, management and research and helps to clarify relationships between recreational settings, activities, experiences, and the ensuing outcomes. Changing or maintaining the physical, social, and administrative characteristics of the recreation setting makes different recreation opportunities available.

The South Fork from Palisades Dam to Conant Boat Access has an existing rural physical setting which is characterized as on or near paved primary highways, but still within a rural area. The South Fork Canyon has a backcountry physical setting which is characterized as more than ½ mile from any kind of road and a naturally-appearing landscape. The Heise area (Byington Boat Access) to Lewisville Knolls and the Henrys Fork would be considered middle country, front country and rural.

Due to changes in fishing regulations, the proximity to local communities, and the popularity of the planning area, visitation occurs year-round with the most intense use in the months of July and August. During this intense period the social and administrative settings are very different compared to the rest of the year. The social and administrative settings also vary depending on the section of the planning area.

Palisades Dam to Conant Boat Access

The contacts characteristics of the social setting from Palisades Dam to Conant Boat Access are classified as middle country, front country, rural, and urban. The wide range in characteristics is due to easy accessibility, scenic qualities, day of week and time of year people utilize this stretch of the planning area. The group size characteristics of the social setting would be classified as primitive due to the nature of the watercraft (i.e., drift boats) primarily used by visitors. This stretch of the planning area parallels a gravel road, therefore mechanized use under the administrative setting is rural. Visitor services and management controls would be classified middle and front country due to the variation in use received during different seasons and day of the week.

South Fork Canyon

The contacts characteristics of the social setting for the South Fork Canyon would be classified as middle country, front country, rural, and urban. The wide range in characteristics is due to the popularity of this stretch, day of week and time of year people utilize this stretch of the planning area. The group size characteristics of the social setting would be classified as backcountry due to the ability to do overnight trips. There are usually small to large groups camping together in the South Fork Canyon. There is no access for OHV use in the South Fork Canyon, therefore mechanized use under the administrative setting would be backcountry. But, there is motorized watercraft use that would also classify this stretch as middle country. Visitor services and management controls would be classified middle and front country due to the amount of use received during different seasons and day of week. There is more of an on-site presence during the peak season conducting river patrols, providing information materials and on-site education.

Heise to Lewisville Knolls

The contacts characteristics of the social setting for this section of the planning area would be classified back country, middle country, front country and rural. The wide range in characteristics is due to the quality of fishing, day week, time of year visitors utilize this stretch of the planning area. In recent years, more visitors are starting to utilize this stretch of the planning area due to the shifts in the social setting described in the last two paragraphs. The group size characteristic of the social setting would be classified primitive due to the type of watercraft. However the evidence of use characteristics would be considered back country and middle country. This is evident by the limited amount of litter and vegetation and soil trampling. There is motorized watercraft use and more opportunities for OHV use that would classify this stretch as middle country. Visitor services and management controls would be classified middle and back country due to the lower amount of use in this section of the planning area. There is more on-site presence during the peak season providing information materials and on-site education.

Henry's Fork

The contacts characteristics of the social setting for this section of the planning area would be classified primitive, back country, and middle country. There is a lower range of characteristics in this section due to the limited opportunities for recreation and access. Due to the limited amount of use, the facilities characteristics of the physical setting are back country, middle country, front country, and rural. Federal facilities are in the back country physical setting and state and county facilities are in the three other settings. In recent years, more people are starting

to utilize this stretch of the planning area due to the growth in Rexburg, Rigby, and St. Anthony. The group size characteristic of the social setting would be classified primitive due to the type of watercraft. The evidence of use characteristic would be considered back country due to the limited use and minor human impacts to the resources. There is limited motorized watercraft use due to the water levels and limited opportunities for OHV use due to limited public access along the Henrys Fork. This would classify this stretch as primitive, back country, and middle country. Visitor services and management controls would be classified back country due to the lower amount of use in this section of the planning area. There is more on-site presence and controls at the county and state facilities.

Developed Recreation

The planning area receives over approximately 250,000 visitors per year directly related to the river. This number is based on estimates and actual road counter numbers installed at the developed boat access sites along the South Fork.

South Fork

The BLM and USFS offer numerous developed recreation sites along the South Fork corridor. The USFS maintains a 23 unit site (Fall Creek campground), large group area, and day use area near scenic Fall Creek Falls and two developed boat access sites (Spring Creek and Palisades Dam) in Swan Valley. These are popular sites for both outfitters and public boaters. BLM maintains the Conant, Byington, and Lorenzo boat access sites, which are also heavily used by both outfitters and the general public. The 14 unit Kelly's Island campground, located near Heise Hot Springs Resort, is managed by BLM and provides a recreation setting only 30 minutes from Idaho Falls.

Four trails located along the South Fork are maintained by BLM or the USFS. They are the multipurpose (hiking, horses, and trail bikes) South Fork Trail, along the canyon area of the South Fork, Cress Creek Nature Trail for hikers near Heise, Stinking Springs designated motorized trail, also near Heise, and North Menan Butte near the confluence of the South and Henrys Forks.

Eleven designated camp areas exist in the South Fork Canyon. These areas are full most weekends and holidays during the months of July and August. During some holidays the camp areas are full and visitors are utilizing non-designated areas to camp. Visitors may not be aware that there are numerous campsites (existing fire ring) within one area because only the area is identified with a sign. Visitors are required to have a portable toilet and self-issue permit for camping in the South Fork Canyon. Table 17 below illustrates the camping use in the South Fork Canyon based on self-issue permits.

Table 14. Self Issue Permit Statistics 1995-2006

| Year | Number of Permits | Number of People | Average Group Size |
|--------------|--------------------------|-------------------------|---------------------------|
| 1995 | 208 | 787 | 3.79 |
| 1996 | 213 | 839 | 3.93 |
| 1997 | 155 | 564 | 3.64 |
| 1998 | 270 | 987 | 3.66 |
| 1999 | 289 | 1,051 | 3.63 |
| 2000 | 325 | 1,291 | 3.97 |
| 2001 | 379 | 1,377 | 3.63 |
| 2002 | | 1015 | |
| 2003 | 327 | 1,350 | 4.13 |
| 2004 | 341 | 1,272 | 3.73 |
| 2005 | 334 | 1,286 | 3.85 |
| 2006 | 404 | 1,509 | 3.74 |
| 2007 | 446 | 1,808 | 4.05 |
| Total | 3,691 | 15,136 | 3.81 (average) |

***Note: There is not 100% compliance with visitors filling out the self-issue permit for camping in the South Fork Canyon. The numbers identified in the table reflect only what was reported and not the actual overall overnight use in the South Fork Canyon.

Undeveloped Recreation

Dispersed recreational activities occur throughout the planning area. Most of this activity centers on dispersed camping. Campsites are numerous within the planning area. They are accessible by vehicle, foot or boat. The heaviest concentration of dispersed campsites is between the Palisades Dam and Heise, with the greatest amount of use occurring within the South Fork Canyon.

Henrys Fork and Main Snake

The Henrys Fork and Main Snake contain fewer undeveloped recreation sites. The main concentration of dispersed campsites and makeshift boat accesses occur between St. Anthony and the community of Hibbard. One portion of the Main Snake near Roberts is used for camping.

With the scenic beauty, wildlife, fishing, and diversity of recreational opportunities, the Snake River is a key resource to southeastern Idaho and a boom to the area's economy.

Commercial Activity

The BLM and USFS permit eight fishing outfitters on the South Fork (four permitted by BLM and four permitted by the USFS). The South Fork is divided into four river sections based on Idaho Outfitters and Guides Licensing Board (IOGLB) rules and statutes. The BLM permits three fishing outfitters on the Henrys Fork. Six of the eight fishing outfitters on the South Fork have reserved outfitter camps in the South Fork Canyon. Outfitters and guides are governed by their State of Idaho license and federal permit.

Table 15. State of Idaho Outfitters and Guides Licensing Board - Commercial Fishing Outfitters Regulations for Planning Area

| Current State of Idaho Use Limits | |
|--|--|
| River Section | Number of Boats |
| Dam – Swan Valley Bridge | No more than four boats/outfitter/one time |
| Swan Valley Bridge – Black Canyon (Exception: Not more than eight (8) boats will be permitted in Section (b) on the same day, provided that no more than four (4) of said boats are in this Section after 11:00 a.m.) | No more than four boats/outfitter/one time |
| Black Canyon – Byington | No more than four boats/outfitter/one time |
| Byington – Confluence | No more than four boats/outfitter/one time |
| St. Anthony – Confluence | Three fishing boats and five other boats/outfitter |

Restrictions: No outfitter may have more than twelve (12) boats on the SS1 (South Fork) in any one (1) day. Further, the lower boundary of Section (a) (Palisades Dam to Swan Valley Bridge) shall overlay Section (b) to the Conant takeout (Swan Valley Bridge to Black Canyon), and Section (b) shall overlay Section (c) to the Cottonwood/Fullmer access. Supply boats which do not carry clients are exempt from these restrictions.

The BLM and USFS receive requests (e.g., National Outdoor Leadership School, BYU- Idaho, City of Rexburg, etc) for SRPs and SUPs for commercial (i.e., commercial activities that do not require an IOGLB license), group and competitive activities. These requests are dealt with on a case-by-case basis each year.

Fee Program

The South Fork Fee Program was one of the original 17 demonstration projects approved by the BLM in 1996 and one of many originally approved by the USFS under the Pilot Fee Demonstration Legislation. This interagency and intergovernmental approach to collecting fees within the planning area has ultimately achieved great success, creating improved internal communications between the agencies, and between agencies and the public. The fee program now operates under the Recreation Enhancement Act Authority (2004).

The South Fork Fee area has ten developed boat access sites included in the program. Management of the 10 sites is spread between the BLM, the USFS, the IDF&G, and Bonneville, Jefferson, and Madison Counties. A working group, composed of a representative from each agency and county exists and is tasked with managing the basic structure and distribution of funds related to the fee system.

The strength of the interagency and county approach, however, is rooted in the process developed for utilizing the collected funds. Regardless of which jurisdictional site funds are

collected from, the working group comes to consensus on where the funds would be spent within the corridor. This approach allows all partners in the pilot fee system a voice in how the South Fork access sites would be managed, regardless of ownership. Fees are collected from May 24 through September 30 each season. The working group meets once a year to determine project funding for the coming year.

Table 16. Fee Revenues for the South Fork 1997-2007

| Year | Fees Collected |
|--------------|-----------------------|
| 1997 | \$14,001.00 |
| 1998 | \$27,960.65 |
| 1999 | \$30,469.00 |
| 2000 | \$36,401.00 |
| 2001 | \$38,278.79 |
| 2002 | \$37,991.00 |
| 2003 | \$35,457.70 |
| 2004 | \$34,391.90 |
| 2005 | \$37,348.21 |
| 2006 | \$40,492.67 |
| 2007 | \$44,697.77 |
| Total | \$377,489.69 |

Visual Resources

Important visual resources are those sensitive areas viewed from roads and highways with relatively heavy use, communities, recreation areas, recreational trails, the river, and other areas where the public would spend time viewing a particular scene.

The visual characteristics are divided into three main types: floodplains, mountainous with vertical cliffs and transition zones between flood-plains, and mountainous areas. Starting at Palisades Dam going downstream the observer would notice a broad floodplain through the small community of Swan Valley. Much of the land north of the river is private. Small private pastures are scattered throughout this side of the river. The south bank is predominately timbered land. There is a gravel road running along the south bank and it can be seen in several places while floating the river. Close to the Swan Valley Bridge, Fall Creek Falls cascades into the main channel of the river providing a beautiful scene for those people floating the river. Conant Valley serves as a transition zone maintaining characteristics of both floodplain and mountainous terrain. It also serves as the start of the most scenic stretch of the river. From Conant Valley the observer would move into the South Fork Canyon where the north bank maintains mountain characteristics and the south bank has steep cliffs with narrow bands of vegetation along the river frontage. In the Heise area the observer would move into another transition zone where sagebrush can be seen on the gentle slopes surrounding the river. From this point downstream the observer would notice more developments along the shore including diversions and bridges. The lower stretch of the river is all floodplain with large stands of old growth cottonwoods. Much of the river frontage has limited access due to surrounding private

land. The river is also more braided through this stretch. Twin Bridges and Lorenzo Bridge are the only two bridges that interrupt the landscape.

After reaching the confluence with the Henrys Fork the observer would notice a more meandering river. Much of the land bordering the river is private and as a result, more pasture land is visible. Many of the cottonwood stands have been cleared away and more intrusions are seen from the river. This meandering river and pasture land setting makes up the majority of the Henrys Fork and Main Snake from St. Anthony south to Idaho Falls.

Geologic features are fairly common, usually consisting of horizontal bands of exposed sedimentary rock; these strata have a turbulent history expressed in dipping or warped lines. Some volcanic features also are seen. These features are sometimes distinctive.

3.2.4 Soils/Surface Water/Floodplain/Water Quality

Soils

The soils in the planning area have developed from rocks deposited during a sequence of geologic events that began almost 700 million years ago, during the Carboniferous Period. For about 500 million years, ancient seas intermittently covered the region, depositing limestone, and other sedimentary rocks typical of ocean floors. Beginning about 17 million years ago, fault block mountain building has pushed up the rocks, exposing them to weathering, and soil development processes. The many mountain ranges in the Basin and Range province have developed in this way. Recent earthquake activity is evidence that these mountain building processes continue today.

Snake River Flood Plains-- Dry Alluvial Soils

These soils have developed in rich alluvial materials eroded from the fans and mountains on the Snake River flood plain. Typically they are aridisols with light colored profiles, high rock content, with carbonate accumulations at depth. Typical shrub vegetation includes Wyoming big sagebrush and some xeric big sagebrush or shadscale.

Stream Bottom Soils

These soils are found within the floodplain on nearby stream terraces. These are deep and poorly to extremely well-drained soils that formed in mixed alluvial materials which are occasionally flooded during spring runoff. These mollisols have surface horizons which are dark and profile textures which are generally sandy, sandy loam, and gravelly. Typical vegetation includes wetland species and some basin big sagebrush and Wyoming big sagebrush. Cottonwood, willows, silver sage, and other shrubs are common in most riparian areas.

Streams-- Moist Alluvium Soils

These soils have developed in rich alluvial materials eroded from the fans and mountains near the Snake River flood plain and streams. They are mollisols and aridisols with dark and light colored profiles, high rock content, and some saline soils with carbonate accumulations at depth.

Typical shrub vegetation includes mountain or Wyoming big sagebrush, basin big sagebrush, and occasionally some silver sage.

Wetland Soils

These soils are soils with a seasonal water table at a shallow depth. Sedges and wetland shrubs are common on these soils. Annual sediment yield rates on federal lands vary from 5 to 40 tons per square mile on soil with a conifer timber cover, and between 150 to 200 tons per square mile on soil with brush and grass vegetation. In comparison, surface erosion from private farm and rangelands varies from 640 to 6,400 tons per square mile, according to the Snake River Basin studies on similar kinds of lands.

Nearly all the deteriorated watershed areas in the corridor are small (about 10 to 50 acres) and are widely scattered throughout. The high potential soils were identified by the soil inventory, and are listed in the appendices of the land management plans for the BLM. These lands have restrictions for all surface soil disturbance, to ensure that future management does not increase soil erosion.

Prime Farmlands

There are some prime farmland soils associated with a small portion of land administered by the BLM, mostly between Ririe and Menan. The vast majority of these prime farmlands are on private land.

Surface Water

BLM manages 51 miles of river bank along the South Fork, 19 miles of bank along the Lower Henrys Fork, and 17 miles along the Main Snake. USFS manages 51 miles of river bank along the South Fork to the Table Rock area.

South Fork

Flows along the South Fork in this project area are directly controlled by the Bureau of Reclamation's Palisades Dam, located 11 miles west of the Wyoming-Idaho border. Upstream of Palisades Dam flow releases are controlled by Jackson Lake Dam near Jackson Hole, with a storage capacity of 624,400 acre-feet. The Palisades Dam was finished in 1957 for purposes of flood control, power, irrigation, fish and wildlife habitat. Mean monthly flows for the period of record (1911-2005; 95 years) at the Heise gauge are shown in Table 12. The Heise gauging station is 48 river miles below Palisades Dam. From Palisades Dam to Heise, there are few irrigation diversions, and stream flows increase (about 3% to 9%) between the Irwin and Heise gauges because of the five tributary streams: Palisades, Falls, Rainey, Pine, and Burns Creeks. However, between Heise and Lorenzo there are seven irrigation diversions that together result in about a 50% flow loss (along with seepage and evapotranspiration). The largest diversion is the Great Feeder Canal, on the Dry Bed channel, which was constructed in 1895. Table 13 shows this flow difference at Lorenzo as a percentage of the Heise flow, for the years 1998 to 2005.

In 1996 Mike Merigliano completed the study, "Ecology and Management of the South Fork Snake River Cottonwood Forest." This study was an in-depth study relating river flow changes since Palisades Dam to effects on the broad, cottonwood forest in the planning area, from the

dam to Heise. The study found that the South Fork now is less dynamic due to the dam, and that it has a reduced potential for new cottonwood recruitment. New floodplain habitat for recruiting new cottonwoods along the river is smaller and narrower than before the dam. The cottonwood forest was found to be older (50-125 years old) and less extensive than the pre-dam period (Merigliano, 1996).

In 1997, with snow water equivalent (water content in the snow pack) around 250% of normal in the upper, mountainous watershed, and a cool, wet spring with rains in May and June, Palisades Dam discharged its maximum capacity rate, 43,500 cfs on June 11, 1997, and the Snake River Flood ensued. Without Palisades Dam regulation, the Bureau of Reclamation estimates that peak discharges would have been approximately 60,000 cfs (Federal Emergency Management Agency (FEMA) and Idaho Bureau of Disaster Services, 1997). Flooding prompted Governor Batt and President Clinton to declare seven southeastern Idaho counties eligible for disaster relief and FEMA, the NRCS, counties and the Corps of Engineers directed and assisted relief efforts. The peak flow of 43,500 cfs was the highest flow since 1918 along the South Fork and had an estimated return interval of about 100 to 150 years.

Table 17. South Fork Snake River Mean Monthly Stream Flows for Period of Record for Heise and Lorenzo USGS Gauging Stations by Water Year

(Heise Period of Record = 1911-2005 (95 years); Lorenzo Period of Record = 1924-2005 (82 years); stream flows in cubic feet per second (cfs))

| Station | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|----------------|------|------|------|------|------|------|------|--------|--------|--------|------|-------|
| Heise | 3646 | 2788 | 2641 | 2581 | 2650 | 3404 | 6268 | 13,240 | 16,830 | 13,330 | 9222 | 6457 |
| Lorenzo | 1436 | 1247 | 1751 | 1955 | 1987 | 3235 | 5056 | 7900 | 9424 | 7408 | 4416 | 3173 |

Table 18. South Fork Mean Monthly Stream Flow (cfs) for Water Years 1998-2005(8 years) for May through September and percent flow difference between Heise and Lorenzo USGS Gauging Stations

| Station | May | June | July | August | September |
|--------------------------|------------|-------------|-------------|---------------|------------------|
| Heise | 11,313 | 13,476 | 12,705 | 9167 | 7258 |
| Lorenzo | 6147 | 7161 | 6441 | 4660 | 3570 |
| % Flow Difference | 46% | 47% | 49% | 49% | 51% |

Another study to evaluate impacts from Palisades Dam to the ecology of the river system was the Bureau of Reclamation’s study, “Ecologically Based Systems Management (EBSM), the Snake River---Palisades Dam to Henrys Fork” (Hauer et al, 2004). This study sought to establish a decision support system to aid water managers making flow decisions based also on the ecological needs of the riparian and aquatic resources. This study further explains and investigates the complexities of this river system. It studied ground water-surface water interaction zones, such as backwater channels and spring brooks that have cooler summer

temperatures and warmer winter water temperatures than the main river channel. These backwater systems provided nutrient-rich inflows to the river for high macroinvertebrate productivity and possibly spawning sites.

The study also found significant stream flow changes on the South Fork between pre-dam and post-dam stream flows. After the construction of Palisades Dam, flows have increased in February and March, 30 to 45 days earlier than before the dam. The pre-dam flow increase usually occurred in late March/early April. The other significant change was that annual peak flows have been much reduced post-dam. Normal water year peak flows today are usually between 15,000 to 20,000 cfs, whereas pre-dam peaks approached 30,000 cfs. For example, for the 46 years prior to the construction of Palisades Dam, the South Fork at Heise exceeded 30,000 cfs 12 times, whereas for the 46 years post-dam this flow was exceeded only once (1997). This lack of high flows limits the “work”---the cutting and filling-in the river can do to create new substrate areas for cottonwood recruitment. The study lists the following river benefits as recommendations if the USBOR were to more closely approximate pre-dam flow conditions:

- Higher peak flows would result in more geomorphic channel change and complexity, increasing available areas for cottonwood recruitment, and replenishing side channels and backwater areas.
- Lower late winter/early spring flows would reduce velocities, and therefore stress on wintering fish.
- Reducing stream flows on the downward limb of the hydrograph during the summer no more than 5% per day would allow cottonwood seedlings to establish, allowing them to better follow the descending water table with their root systems.

Of course, these recommended changes in dam operation would only be considered if water right delivery conflicts and other primary considerations could be avoided.

Henry's Fork

The Henry's Fork flows are directly controlled by Henry's Lake Dam, Island Park Dam and Ashton Dam, with further flow releases from Grassy Lake Dam. Table 14 shows the average monthly flows at the Henry's Fork near Rexburg (at Highway 33 Bridge) gauge, approximately 33 river miles below Ashton Dam for the period 1977 to 2005 (29 years).

On June 5, 1976, due to the Teton Dam failure and the corresponding 79,000 cfs that flowed in the Lower Henry's Fork, this lower 18 river miles covered by the plan was significantly changed. The post-flood reach is now a wide, deep, flat-water section with high sediment deposits in the channel. It has been changed permanently from its natural character prior to the dam failure.

Table 19. Henrys Fork Snake River near Rexburg Mean Monthly Stream Flows for 1977-2005 (29 years; stream flow in cfs; at USGS Gauging Station

| Month | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Flow | 1651 | 1934 | 1897 | 1937 | 1948 | 1863 | 2381 | 4839 | 4172 | 1748 | 1506 | 1481 |

Floodplain

Almost all of the BLM-administered lands adjacent to the immediate stream bank are within the Snake River floodplain. The BLM facilities Kelly Island Campground, Lorenzo Boat Access , Wolf Flat Boat Access and Menan Boat Access are all within the Snake River floodplain. All of the Henrys Fork undeveloped boat launch slides are also within the floodplain. Conant Valley and Byington parking lots and other nearby facilities are not within the 100-yr. floodplain.

The historic Snake River floodplain was likely many times the size it is currently. Besides the Palisades Dam controlling floods, several large levee systems greatly control, and narrow the current width of the floodplain. These levee systems help protect canals, residences, structures, and agricultural cropland. The largest levee systems covered by this plan include the 20-mile levee on the south bank of the South Fork from the Great Feeder Canal headgate to the Annis Slough confluence; and, the 10-mile levee on the north bank between just south of Archer to the confluence with the Henrys Fork.

Water Quality

The planning area covers the river corridors contained within three subbasins: Lower Henrys (Hydrologic Unit Code, HUC# 17040203); Palisades (HUC# 17040104), and Idaho Falls (HUC# 17040201). From the Idaho Department of Environmental Quality (IDEQ) 2002 Integrated Report (IDEQ, 2005), the South Fork was listed on the section 303(d) of the Clean Water Act list from Black Canyon to Heise for flow alteration. This list describes water quality-limited streams. The Henrys Fork within the planning area has not been listed on the 303(d) list. Flow alterations can include controlled releases from Palisades Dam, but may also include irrigation diversions.

Designated beneficial uses for the South Fork are cold water aquatic life, salmonid spawning, primary contact recreation, and domestic water supply. In addition, in the Palisades Subbasin the South Fork is also a special resource water and in the Idaho Falls Subbasin the South Fork is also designated for agricultural water supply. The designated beneficial uses for the Henrys Fork are: cold water aquatic life, salmonid spawning, primary and secondary contact recreation, domestic water supply, agricultural water supply, and a special resource water.

Because the Lower Henrys Fork was not listed on the 303(d) list and the South Fork was only listed for flow alteration (not a pollutant), total maximum daily loads (TMDL's) have not been assigned by IDEQ to reduce pollutants to these streams. In general, water quality is fairly high in the South Fork. When IDEQ assessed the South Fork through the large river protocol, it was basically found to be a reference site, a least-disturbed site. For example, the Palisades Subbasin of the South Fork has no non-point discharge elimination system (NPDES) permits for point

sources. There are no confined animal feedlot operations (CAFO's) nor industrial pollution sources on this reach. Past United States Geological Survey (USGS) water quality data show sample data within state water quality standards. From IDEQ's TMDL Report, any impacts to water quality in the Palisades Subbasin are mainly caused by roads and trails, recreation, and livestock grazing in riparian areas, contributing fine sediment. The South Fork generally supports the beneficial uses of cold water aquatic life and salmonid spawning.

The Lower Henrys Fork, with the sediment deposits remaining from the Teton Dam Failure, appears to continue to show fine sediment impacts along this lower reach.

Impacts to water quality on BLM-administered lands can originate from roads and trails, livestock grazing, recreation (including OHV and jet boat use) and from naturally-erosive hillsides and streambanks.

3.2.5 Vegetation

Riparian-Wetland Vegetation

The riparian-wetland communities along the Snake River range from higher gradient, cobbly and sandy cottonwood forests on the South Fork to a very low gradient, slow-moving, silt laden channel dense with dogwood, and willow on the Lower Henrys Fork above the confluence with the South Fork. Maintenance of large river riparian-wetland systems, particularly cottonwood forests, is critical to bald eagle nesting and wintering, and for other wildlife habitat. The deciduous wet shrub communities provide streambank and floodplain protection, contribute shade to improve aquatic life, and provide habitat for a wide diversity of wildlife species. The riparian-wetland system as a whole provides screening and aesthetic values for recreationists.

The BLM has completed and continues to actively pursue a number of land acquisitions and conservation easements in the planning area to protect riparian-wetland habitat.

In 1996 the BLM and the USFS agreed to accelerate cooperative riparian-wetland restoration management. Part of this effort defined proper functioning condition (PFC) as a BLM minimum health standard for riparian-wetland areas. The PFC method has also been used to define the riparian-wetland standard in Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (Standards and Guides) (USDI-BLM, 1997). The "Lotic Wetland Health Assessment for Large River Systems" was developed by the Montana Riparian and Wetland Association (MRWA) in the 1990's.

A baseline PFC inventory of the South Fork, the Henrys Fork, and the Main Snake was done for BLM in the late 1990s. The data is currently maintained by Ecological Solutions Group, LLC. Subsequent monitoring of river reaches associated with specific grazing allotments continues to be conducted for Standards and Guides assessments. Although proper functioning condition is what BLM is striving for along the Snake River system, certain factors affecting function of the river may be outside the BLM's control. Thus, given the altered flow regime caused by Palisades Dam and irrigation diversion withdrawals, the highest attainable riparian-wetland health state may be less than perfect. Appendix F includes: 1) definitions of the three PFC rating categories, 2) a table of factors and their associated point values used in assessing riparian-

wetland health of large river systems, 3) a table of health summaries resulting from the base line PFC inventory, and 4) a map of the river reaches inventoried and their associated rating categories.

South Fork

Approximately 79 miles of the South Fork flows through federally managed lands within the planning area. The South Fork has one of the most extensive cottonwood riparian-wetland ecosystems in North America. This cottonwood forest is one of the last well-developed ecosystems of this type in Idaho. The U.S. Fish and Wildlife Service have identified this area as the highest quality cottonwood riparian zone in the western United States. The dense and diversified vegetative community is dominated by narrowleaf cottonwood (*Populus angustifolia*), box elder (*Acer negundo*), willow (*Salix* spp.), red-osier dogwood (*Cornus stolonifera*), Rocky Mountain juniper (*Juniperus scopulorum*), silverberry (*Elaeagnus commutata*), and western serviceberry (*Amelanchier alnifolia*).

The 1991 Snake River Plan contained riparian-wetland standards calling for maintaining acres of cottonwood range sites, recruiting cottonwood seedlings and saplings, maintaining acres of deciduous wet shrub types, and maintaining specific canopy coverages. However, after the 1997 Snake River flood, it became apparent that recruiting and maintaining cottonwood and other riparian-wetland species is a function of periodic floods, and that these high flow events have the greatest influence on this river system.

The 1991 Snake River Plan paved the way for two studies along the South Fork that have aided federal agencies in managing the planning area (Merigliano, 1996 and 2005). These studies were instrumental in inventorying the cottonwood riparian-wetland system, determining the present age class, and other associated ecological implications from the 1956 Palisades Dam construction and subsequent flow releases. The studies also offered management recommendations on how best to augment what remains of the historical floodplain.

Merigliano's first study (1996) determined that, as a result of the Palisades Dam, the current floodplain area is much smaller than its pre-dam size, and that the cottonwood forest area is shrinking and becoming older. "Although very extensive, ninety five percent of today's cottonwood forest is a legacy of pre-dam, natural conditions." Later he states, "The South Fork's potential for new cottonwoods has changed since the construction of Palisades Dam. The river is less dynamic now because of flood control" (Merigliano, 1996).

Merigliano's second study (2005) determined that erosion and deposition of the flood plain during the 1997 flood far exceeded all other years since closure of Palisades Dam in 1956, and it even exceeded many pre-dam floods. The resulting sediment deposition timed with seed dispersal increased the amount and distribution of cottonwood recruitment, resulting in a slightly improved age class distribution (Merigliano, 2005).

Sediment retention in Palisades Reservoir, combined with erosive floods, would likely cause net channel erosion, as increased average channel width or down-cutting of the bed occur. Width changes have been negligible, but some (0.3 feet) downcutting has occurred at the Irwin and

Heise gaging stations. The channel at Irwin would probably not recover, but by 2004, mean bed elevations at Heise were nearly recovered (Merigliano, 2005).

Henry's Fork

Approximately 19 miles of the Henry's Fork flows through BLM within the planning area, making up about 1901.3 acres of riparian/wetland vegetation. The Lower Henry's Fork is regulated by four upstream dams (Henry's Lake, Island Park, Grassy Lake and Ashton Dams) and several irrigation diversions. The Lower Henry's Fork below the Teton River confluence was extensively changed during the June 6, 1976 Teton Dam failure (Randle et al, 2000). This lower channel was over-widened and deepened in places, with tons of fine sediment deposited in the floodplain, resembling a wider, pooled, and slow moving river compared to before the dam failure.

Major riparian-wetland species occurring along the Henry's Fork include willow, red-osier dogwood, narrowleaf cottonwood, box elder, quaking aspen (*Populus tremuloides*), common chokecherry (*Prunus virginiana*), mountain alder (*Alnus incana*), black hawthorn (*Crataegus douglasii*), common snowberry (*Symphoricarpos albus*), Woods rose (*Rosa woodsii*), Rocky Mountain maple (*Acer glabrum*), sedge (*Carex* spp.), rush (*Juncus* spp.), and sagebrush (*Artemisia* spp.).

Main Snake

Approximately 17 miles of the Main Snake flows through BLM within the planning area, making up about 414.2 acres of riparian/wetland vegetation. The Main Snake begins as a highly meandering, braided channel within a dense cottonwood/willow forest, slowly changing to a single-channel river with higher banks, and more shrubs than trees. Agricultural development adjacent to the river banks has increasingly become the land use trend, particularly at the downstream end of the planning area.

The dominant riparian-wetland vegetation along the Main Snake is made up of willow, red-osier dogwood, narrowleaf cottonwood, box elder, silverberry, and common snowberry. Alluvial sediment bar development is naturally limited along the lower 14 miles of the Main Snake within the planning area, and this limits the potential for cottonwoods to establish along this reach of the river.

Upland Vegetation

The majority of the planning area closely parallels the South Fork and Henry's Fork of the Snake River and the vegetation in these areas are predominantly riparian influenced species. The planning area incorporates areas further from the river in Swan Valley and Menan Butte and includes upland native vegetation communities of a xeric nature. While several ecological sites occur, the majority are covered by either a Wyoming big sagebrush/bluebunch wheatgrass (*Artemisia tridentata* ssp. *wyomingensis*/*Pseudoroegneria spicata*) range site or a Mountain big sagebrush/bluebunch wheatgrass (*Artemisia tridentata* ssp. *vaseyana*/*Pseudoroegneria spicata*) range site. All BLM allotments which have been assessed for Fundamentals of Rangeland Health were determined, where applicable, to be meeting the standard for native plant communities. All USFS Allotments in the planning area have been assessed and found to be

meeting Standards and Guides pertaining to grazing as specified in the Targhee National Forest RFP.

Endangered, Threatened, Proposed, Candidate, Plant Species

Species identified by the USFWS as endangered, threatened, proposed, and/or candidate species under the Endangered Species Act that occur within the Snake River Planning Area include the Ute ladies'-tresses orchid (threatened).

Ute ladies'-tresses

Ute ladies'-tresses is known from eight western states, including Idaho. Currently, the only known locations for Ute ladies'-tresses in Idaho are on the South and Henrys Forks and near the Fort Hall River Bottoms in eastern Idaho. Ute ladies'-tresses are listed for both the USFO of the BLM and the Palisades Ranger District of the Caribou-Targhee National Forest. There are currently eight element occurrences (EO) that represent the 22 subpopulations found on the South Fork. Of the 22 subpopulations located in the planning area; 14 on BLM managed lands, four on USFS lands, two on private land and two on land cooperatively managed with BLM and Madison Co., and a private land owner. None of the known populations associated with the Henrys Fork watershed are located on BLM or USFS managed lands. The one location that is shared between private land and BLM has a conservation easement that would preserve that habitat and keep future developments from occurring.

In habitat throughout the orchid's range, Ute ladies'-tresses is endemic to mesic or wet meadows and riparian/wetland habitats in relatively low elevations near spring, seeps, lakes, or perennial streams. Soils may be inundated early in the growing season, normally becoming drier but retaining subsurface moisture through the season. The elevation of known orchid occurrences ranges from approximately 700 to 7,000 feet.

Generally, this species occurs below the coniferous zone in areas where the vegetation is relatively open (e.g. grass and forb-dominated sites), but some populations are found in riparian woodlands (such as cottonwoods) in Colorado, Utah, and Idaho and in riparian shrub (e.g. willow thickets) communities.

The Main Snake was inventoried in 1997 and again in 2006 finding no Ute ladies'-tresses, and little suitable habitat.

A draft recovery plan for Ute ladies'-tresses was developed by the USFWS (1995), but has not been finalized. The draft plan had three primary objectives for achieving recovery:

1. Obtaining information on life history, demographics, habitat requirements, and watershed processes that would allow specification of management and population goals and monitoring progress.
2. Managing watersheds to perpetuate or enhance viable populations of the orchid.
3. Protecting and managing Ute ladies'-tresses populations in wet meadow, seep, and spring habitats (USDI-FWS, 1995).

Sensitive Plant Species

There is currently one State of Idaho sensitive plant species newly located on islands in the South Fork of the Snake River. Sweetgrass (*Hierochloa odorata*) was found on three islands while conducting Ute ladies-tresses site visitations in August 2005. This plant is not currently listed as a sensitive species for the BLM or USFS.

Giant Helliborine (*Epipactis gigantea*), is a sensitive plant listed for both the BLM and USFS. The Giant Helliborine is found only on BLM managed lands within the planning area at Cress Creek Nature Trail and currently has few threats. There are no USFS sensitive plant species currently known to occur within the planning area. A list of USFS sensitive plant species in the Palisades Ranger District are in the Biological Evaluation for sensitive plant species (Lehman, 2008). Refer to Appendix G for a list of sensitive plant species.

3.2.6 Wildlife and Aquatic Species Habitat Management

General Wildlife

Towering cliffs, islands, free-flowing water, cottonwood galleries, Douglas fir, quaking aspen, and juniper/sage-brush vegetation and mountains provide habitat for a wide variety of wildlife. Mammals that use the planning area include elk (*Cervus elaphus*), white tail (*Odocoileus virginianus*), and mule deer (*Odocoileus hemionus*), moose (*Alces alces*), black bear (*Ursus americanus*), mountain lion (*Puma concolor*), badger (*Taxidea taxus*), coyote (*Canis latrans*), red fox (*Vulpes vulpes*), bobcat (*Lynx rufus*), otter (*Lontra canadensis*), mink (*Mustela vison*), beaver (*Castor canadensis*), mountain cottontail (*Sylvilagus nuttalli*), hares (Leporidae family), American pika (*Ochotona princeps*), marmot (*Marmota flaviventris*), red squirrel (*Tamiasciurus hudsonicus*), northern flying squirrel (*Glaucomys sabrinus*), common porcupine (*Erethizon dorsatum*), and mice and voles (Zapodidae and Muridae families). Waterfowl species such as Canada geese (*Branta canadensis*), mallards (*Anas platyrhynchos*), blue-winged (*Anas discors*), green-winged (*Anas crecca*) and cinnamon teals (*Anas cyanoptera*), common mergansers (*Mergus merganser*), and wood ducks (*Aix sponsa*) are found nesting on islands and along the river's edge.

Migratory songbirds such as warblers, vireos, buntings, flycatchers, gnatcatchers, sparrows, swallows, thrushes, and wrens use the planning area for their breeding and nesting sites. Avian game species found include ruffed grouse (*Bonasa umbellus*), mourning dove (*Zenaidura macroura*), and ring-necked pheasant (*Phasianus colchicus*), gray partridge (*Perdix perdix*), and wild turkey (*Meleagris gallopavo*). Along with the nesting and perching habitat and fish in the river, the previously named species provide a prey base that draws many raptors to the river including Cooper's (*Accipiter cooperii*), sharp-shinned (*Accipiter striatus*), red-tailed (*Buteo jamaicensis*), and Swainson's hawks (*Buteo swainsoni*), and American kestrel (*Falco sparverius*). Additionally, a variety of owls such as great-horned (*Bubo virginianus*), pygmy (*Glaucidium gnoma*), saw-whet (*Aegolius acadicus*), long-eared (*Asio otus*) and short-eared (*Asio flammeus*) call the planning area home. Golden (*Aquila chrysaetos*) and bald eagles (*Haliaeetus leucocephalus*), as well as turkey vultures (*Cathartes aura*) osprey (*Pandion haliaetus*) can be seen soaring above the cliffs, perched in trees or foraging along the river.

Portions of the planning area are recognized as important winter range habitat for a number of these animals. (See Targhee National Forest RFP and Medicine Lodge RMP for more information).

The South Fork, Henrys Fork, and the Main Snake, including adjacent mountain ranges, have a potential of 156 nesting species of birds. The most productive habitat for species diversity is the cottonwood type.

Big Game

The planning area and adjacent lands provide crucial year long habitat to white-tailed deer and moose, and crucial winter habitat to mule deer and elk. Juniper shrubs and basin big sagebrush above the river provide thermal cover as well as shelter and protection from predators. Along the river, riparian habitat provides cover and browse. Winter ranges play a disproportionate role in maintaining ungulate populations as they ensure a significant proportion of the breeding population survives to the following year and is in good enough shape to produce a healthy new crop of young. Human activity within and adjacent to key wintering areas adds stress and increases energy drain for animals. They may be forced to move about more than normal and even relocate to less favorable habitat (ASRD Fish and Wildlife Division, 2000). Critical winter range within the Snake River Planning Area consists of southwest facing slopes that receive more sun and less snow accumulation. Valleys provide protection from high winds.

Generally, elk stay in the canyon during the early spring green-up and then move to the mountains for the summer. Some elk remain near the confluence throughout the year. Mule deer are found along the north side of the South Fork during the winter with a few remaining in the corridor throughout the year. The BLM, USFS, and IDF&G continue to work closely together to ensure habitat requirements for big game are being met and to reduce disturbance during the critical winter season.

Heron Rookeries

Great blue herons are considered common in most wetland environments such as wet meadows, river and lake edges, swamps, marshes, and ditches. They are colonial nesters and use a variety of deciduous and evergreen trees, bushes, and artificial structures as nesting sites. They are considered an indicator species for the presence of mature-aged cottonwood stands that also provide nesting habitat for eagles. Great blue herons are known to be sensitive to disturbance by human activities and the size and location of nesting sites, called rookeries, may vary based on human activities in the area.

Bats

Bats are an important component of forest, desert, and rangeland ecosystems due to their roles in controlling insects and pollination. Forty-five species of bats are known to occur in the United States with 14 occurring in Idaho.

Surveys were conducted, using a variety of acoustical and trapping methods, during the summer of 2005 to determine species diversity, sex and reproductive status of bats in the planning area. Acoustical surveys identified 11 species of bats, of which two, Townsend's big-eared bat (*Corynorhinus townsendii*) and spotted bat (*Euderma maculatum*), are Federal Species of

Concern and another, fringed myotis (*Myotis thysanodes*) is an Idaho Species of Concern. Trapping identified seven species of bats. The big brown bat (*Eptesicus fuscus*) was detected most often via acoustical surveys while the little brown bat (*Myotis lucifugus*) was captured most frequently. Males were captured four times more frequently than females and adults were captured nearly eight times more often than juveniles. Twenty-eight females from six species were captured, of which 21 exhibited signs of reproductive activity.

The species diversity and reproductive status underline the importance of the planning area to bats in eastern Idaho.

Wildlife Endangered, Threatened, Proposed, and Candidate

There are three species identified by the USFWS as endangered, threatened, proposed and/or candidate under the ESA that occur within the planning area. The Threatened Canada lynx, gray wolf which is considered to be experimental-nonessential population south of I-90 in Idaho (USDI-FWS, 1994) and will soon be delisted (USDI-FWS, 2008), and the YBCU, a candidate species.

Gray Wolf (Experimental nonessential population)

Wolves in Idaho south of I-90 are listed as "experimental, non-essential," under Section 10(j) of the Endangered Species Act (USDI-FWS, 1994). The Northern Rocky Mountain Population of gray wolf encompasses the eastern third of WA and OR, a small part of north-central UT and all of MT, ID and WY. This portion of the population has been removed from the List of Threatened and Endangered Species effective March 28, 2008 (USDI-FWS, 2008). More than 700 wolves are present through-out the state of Idaho with greater than 25 breeding pairs. Recent reports indicate there is a pair of reproducing gray wolves becoming established in upper Fall Creek which runs into the South Fork. As of January 2008 one male was taken by Animal Depredation Control for domestic sheep depredation, and the pup that was with the female is now missing. Another gray wolf is running with the female. This group is not classified as an official wolf pack or official pair by the USFWS, because it does not meet the "pack" qualification. This wolf group has yet to be documented in the river corridor, but other observations have been reported near the river over the past several years. Potential wolf prey species within the river corridor include rabbits, voles, mice, birds, small mammals and big game.

Canada Lynx (Threatened)

Lynx are highly mobile and have large home ranges from 12 to 83 square miles, and individuals can regularly travel more than 62 miles and are documented to go up to 680 miles. There are no lynx denning sites documented in or near the river corridor or on the Caribou-Targhee National Forest, but have been on the adjacent Bridger-Teton National Forest. Snowshoe hare is a primary prey comprising 35 to 97 percent of the diet and conifer forests are important habitat for hare. Lynx survival depends on a hare density of 1.2 hares per acre. A confirmed lynx was seen about 10 miles from the river in 1999, but a subsequent three year lynx hair-snare study in the adjacent Big Hole Mountains found no lynx hair. The closest lynx hair sample collected during the Forest study was on the west side of the Teton Mountains about 30 miles northeast. No lynx tracks have been found on any Forest Service furbearer transects in the Palisades Ranger District,

but there is one unconfirmed track observation at Fall Creek Falls within the corridor in Swan Valley. There are no specific management goals or mitigation needed for lynx outside of the Targhee National Forest RFP and the 2007 Lynx Amendment to the Forest Plan (Northern Rockies Lynx Mgmt Direction ROD; USDA/USDI, 2007). More detailed discussion of lynx is found in the associated Biological Assessment for the 2008 Snake River Activity/Operations Plan Revision (Orme, 2008).

Yellow-billed Cuckoo (Candidate)

July 25, 2001 the USFWS determined listing of the YBCU was warranted but precluded. In Idaho, the YBCU was historically considered a rare-breeder with the majority of sightings occurring in the Upper Snake River Basin. Breeding habitat of YBCUs in the west consists of a minimum of five acres of riparian habitat typically comprised of mature cottonwoods with a dense willow understory. Currently YBCUs are found along the lower portion of the South Fork and in the Deer Parks Wildlife Management Unit. Surveys conducted in 2005 found at least five pairs within the Snake River Planning Area. Although no nests were located, surveyors observed copulating pairs and nesting behavior as well as a single juvenile.

At present there is no approved Conservation Strategy for YBCUs. However, recommendations to avoid potential negative impacts on cuckoos discussed in this document were developed during Section 7 consultation with USFWS (CH2MHill, 2006).

Sensitive Species

Many wildlife species within the Snake River Planning Area are considered species of conservation concern by the BLM, USFS, and IDF&G. A list of these species and their status can be found in Appendix G. Lists of sensitive species tend to be dynamic as their status changes based on population size, range extent, area of occupancy, trend, threats, vulnerability, environmental specificity, and other considerations. This document does not address management of each of these species specifically, but agencies continue to monitor their populations and habitat conditions.

Two sensitive species are featured here, the Bald Eagle and Peregrine Falcon, because of their prominence in the river corridor. For more information on the other 16 sensitive species on the Caribou-Targhee National Forest refer to the wildlife biological evaluation (Alford, 2008) and Appendix G.

Bald Eagle

The Snake River provides very important nesting and wintering habitat for the restoration and maintenance of the Greater Yellowstone Ecosystem bald eagle population as well as the Idaho bald eagle population. When the original Snake River Plan was written in 1991 bald eagles were listed as endangered under the Endangered Species Act of 1973 as amended. Delisting goals have been met and currently the bald eagle has been removed from the list of endangered and threatened wildlife August 8, 2007. However, BLM and USFS would continue to manage them per the specific management plan for bald eagle habitat developed by the Greater Yellowstone Bald Eagle Group, whose responsibility is to recommend management actions to protect and enhance bald eagle habitat to aid in the recovery of the species.

In 1991 there were eight active bald eagle nests on the South Fork below Palisades Dam and three on the Main Snake and Henrys Fork. Currently there are 19 active nests on the South Fork between Palisades Dam and the Henrys Fork confluence, three on the Henrys Fork below St. Anthony, and three on the Main Snake. This comprises thirteen percent of the active nests in Idaho. The majority of nests are located in large cottonwood trees along sections of the river while a few are found in large, above stand Douglas fir trees. The Snake River Planning Area continues to be an important bald eagle management area in Idaho as 87 % of nests produced young in 2006 compared to a 50 % success rate throughout the remainder of Idaho. This is similar to the nest success of 85 % found throughout the Wyoming portion of the Greater Yellowstone Ecosystem. Detailed discussion and data presentation of bald eagle productivity associated with the Targhee National Forest RFP management from Palisades Dam to Table Rock is found in the biological evaluation (Alford, 2008).

The specific management plan for bald eagle habitat discussed in this document was developed by the Greater Yellowstone Bald Eagle Working Group (1996), whose responsibility is to prescribe management actions to protect and enhance bald eagle habitat to aid in the recovery of the species.

Peregrine Falcon (Sensitive)

Within the Snake River Planning Area there are now five falcon eyries located on cliffs from Palisades Dam to Heise. Habitat along the river is prime foraging and nesting habitat. Presently these five eyries are monitored by the IDF&G yearly (IDF&G, 2006). Two of the eyries are among the top six producing eyries in Idaho with a total of 26 young produced in 15 years (IDF&G, 2006). More detailed discussion and data presentation of peregrine productivity associated with these five eyries from Palisades Dam to Table Rock is found in the biological evaluation (Alford, 2008).

Aquatic Species

The diverse cold water fishery in the Henrys and South Forks of the Snake River is a biologically and economically valuable resource. The native species found in the Snake River include Yellowstone cutthroat trout (*Oncorhynchus clarki bouvieri*), mountain whitefish (*Prosopium williamsoni*), Utah chub (*Gila atraria*), Utah sucker (*Catostomus ardens*), mountain sucker (*Catostomus platyrhynchus*), longnosed dace (*Rhinichthys cataractae*), speckled dace (*Rhinichthys osulus*), reidside shiner (*Richardsonius balteatus*), mottled sculpin (*Cottus bairdi*) and Paiute sculpin (*Cottus beldingi*). Introduced species include rainbow trout (*Oncorhynchus mykiss*), brown trout (*Salmo trutta*), and lake trout (*Salvelinus namaycush*).

The Snake River is an internationally recognized trout fishery. Around this fishery a substantial outfitter and guiding industry has developed. Between the general fishing public use and the outfitting use on the river, a high demand has been put on the fishery resource. The primary species sought after by anglers are the native Yellowstone cutthroat trout (YCT), rainbow trout, and brown trout. Also of interest to anglers are native mountain whitefish and lake trout. In a study done by Loomis (2005) it was estimated that from May to September of 2004, 87% of the total visitor days on the Henrys Fork and 82 % on the South Fork where anglers. Out of the total angler visitor days on the South Fork, about half where fishermen targeting YCT.

YCT is a BLM Type two special status species, a Forest Service sensitive species and a State of Idaho species of special concern. In August 1998, a group of conservation groups filed a petition with the USFWS to list the YCT under the Endangered Species Act. The USFWS determined in February 2006, based on their review, that YCT did not warrant listing under the ESA. This finding was partly determined due to each of the states with YCT already having YCT management plans in place.

Some taxonomists such as Robert Behnke recognize the “fine-spotted” cutthroat trout (*O. clarkii* subsp.) of the upper Snake River as a separate subspecies of cutthroat trout (Behnke 1992). The distribution of the fine-spotted morphotype overlaps that of the large-spotted form of YCT, which is an unusual occurrence since all other cutthroat trout subspecies are geographically isolated from each other. Because of the overlap in taxonomic characters and the occasional specimen with intermediate spotting, Behnke (1992) suggests that hybridization and limited gene flow do occur. The fine spotted form is primarily found above Palisades Reservoir. Below Palisades Dam downstream to Shoshone Falls, the large-spotted YCT is the native trout. Genetic differentiation between large-spotted YCT and the fine-spotted forms so far has not been possible. (Loudenslager and Kitchin, 1979; Leary et al., 1987; Allendorf and Leary, 1988; Mitton et al., 2006 in review; Novak et al., 2005). Until and if the question of subspeciation is addressed the IDF&G considers the fine-spotted form a unique morphotype of YCT and would manage it accordingly.

YCT inhabit relatively clear, cold streams, rivers, and lakes. Optimal temperatures have been reported to be from 4° C to 15° C, with occupied waters ranging from 0° C to 27° C (Gresswell, 1995). YCT typically spawn in spring and early summer after flows have declined from their seasonal peak and tend to select sites with suitable substrate (gravel less than 85 mm in diameter), water depth (9-30 cm), and water velocity (16-60 cm/s) (Varley and Gresswell, 1988; Byorth, 1990; Thurow and King, 1994). Water temperature determines the time to hatching and emergence of fry. After emergence, fry immediately begin feeding, typically in nearby stream margin habitats, but they may also undertake migrations to other waters (Gresswell, 1995). Juvenile fish require three or more years to mature. Spawning fish tend to be from 200 to over 600 mm long and weigh from 0.1 to 5 kg (Thurow et al., 1988). Fish may live as long as 11 years (Gresswell, 1995).

There are three primary life history patterns: resident, fluvial, and adfluvial (Gresswell, 1995). Resident fish occupy home ranges entirely within relatively short reaches of streams. This may be the dominant strategy in headwater streams, particularly those isolated from other waters by barriers. Fluvial fish migrate as adults from larger streams or rivers to smaller streams to reproduce. The resulting fry migrate to the larger waters one to three years after emergence. This is the life stage that is found within the South Fork and Henrys Fork. Populations of YCT in basins providing a diversity of habitats have evolved variations of all these strategies (Gresswell et al., 1994, 1997); individuals with different strategies may use the same habitats and even interbreed (cf. Jonsson, 1985).

Movement in cutthroat trout may also be associated with temporal habitat changes. At low water temperatures in winter, fry (and probably juvenile) YCT entered spaces in the stream bottom during the day, and emerged from them at night (Griffith and Smith, 1993). Larger cutthroat

trout may also shift habitats from fall to winter as water temperature declines and anchor and shelf ice develop (Brown and Mackay, 1995; Jakober et al., 1998). YCT probably undergo localized movements associated with changes in habitat or food availability in other seasons (cf. Young, 1996; Young et al., 1997, 1998).

The tributaries to the South Fork are particularly important to YCT because they provide spawning areas for both the resident fluvial life forms of the species. A research project utilizing radio telemetry to describe where and when rainbow trout, cutthroat trout, and rainbow cutthroat hybrids are spawning indicated rainbow and hybrid trout primarily use mainstem side channel habitat for spawning while YCT use both mainstem side channel and tributary habitat (Henderson, 1999; Henderson et al., 2000). Following these results, an intensive tributary management program was implemented to preserve the genetic integrity of YCT spawning in Burns Creek, Pine Creek, Rainey Creek, and Palisades Creek. Permanent tributary weir and trapping facilities now allow IDF&G personnel to block escapement of rainbow and hybrid spawners and allow passage of nearly genetically pure YCT spawners.

The goals of the Management Plan for the Conservation of YCT in Idaho are:

1. Ensure the long-term persistence of the subspecies within its current range in Idaho;
2. Manage YCT populations at levels capable of providing angling opportunities;
3. Restore YCT to those parts of its historical range in Idaho where practical.

The Henrys and South Forks and their tributaries make up the major part of the Upper Snake Geographic Management Unit (GMU), one of four GMU's developed range wide for the conservation and management of YCT.

Potential threats to YCT not listed in any particular order include genetic introgression with rainbow trout; impoundments, water diversion, road culverts, improper livestock grazing, mineral extraction, angling, and competition with nonnative species. Whirling disease has been identified as a more recent potential threat.

Most of the area addressed in this plan is in good riparian condition and does not show adverse grazing impacts as they pertain to fisheries. In those areas where the riparian condition is not properly functioning, it is due to water management and not grazing.

The introduction and subsequent spread of non-native trout has been one of the greatest threats to the status of YCT since stocking in YCT habitats first began over 100 years ago. Competition, predation, and hybridization from other salmonids including rainbow, brook and brown trout, as well as genetically compromised cutthroat, continue to pose a threat to the expansion and conservation of YCT. In the 2007 Status report, 105 miles of occupied habitat (6% of occupied habitats) were identified as having the potential of being hybridized due to the presence, or past stocking, of hybridizing nonnative species or subspecies.

Two strategies to decrease the threat of competition from and hybridization with rainbow trout in the South Fork are being tried. One is to release a larger discharge of water from Palisades Dam during the spawning of rainbow trout to try to flush fish and eggs downstream prior to Yellowstone

cutthroat spawning. In a study by Moller and Van Kirk (2003) it was shown that flood peak releases of water from Palisades Reservoir that would mimic a more natural hydrograph would not impact irrigation storage and delivery responsibilities of the dam. It is hoped that these releases would benefit the YCT because their spawning takes place later in the year, May through June as opposed to March through early May for rainbow, and in river tributaries as opposed to the main channel of the river. The other strategy is to allow fishing on the South Fork for rainbow yearlong without any limit while keeping all YCT fishing catch and release. This regulation was put into effect in 2004. In 2003 the composition of total catch of rainbow trout was 14%; in 2005 it was 13%. In 2003 the composition of total harvest of rainbow trout was 56%; in 2005 it was 71%. The cumulative harvest rate for rainbow trout on the South Fork has increased from 5,070 fish in 2003 to 6,718 fish in 2005.

Another limiting factor to fisheries in the both the Henrys Fork and South Fork are depleted flows. Flow regulation has caused decreased flows on the lower Henrys Fork during the summer irrigation season and decreased winter flows and increased summer flows on the South Fork.

The fishery of the Henrys Fork and the Main Snake below the confluence with the South Fork was severely degraded by the failure of the Teton Dam in 1976. Sediment deposition in the stretch of river below where the flood water reached the Henrys Fork has changed the stream bottom to one of shifting sand and silt. This type of stream bottom has reduced the capability of the Henrys and the Main Snake to maintain healthy fish populations.

Utah valvata snail (endangered)

The Henrys Fork from the confluence with the South Fork to Beaver Dick Park is also occupied habitat for the Utah valvata snail (*Valvata utahensis*). The Utah valvata snail (*Valvata utahensis*) was listed by the USFWS as endangered under the Endangered Species Act on December 14, 1992 (Federal Register Volume 57, No. 240, pages 59244-59527). The Utah valvata snail is discontinuously distributed from Grandview, Idaho upstream to the confluence with the Henrys Fork near Menan, Idaho and upstream on the Henrys Fork to Beaver Dick Park near the city of Rexburg, Idaho. The Utah valvata snail in the Snake River inhabits areas associated with stable sand and silt/mud substrate, generally in shallow shoreline water and in pools adjacent to rapids or in perennial large spring complexes.

The Utah valvata snail evolved in the Snake River system and is adapted to the natural river fluctuations. Therefore, it is assumed, seasonal fluctuations in flow probably do not adversely impact the species. However, drastic changes in flow, particularly during winter months could impact the snail (USDI-BOR, 2001). Frest and Johannes, (1993), concluded that seasonally dewatered reaches may not provide habitat for permanent colonies of Snake River mollusks.

Biologists from the USBOR, and the University of Montana as well as contractors from the Idaho Department of Transportation have collected Utah valvata snails on the Henrys Fork at Beaver Dick Park near Rexburg and from the Snake River near the town of Roberts. Limited current information from the survey suggests low population densities (one to three snails per square foot when present) with a sporadic, discontinuous distribution. However, many of the samples within occupied habitat do not contain Utah valvata snails. Even where collected, they do not appear to be uniformly distributed on the potential habitat.

Aquatic Nuisance Species

The New Zealand Mudsnaill (*Potamopyrgus antipodarum*) is a small (three to six mm or one-eighth inch) introduced species of snail that has up until this time has not been found in the planning area. It has however been found in the Snake River between C.J. Strike Dam and Shoshone Falls in Idaho; and in the Yellowstone, Bighorn, Missouri, Firehole, and lower Gibbon rivers in Montana. This snail has the ability to reproduce quickly and mass in high densities. When snails become as dense as one-half million per meter square, this has been a cause for concern in western streams. Because both the Henrys Fork and the South Fork are known for their great trout fishing, there is concern that the mudsnails would impact the food chain of native trout and alter the physical characteristics of the streams themselves. Research is needed to determine the impacts of large populations of mudsnails on the native fauna, such as aquatic insects and native snails, including Utah valvatas, and on any changes in the physical environment.

The rapid spread of the mudsnail throughout the Yellowstone watershed may have been assisted by human transport. Mudsnails are able to withstand desiccation, a variety of temperature regimes, and are small enough that many types of water users (anglers, swimmers, picnickers, and pets) could inadvertently be the mechanism for interbasin transfer of this nuisance.

No other aquatic nuisance species have at this time been found in the Henrys and South Forks of the Snake River. But these too could easily be introduced into these waters by “hitchhiking” in with water users coming from other water bodies.

CHAPTER 4 ENVIRONMENTAL IMPACTS

This section of the environmental assessment considers and compares environmental impacts of implementation of the various alternatives.

These impacts may be direct, indirect, or cumulative and are covered in the following section. Impacts can be short-term or long-term. Impacts are direct when they occur in the same place and at the same time as the Proposed Action. Impacts are indirect when they do not take place at the same time and place as the Proposed Action, but when they can be related to the Proposed Action.

Cumulative impacts are those environmental consequences that result from the incremental impacts of an action when added to other past, present, and reasonably foreseeable future actions. When added together, cumulative impacts are those which independently do not pose a risk, but collectively may have some measurable impacts.

The analysis does not cover the Site Specific Management Classes (SSM Classes) but instead covers the range of alternatives identified within each class. The SSM classes show the natural breaks in the river system which would aid the agencies in future management. They represent what is currently going on in the system and what should continue through time. All the SSM Classes are in conformance with the direction provided in the land management plans.

4.1 Assumptions and Clarifications

To help the specialists prepare the environmental consequences section there were several assumptions made and a reasonable foreseeable scenario developed. This would guide the identification of impacts by resource and provide a better understanding of the scope of the impacts.

1. Recreation use associated with the planning area would continue to grow and provide an ever increasing economic influence to adjoining counties. The increased use would also place more demand on resources such as riparian vegetation and wildlife.
2. As the population of the area increases so would the potential to develop private land along the river. When the private land becomes developed and riparian vegetation is removed, especially cottonwoods, federal land would become more critical for the long term survival of bald eagles and other nongame and game species in the planning area.
3. Approximately 50% of the sites within the designated camping areas in the canyon are occupied per night during the months of July and August.
4. Without management controls in those areas accessible by road, lateral expansion of unimproved campsites and day use areas would continue. The loss of riparian vegetation could equal 10 to 25% in these accessible areas by year 2022.
5. With controls and enforcement, lateral expansion would be held in check and agencies would see a reduction in what currently exists.
6. As the fishing improves in the lower stretch of the South Fork due to new regulations on cutthroat trout, and more use occurs between Swan Valley and Heise, we can expect more recreation user days spent on the lower stretch of the South Fork, Main Snake, and Henrys Fork.
7. Outfitting services would continue to be in demand throughout the life of the plan. As a result, agencies would see an increase in illegal outfitter occurrences. This type of activity is difficult for the federal agencies and IOGLB to monitor.
8. Even though a good diverse riparian complex is maintained, the increased number of users may displace nongame and game species, especially in the lower stretches of the South Fork.
9. At some point in the future, regulations may be placed by county, state or federal agencies on power boats using the South Fork Canyon of the river.
10. The likelihood of a user fee(s) to increase or required year-round would increase as public demand for additional management and services increases beyond agency funding capabilities.
11. Total sediment load should decrease in both the South Fork and Henrys Fork due to cost-sharing projects organized through the Soil and Water Conservation Districts. These projects propose to establish Best Management Practices (BMPs) on 47,000 critical erosion acres (those

acres under cultivation) tributary to the South Fork. The BLM goals of the projects are to reduce soil erosion and fully protect the uses of downstream waters for agricultural water supply, fishing, and recreation.

12. Flow releases out of Palisades reservoir would not change significantly over the life of the plan. Winter flows would continue to be 1,200 - 1,500 cfs and 700 - 1,000 cfs in extreme drought years.

13. Flows controlled by Palisades reservoir affect all the resources along the South Fork from the Dam to the confluence. These effects are not known, they may have large negative impacts on the survival of existing cottonwood stands and limit future cottonwood recruitment.

14. USFS standards and guidelines are clearly identified and regulated on the South Fork under the Targhee National Forest RFP and the Targhee National Forest Open Road and Motorized Trail Analysis for issues relating to grazing and travel management (OHV use). Because this direction has been set and is being monitored and followed, no change is recommended for any of the alternatives in this analysis. Because no change would occur between the current base line (No Action Alternative A) and any action in Alternatives B, C, and D, no discussion concerning the National Forest management would be given in this section of the EA for these resources. All discussion that follows for these resources would be for BLM managed lands only. For information relating to standards and guidelines on National Forest for these resources, reference the specific management document for the Targhee National Forest.

4.2 Reasonable Foreseeable Development Scenario

The development scenario is presented so a meaningful and reasoned analysis of the cumulative impacts resulting from activities described in the alternatives can be presented. The scenario is based on historical activities occurring on the Snake River in Idaho and our best guess.

Through the life of the plan (about 15 years) we can expect the following:

1. A right-of-way application for a power line crossing the river would be received by a federal agency and the project would impact about five acres of riparian vegetation.
2. About 30% (6,000 acres) of the private land next to the river would be developed or impacted. Approximately 2,400 acres of that disturbed area would be riparian vegetation.
3. Current recreational use (250,000 visitors per year) would increase, especially with the development along the lower South Fork and Rexburg/Rigby area.
4. Livestock grazing would remain static or decrease (10%) as private land changes hands.
5. Agricultural trespass would continue where federal boundaries are not clearly defined and would approximate about 100 acres, mainly on the Henrys Fork.

6. The existing road on the north side of the South Fork, running from Kelly Island to Black Canyon, would be maintained to meet public needs.

7. If the BLM is successful in receiving funds for land or conservation easement purchase, approximately 5,000 acres of private land would be conserved through conservation easement or fee title purchase and/or donation. This would be acquired, through a willing seller scenario, by federal agencies or conservation groups. About 90 to 95% of the acquired land would be left in its natural condition or reclaimed to a natural condition.

8. Even with noxious weed control measures, on BLM new infestations would continue to occur and may approximate 200 to 300 acres at the end of 15 years. On USFS managed lands it is predicted that noxious weed acres would remain stable. Treatment methods would reduce existing weed infestations, but occurrences of new invasions would result in similar acres of total weed infestation.

4.3 Cultural Resources

4.3.1 Alternative A – Existing Management Situation

Cultural resources are generally fragile and irreplaceable resources. Soil erosion, livestock grazing, off-road vehicles, timber harvesting, brush removal, road building, river bank stabilization, recreation site development and other surface disturbing activities can damage or destroy these resources. Vandalism and other unauthorized activities can also adversely affect cultural resources. Palaeontological resources are similarly fragile and irreplaceable. Unrestricted and unmodified surface and subsurface disturbing activities also adversely affect these resources.

Under Alternative A, public education about the planning area's cultural and palaeontological resources has been limited to information provided by kiosks, the Eastern Idaho Visitor Information Center and the South Fork boater's guide. Lack of public education could adversely affect the area's cultural and palaeontological resources. A lack of public knowledge regarding the laws and regulations that protect these resources could lead to increased vandalism and unauthorized use of cultural resources.

Current recreational uses within the planning area could adversely affect cultural resources. Motorized and non-motorized trail use, improper disposal of human waste, firewood cutting and dispersed camping threaten the physical integrity of historic properties located within the planning area. Human-caused impacts include trailing, and vegetation clearing. These impacts are particularly noticeable at several springs located along the banks of the South Fork. BLM and USFS archaeologists have not identified archaeological sites at or near these springs. However, Shoshone-Bannock individuals have expressed concerns about the condition of these springs. A South Fork outfitter has established a seasonal overnight camp near a spring. A trail through the riparian vegetation leads to the spring. At the present time, impacts to the spring are very low.

Bank alteration and vegetation removal, soil and vegetation disturbance could potentially affect cultural resources located within the annual floodplain. The flooding characteristics of the planning area's river system may have removed evidence of past human use.

Cumulative Impacts

The types of cumulative impacts to cultural resources are the same as those listed under direct impacts above. Additional impacts include those to Tribal members' traditional practices, which take place in the natural environment and require a spiritual space that is indefinable. As the number of people utilizing this area for recreational purposes increases, it may adversely impact and decrease the opportunities by Tribal members to practice traditional ways in a respectful manner. Cumulatively, impacts are greatest under Alternative A, primarily because of increased recreational use without trail and campsite designation. Less public education about cultural resource protection under this alternative would also result in more cumulative impacts than from alternatives B, C or D.

4.3.2 Alternative B – Intensive Resource Management with Less Recreation Development

Under Alternative B, impacts to cultural resources would be similar to those described under Alternative A. However, since this alternative would promote more public education of cultural resource protection through brochures and packets, fewer impacts would be expected compared to Alternatives A and C, but impacts would be similar to Alternative D.

Cumulative Impacts

Under Alternative B, many cumulative impacts would be similar to Alternative A, but impacts would occur to a lesser extent.

4.3.3 Alternative C – Recreation Development Emphasis

Under Alternative C, impacts to cultural resources would be similar to those described under Alternative A. With more designated trails and camping opportunities, this alternative would be expected to impact cultural resources more than Alternatives B and D.

Cumulative Impacts

Under Alternative C, many cumulative impacts would be similar to Alternative A, but impacts would occur to a lesser extent. Cumulative impacts to cultural resources would be greater compared to Alternatives B and D.

4.3.4 Alternative D – Proposed Action

Impacts under Alternative D would be similar to the other Alternatives. However, there would be an emphasis on the reduction of adverse effects on cultural and palaeontological resources. Public education efforts would increase, and the use of kiosks, brochures, and the Eastern Idaho Visitor's Center would increase. Camp hosts at Kelly Island Campground would be provided with information packets, and they would be encouraged to talk to visitors about the prehistory and history of the area and the need to protect archaeological sites. Under this alternative, a reduction in impacts from motorized and non-motorized trail use, improper disposal of human

waste, vegetation clearing, firewood cutting, and dispersed camping would be expected. Impacts at several springs (traditional cultural properties) would be reduced. Impacts to cultural resources under this alternative would be lower compared to Alternatives A, B and C.

Cumulative Impacts

Cumulative impacts under Alternative D would be similar to Alternatives A, B and C, but would occur to a lesser extent.

4.4 Livestock Grazing Management

4.4.1 Alternative A – Existing Management Situation

Under Alternative A, the site specific management classes and corresponding annual indicator guidelines for livestock grazing management would be retained were applicable. Adjustments in terms and conditions of allotments within the planning area were made following the 1991 Activity Plan. Grazing permits or leases may be changed at any time in accordance with the Code of Federal Regulations Title 43 Part 4100 – Grazing Administration.

Under Alternative A, the potential for recreation use to impact livestock grazing would continue. Increased densities of recreation users may displace livestock and change distribution patterns. Public land users may leave gates open, cut fences, or modify structures which may lead to livestock use of unallocated areas or use outside the terms and conditions authorized.

Under Alternative A, there would be no changes to the actions implemented through the 1991 Snake River Activity/Operations Plan. The implemented alternative from the 1991 plan states that grazing privileges in SSM Class 1A and 1B areas could not be transferred and that allotments would be permanently retired when relinquished by the current operator. This action was not implemented after it was identified that implementation was not in compliance with CFR 43 Part 4100. Under Alternative A, approximately 9200 acres of public land within the planning area would remain available for livestock grazing and the majority of the assessed acreage would continue to meet Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management.

Cumulative Impacts

No incremental impacts of Alternative A on livestock grazing, considering all the other cumulative impacts past, present, and foreseeable future, have been identified.

4.4.2 Alternative B – Intensive Resource Management with Less Recreation Development

Under Alternative B, livestock grazing would be managed under CFR 43 Part 4100. The SSM Classes and their corresponding annual indicator guidelines would be removed. Annual indicators such as herbage and browse utilization levels and stubble height requirement would be established on an allotment rather than SSM Class basis. Alternative B would allow for greater flexibility and more appropriate application of utilization level and stubble height requirements as they would be applied on an allotment specific basis as necessary to meet or make progress

toward meeting fundamentals of rangeland health. In many cases the allotment specific guidelines may closely reflect the SSM guideline established in the 1991 plan.

Under Alternative B, vacant allotments would be identified for a change in status from available to unallocated for livestock grazing. Selection of Alternative B would have no immediate impact on the availability of these allotments for livestock grazing, but would identify them for consideration in a Land Use Plan revision for a change in status to unallocated. In the long term, if the status of the current vacant allotments were changed from allocated to unallocated for livestock grazing, it would result in a 17% decrease in grazing acreage in the planning area and a corresponding 24% decrease in AUMs within the planning area. Because these allotments are small parcels with limited access and many have been vacant for an extended period, there would be little to no discernable difference in resource condition under Alternative B, when compared with the other alternatives, in relation to livestock grazing.

Of the 44 allotments within the planning area, 27 allotments, including all allotment for which livestock grazing is currently authorized, have been assessed for Idaho Standards of Rangeland Health and Guidelines for Livestock Grazing Management. Twenty-three of the allotments assessed were determined to be meeting, making progress toward meeting, or if not meeting the cause was not related to livestock grazing. Changes in the terms and condition for authorized livestock use were made on four allotments determined to not be meeting an applicable standard due to livestock grazing. Under Alternative B, allotments would continue to meet or make progress toward meeting standards where livestock grazing management is a factor.

Under Alternative B, there would be increased emphasis on education of resources for users in the planning area. Opportunities would be available to educate the public of the potential impacts of damaging fences or leaving gates open in authorized livestock use areas. The potential for conflict between user groups may be minimized through education and may be reduced under Alternative B compared to Alternative A.

Cumulative Impacts

No incremental impacts of Alternative B on livestock grazing, considering all the other cumulative impacts past, present and foreseeable future, have been identified.

4.4.3 Alternative C – Recreation Development Emphasis

Under Alternative C, there would be increased emphasis on development of recreation opportunities, including both motorized and non-motorized trails. Trails developed in areas authorized for livestock grazing may result in increased densities of recreation users which may displace livestock and change distribution patterns. Public land users may leave gates open, cut fences, or modify structures which may lead to livestock use of unallocated areas or use outside the terms and conditions authorized. The potential for conflict between livestock grazing and recreation users would be higher under Alternative C compared to Alternatives A or B.

Under Alternative C, livestock grazing would be managed under CFR 43 Part 4100 and allotments would continue to meet or make progress toward meeting standards where livestock grazing management is a factor.

Cumulative Impacts

No incremental impacts of Alternative C on livestock grazing, considering all the other cumulative impacts past, present, and foreseeable future, have been identified.

4.4.4 Alternative D – Proposed Action

Direct and indirect impacts would be similar to Alternative B.

No incremental impacts of Alternative D on livestock grazing, considering all the other cumulative impacts past, present, and foreseeable future, have been identified.

4.5 Recreation and Visual Resources

4.5.1 Alternative A – Existing Management Situation

Issue No. 1 – Education of River Users

Under Alternative A, no changes would be made to existing public education efforts, annual training with camp hosts and recreation technicians, and updates with outfitters and guides. The public would continue to receive valuable information about the Snake River system through existing kiosk information, the boater's guide, campground hosts and recreation technicians, the EIVIC, and the Conant Visitor Center. However, signs and maps to inform visitors about authorized use areas and BLM and USFS rules and regulations would be more limited than those proposed under Alternatives B, C, and D. Educational information for the Henrys Fork and Main Snake would be more limited than those proposed under Alternatives B, C, and D. Websites and pod casts for the river would not be constructed under this alternative, as is proposed under Alternatives B, C, and D. Overall, visitor education regarding the importance of and proper care and maintenance of the planning area would take place to a lesser degree compared to Alternatives B, C, and D. Under this alternative, public recognition of the rare and fragile riparian-wetland ecosystem would occur at a lower rate than under Alternatives B, C, or D. Consequently, the areas currently impacted by recreational activities would continue to decline, and additional encroachment into intact riparian-wetland areas would result in additional restrictions to recreation use to protect the riparian-wetland habitat. This would have impacts to the recreation use and the administrative setting within the planning area. Impacts to recreation under Alternative A would be greater compared to Alternatives B, C, and D.

Education efforts for responsible OHV use, camping, and fees at facilities under Alternative A would help maintain the natural character of the recreation setting.

Issue No. 2 – Protection of Riparian Habitat

Under Alternative A, BLM would continue to manage livestock grazing in the planning area under general and site specific management (SSM) classes. Livestock grazing occurs in the spring (May and June) during periods of low recreation use in the planning area. Under Alternative A, impacts of livestock grazing on recreation would be limited due to limited interaction between the public and cattle. During the months of May and June, the water levels on the river corridors is usually high, thus, the fishing is not as good as later in the summer. Not as many people fish during this period. There is more interaction between livestock grazing and

the public in the Wolf Flats area when the permittee trails cattle through the area. During a limited period there would be impacts to recreation and the physical setting by livestock grazing. During this period, cattle trail through the camp areas leaving scat, kicking up dust, and are present in the camp area. Under Alternative A, impacts of livestock grazing on recreation would be similar to the impacts under Alternative C, but greater than Alternatives B and D.

Under this alternative, designation of non-motorized trails would be limited to North Menan Butte and Cress Creek Nature Trail. With a lack of adequate authorized trails, the illegal creation of new trails would continue unchecked, and there would be few non-motorized trail opportunities for the public that are close to a highly populated area. A loss of recreation opportunities, physical and administrative settings, degraded recreation experiences could occur for non-motorized user groups due to the lack of trails. With the lack of non-motorized trails there would be possible encroachment into riparian-wetland areas causing removal of natural vegetation and soil disturbance, and the potential for invasion from non-native plants and noxious weeds causing impacts to visual resources. Recreation impacts of designating just a few non-motorized trails under Alternative A would result in higher impacts compared to Alternatives B, C, and D.

Under Alternative A, a human waste carryout system would be required for overnight camping in the South Fork Canyon. Although this would decrease human waste in the South Fork Canyon, day users and campers in the remainder of the planning area would not be required to carry out their waste impacting the social and administrative settings. As a result, human waste would continue to be an issue for the managing federal agencies and there would be possible risk to human health from the exposed human waste. This is aesthetically unappealing and a health risk to the public and impacts the recreation experience. Impacts to recreation under this alternative would be higher than Alternatives B, C, and D.

Under Alternative A, the burning of firewood in the planning area would be limited to dead and down wood. There would be no restrictions to where a campfire can be constructed. This would make it convenient for recreation users throughout the planning area. However, it would make it difficult to manage the area and keep the campsites clean of ash and garbage. This would have a negative impact to visual resources and the recreation experience. Under this alternative, the dead and down camp fire policy and undesignated location of campfires would have less impacts to the convenience for recreation users compared to Alternatives B, C, and D. But, in the long-term there would be greater impacts to the recreation experience, physical and social settings, and visual resources compared to Alternatives B, C, and D due to the degradation of natural ecological processes in the riparian-wetland areas, the build-up of ash and garbage in campfires, and the encroachment of campfires in the riparian vegetation.

Issue No. 3 – Protection of Watershed

Recreationists could be displaced from erosion control, rehabilitation of areas, and vegetation treatment areas to other more desirable areas until rehab and revegetation occurs; however, the erosion control and vegetation treatments would benefit recreationists by improving the long-term aesthetics of an area and creating an improved recreation opportunity. These treatments would be conducted on a case-by case basis, so the extent of the impacts would be difficult to determine. Surface erosion in the Stinking Springs area has created numerous problems on the

designated motorized trail and surrounding area. However, a 2007 project to stabilize and relocate portions of the trail system is expected to enable BLM to limit erosion, improve vegetation management, and provide additional recreation opportunities. Erosion control and vegetation management under Alternative A would have similar impacts on recreation as Alternatives B, C, and D.

Under Alternative A, erosion would continue to occur at unauthorized slides/boat ramps impacting the aesthetics and physical setting of an area. There would be slightly greater impacts than Alternatives B, C, and D under Alternative A for not closing and rehabilitating unauthorized boat ramps.

Under Alternative A, treatment of noxious weeds and non-native invasive species would be a high priority. The treatment of noxious weeds and non-native invasive species would benefit recreationists by improving the long-term aesthetics of an area and creating an improved recreation opportunity and physical setting. The control of noxious weeds and non-native invasive species would greatly improve the stability, health and vigor of riparian-wetland areas in the planning area, thus, improving opportunities for recreation. Impacts to recreation under Alternative A would be slightly lower than Alternative C, but the same as Alternatives B and D.

Currently under Alternative A, there is no educational outreach program for undesirable aquatic species. This would have large impacts on recreation due to the potential for undesirable aquatic species to significantly alter the composition of aquatic life in the river. This has the potential to significantly impact the fishery, recreation opportunities, and administrative setting within the planning area. No educational outreach program would result in higher impacts to recreation compared to Alternatives B, C, and D.

Issue No. 4: Land Ownership

The use of the existing boaters guide and maps would be the only method for the public to determine land ownership in the planning area. Maps of the Henrys Fork would not be included in the boaters guide and the rivers have changed since the last printing of the boaters guide and existing maps and it can be difficult to determine public or private land within the planning area. Impacts to recreation and the administrative setting would be greater under Alternative A compared to Alternatives B, C, and D.

Unauthorized use is any action on public or forest lands that is not authorized. Private fences encroaching on federal lands would make it difficult for the public to determine what are federal lands and what are private. Recreationists would not be able to utilize some federal lands. This unauthorized use and others would have an impact to recreation and the physical and social settings. Periodic BLM Law Enforcement and recreation technician, and USFS Forest Protection Officer and LEO patrols to ensure user compliance would be beneficial to recreation. Impacts to recreation would be slightly higher under this alternative compared to Alternatives B, C, and D because partnerships would not be developed to identify and report unauthorized uses.

Under Alternative A, public access across private land would be pursued with willing land owners. This would be advantageous to the public. Obtaining additional access to public lands would enhance recreation opportunities, experiences, and management, which would also

facilitate greater access to recreation areas and reduce conflicts between recreationists and private landowners. There would be increased coordination between the federal agencies and private land owners to monitor these access points. This alternative may result in more damage to riparian-wetland areas and/or private property in some instances if resource values are not considered. This may have the potential to impact the aesthetics, physical and administrative settings, and access for recreation. Impacts to recreation would be higher under this alternative compared to Alternatives B and D, but would be similar to Alternative C.

Under Alternative A, BLM and USFS would continue to work with non-profit partners to obtain conservation easements and acquisitions on private lands adjacent to public land from willing landowners. As this occurs, preservation of a larger footprint of the planning area would take place, providing additional opportunities for enhancing recreation and experiences, and creating a scenic view shed in the planning area. This alternative would result in slightly less opportunities for recreation in the planning area compared to Alternatives B, C, and D, because the other alternatives would provide additional resources through coordination with federal and state agencies to pursue land acquisitions and easements.

Issue No. 5 – Protection and Enhancement of Fish, Wildlife, and Botany Resources

Under Alternative A, no minimum streamflow water rights would be pursued on streams tributary to the Snake River within the planning area, no improvements to non-functional fish passage areas on stream tributary to the Snake River would be made, and federal agencies would not inventory diversions for fish entrainments. These actions have the potential to highly impact the fish population within the planning area. As a result, this would largely impact the recreation opportunities and experience. This alternative would result in greater impacts to recreation compared to Alternatives B, C, and D.

Under Alternative A, snow would not be removed from the boat access sites, yet the sites would remain open for use. This alternative would create a minor inconvenience to the recreationists who want to utilize the ramps in the winter, although, the ramps would remain open providing the recreation opportunity. Also under this alternative the BLM would close Stinking Springs to human access during crucial periods to protect mule deer. This would be an impact to recreation at first, but as the mule deer population improves opportunities for hunting would also improve. Bald eagle nesting areas would be signed in the South Fork Canyon. This alternative would have greater impacts to recreation and the physical and administrative settings compared to Alternatives B, C, and D.

Issue No. 6: Management of Off-Highway Vehicles (OHVs)

Under this alternative, no OHV trails in addition to those identified in the existing plan would be considered for development. Designated routes would be clearly signed and enforced. The only designated trail is Stinking Springs, which does not provide many opportunities for motorized recreation. This alternative would have higher impacts to recreation compared to Alternatives B, C, and D, because of the limited recreation opportunities in the planning area for motorized recreation and the potential for user conflicts.

Under the 1991 Snake River Plan (Alternative A), undeveloped sites that are not identified for OHV trail development, improvement, or maintenance are supposed to be closed to motorized

access. This did not occur because a federal register notice was never published after the publication of the 1991 Snake River Plan to close lands within the planning area to motorized use. A specific closure was published in 2001 to target some key problem areas. The planning area is popular with non-motorized and motorized users with some permanent motorized closures. The anticipated recreation demand and associated user and resource conflicts would diminish the recreation opportunities and experience in the area; however a loss of recreation opportunities and degraded recreation experiences could occur for both user groups. This alternative would have higher impacts to recreation compared to Alternatives B, C, and D

Information for the public about OHV designations and closed areas would be minimal under Alternative A. Due to the lack of signing and information, OHV use would still occur in closed areas, creating conflict between user groups and diminishing the aesthetic qualities of the planning area from unauthorized use. The lack of signing and providing information to the public under Alternative A would result in higher impacts to recreation compared to Alternatives B, C, and D.

Under Alternative A, motorized use below the ordinary high water mark would continue. There would be possible conflicts between the different user groups and the potential for recreation experiences could be diminished. Alternative A would result in higher impacts to recreation compared to Alternatives B, C, and D.

Issue No. 7: Management of River Corridor Uses

Under Alternative A, a capacity study to determine visitor use thresholds for the planning area would be conducted. This alternative would address potential conflicts between users and the impacts to the recreation experience as a result of uses that may exceed the planning area's capacity. The planning area receives heavy recreation use that currently fall under SRMA management. Use in the planning area is anticipated to continue to increase. Continuing current recreation management would likely not meet the recreation demand, or address user and resource conflicts throughout the planning area, which would affect both users and the natural resources that are important to recreationists. Current recreation management would also likely result in the shift of the existing physical, social, and administrative settings. A loss of recreation opportunities and degraded recreation experiences could occur in the planning area with increased use. Impacts would also occur on other public lands managed by the BLM, from an increase in recreation activity, impacts on natural features, and from conflicts between users. Addressing public health and safety, user conflicts, and resource protection to determine if changes to visitor capacities would be needed, would reduce these impacts. The anticipated increase of recreational use in the planning area would likely be significant. Impacts to recreation under this alternative would be the same as Alternatives B, C, and D.

Under Alternative A, non fishing commercial activity would be permitted on case-by-case basis with no established limit on number of permits. The eight existing commercial fishing outfitters would remain the same. The recreational use in the planning area would be anticipated to increase. Issuing commercial permits on a case-by-case basis would not meet the recreation demand, or address user and resource conflicts throughout the planning area, which would affect both users and the natural resources that are important to recreationists. Impacts to recreation under Alternative A would be greater compared to Alternatives B, C, and D.

Issue No. 8 – Management of Camping and Facilities

A partnership with county and state agencies exists for managing and maintaining the boat access facilities along the South Fork. An interagency fee program is also in place on the South Fork to fund maintenance and improvements of the facilities. These partnerships help the managing agencies provide recreation opportunities on the South Fork. The same type of partnership would not exist on the Henrys Fork under Alternative A. The boat access facilities on the Henrys Fork do not have the same type of recreation facilities or recreation opportunities as the South Fork. Although the partnership and fee program aid in the management and recreation opportunities on the South Fork the same is not provided for the Henrys Fork. Therefore, the benefits of this alternative would be smaller compared to Alternatives B, C, and D.

Under Alternative A, existing camping areas throughout the planning area would be evaluated using monitoring protocols to determine if closure and rehabilitation is needed. Campsite use would be available on a first come first serve basis throughout the planning area and group sizes would not be limited. Recreationists would be required to camp in designated camp areas in the South Fork Canyon and dispersed camping would be allowed unrestricted throughout the rest of the planning area by vehicle and boat. Limited physical improvements, such as hardening with wood chips or gravel, would be made to increase the resiliency of campsites to continual use during summer months. As a result, the campsites would become compacted and dominated with weedy herbaceous plants or bare ground. Campsites would have the potential to exceed capacity, increasing the footprint size of camp areas and encroachment into adjacent camp areas would occur. There would be impacts to the recreation experience and there is the potential to alter physical and social setting of camping on the planning area. It is unlikely that the existing campsites would meet the anticipated increase of recreation activity and accommodate the quantity and size of groups in the designated and dispersed camp areas. This could result in user conflicts and degraded recreation experiences in areas that receive heavy use. These areas warrant recreation facilities to harden them (e.g. wood chips or gravel), protecting the natural resource important to recreationists. Impacts to recreation would be higher under Alternative A compared to Alternatives B, C, and D.

Issue No. 9: Present and Future River Access Needs

Under Alternative A, numerous recreation developments including boat ramps, parking areas, interpretive signs, trails, campgrounds, toilets, fences, day-use areas, and a visitor center would be proposed. Continuing to manage the existing developed recreation sites would not meet the current level of recreation demand in the planning area. It is unlikely that the existing developed recreational sites would meet the anticipated increase of recreation activity in the area, which could result in user conflicts and degraded recreation experiences in areas that receive heavy use. Many of these areas are already impacted, and the proposed projects would be implemented to protect additional encroachment into intact riparian-wetland areas. These areas warrant recreation facilities to harden them, protecting the natural resources and physical settings important to recreationists. However, several projects would propose more recreation opportunities that would involve expansion of current use. Degraded recreation experiences could occur in the planning area with increased use. Overall, this alternative would result in higher impacts to recreation compared to Alternatives B, C, and D.

Cumulative Impacts

Cumulative impacts would likely occur through management proposed under Alternative A because of increased surface disturbance from facility development and general recreation use of the area, the percentage of the planning area open to OHV use, and the lack of special management to address the increased use and demand for recreation opportunities and experiences within the planning area. Development activities could impact certain recreational settings resulting in the degradation of some recreational opportunities and experiences. Impacts would potentially occur as a result of increased recreational demand and use to a point where conflicts would occur to unconfined dispersed recreational opportunities. As the use of motorized watercraft and OHV use increases, the threat of public safety and excessive noise pollution would be elevated, and the overall recreation experience may be compromised. The cumulative effect of these actions would degrade resources that are important to recreationists and there would be increased user conflicts between recreationists.

There are many factors that put pressure on the resources and recreation experiences within the planning area. The beauty, recreation opportunities, and popularity of the planning area draw many visitors. Additional population growth in Bonneville, Fremont, Jefferson, and Madison counties is anticipated and out-of-area visitation has been on an upward trend for over a decade. These factors would likely result in additional demand for recreational opportunities. This additional demand for recreational opportunities would not be considered under the management actions under Alternative A. The increment of impacts from Alternative A, when added to the small increment from other land use activities in the planning area, would not be discountable and would not allow for improvement of recreation opportunities and experiences. Overall, this alternative would result in higher cumulative impacts to recreation compared to Alternatives B, C, and D.

4.5.2 Alternative B – Intensive Resource Management with Less Recreation Development

Issue No. 1 – Education Tools/Media

Under Alternative B, in addition to existing kiosk information, the EIVIC, and the Conant Visitor Center, public education efforts would be greatly increased in the form of brochures, signs, videos, maps, websites, and an updated boater's guide. Outfitters and guides, camp hosts, and recreation technicians would be provided with training and handout materials to educate the public about the unique characteristics of the Snake River ecosystem. This information would benefit the recreation experience by providing the public a better understanding of the importance of the proper care and maintenance of the unique ecological characteristics of the planning area. Proper care of the resource would provide additional recreation opportunities throughout the life of the plan. The boaters guide would provide travel maps, including designated trails and areas authorized for OHV use. These resources would provide the public with valuable information about where motorized recreation can occur in the planning area and encourage the public to recognize how their actions impact the fragile ecosystem within the planning area. This alternative would result in better public recognition of the need to preserve and restore riparian-wetland areas for recreation opportunities compared to Alternative A, but would be similar to Alternative C. This alternative would have fewer benefits to recreation compared to Alternative D as a result of the partnerships with state and county organizations, irrigation companies and commercial businesses proposed under Alternative D.

Issue No. 2 – Protection of Riparian Habitat

Under Alternative B, the impacts of livestock grazing would result in similar impacts to recreation as Alternative A and C. But, in the long-term Alternative B would result in greater benefits to recreation. There would potentially be limited interaction between the public and cattle due to identifying allotments as unallocated for grazing as one of the alternatives in the RMP revision. This action could result in shifting the physical and social settings.

Under this alternative, specific non-motorized trails would be designated throughout the planning area. This would benefit the public by making them aware of the trails systems, thus improving their recreation experience. These designations would draw recreationists to these trails and would aid in reducing impacts to other unimproved area. Managing these designated trails would provide recreation management for non-motorized recreation. It would eliminate user and resource conflicts, improve the social setting, and the area would offer the opportunity for solitude and primitive/unconfined recreation. The Cress Creek Nature Trail and North Menan Butte designations would provide environmental education opportunities along with non-motorized recreation opportunities within the planning area. The levee trails are primarily along the fringes of the riparian zone or are located in drier portions of the riparian-wetland communities and would provide numerous opportunities for recreationists to access public land along the lower end of the South Fork. The Wolf Flats trails would be designated in an already impacted mature cottonwood stand, but expansion of the trail would be limited through barrier placement. These non-motorized trails provide access to the planning area away from a busy county gravel road that parallels the river. The Lorenzo Trail would also be designated in a historic dry river channel that has the ability to withstand non-motorized traffic. Administrative management controls would increase under this alternative Under Alternative B, the designation of selected non-motorized trails would result in fewer impacts compared to Alternatives A, C, and D.

Under Alternative B, all users (both overnight and day users) in the entire planning area would be required to carry out their human waste. This would greatly reduce the aesthetic, ecological, and health and safety impacts that have historically occurred along the river. However, this requirement would have both positive and negative impacts on recreationists. The benefits of this requirement would improve the aesthetic, ecological, and health qualities within the planning area. It would also improve the physical and social settings. This requirement could burden the day user and the managing agencies to enforce, thus influencing the administrative management controls and visitor services. Impacts to resources would be less than Alternatives A, C, and D, but impacts to recreation under this alternative would be slightly higher compared to Alternatives A, C, and D.

Under Alternative B, all users would be required to provide their own fire pan and pack out ashes and partially burned trash unless agency provided fire rings are available. There would be no girdling of trees or use of chainsaws. These regulations would greatly improve the recreation experience, physical and social settings, and aesthetics in the planning area. There would be a minor inconvenience to the recreationists and more administrative management controls because of requiring fire pans for campfires, but under this alternative some locations would have agency provided fire rings. Impacts to recreation would be slightly higher compared to Alternatives A and C, but would be similar to Alternative D.

Issue No. 3: Protection of Watershed

Erosion control effects and vegetation management to recreation under Alternative B would be the same as Alternatives A, C, and D.

Under Alternative B, erosion occurring at unauthorized slides/boat ramps would be eliminated because these sites would be closed and rehabilitated. These closures would improve the aesthetics, and physical and social setting of the planning area. There are still numerous boat ramps along the river corridor providing efficient recreation opportunities. There would be lower impacts to recreation than Alternatives A and C, but similar impacts to Alternative D.

Under Alternative B, treatment of noxious weeds and non-native invasive species would be similar to Alternative A. Impacts to recreation under Alternative B would be similar to Alternatives A and D, but slightly higher than Alternative C.

Issue No. 4: Land Ownership

Under Alternative B, land ownership would be identified and posted at public access locations along the levee system, in the boaters guide, and on maps. This would increase the administrative management controls and visitor services. These venues would provide numerous opportunities for the public to determine land ownership in the planning area. Impacts to recreation would be similar compared to Alternatives C and D, but lower than Alternative A.

Impacts to recreation from unauthorized use under Alternative B would be similar to what was described in Alternative A. In addition to the description under alternative A would be the benefits from developing partnerships to identify and report unauthorized uses. Impacts to recreation would be similar to Alternatives C and D, but lower than Alternative A.

Under Alternative B, acquiring public access from willing land owners across private land would be considered only where conflicts with resource values could be avoided, and minimal impacts to wildlife could be achieved. This alternative would alleviate the conflict between recreationists and maintain resources values. Over the long-term this would benefit recreation opportunities. Impacts under Alternative B would be lower compared to Alternatives A and C, but would be similar to Alternative D.

Under Alternative B, BLM and USFS would continue to work with non-profit partners to obtain conservation easements and acquisitions on private lands adjacent to public land from willing land owners. As this occurs, preservation of a larger footprint of the planning area would take place, providing additional opportunities for enhancing recreation and experiences, and creating a scenic view shed within the planning area. In addition, coordination with other federal and state agencies to purchase land acquisitions and easements would also be pursued. These additional resources would help enlarge the footprint of the planning area and enhance recreation experiences. With additional support from other federal and state agencies, Alternative B would result in more benefits to recreation compared to Alternative A. Alternative B would be similar to Alternatives C and D.

Issue No. 5: Protection and Enhancement of Fish, Wildlife, and Botany Resources

Under Alternative B, opportunities for minimum streamflow water rights would be pursued on selected streams tributary to the Snake River within the planning area. These water rights would ensure that streams are not dewatered as a result of irrigation diversions or hydro power projects. BLM would also inventory fish passage areas on stream tributaries and inventory diversions for fish entrainment. Adequate streamflows, inventorying fish passage and diversions, and pursuing fish passage and diversion screening for fish would aid in maintaining or improving spawning tributaries for fish. These actions would improve the fishery, which in-turn would improve recreation opportunities and experience. This alternative would benefit recreation to a greater extent than Alternative A, the same as Alternative C, but would provide fewer benefits compared to Alternative D because of the combined work with IDF&G.

Under Alternative B, snow removal would be prohibited at the federal boat access sites, yet the sites would remain open for use. This alternative would create a minor inconvenience to the recreationists who want to utilize the ramps in the winter. The ramps would remain open providing recreation opportunities. Also under this alternative the BLM would close Stinking Springs and other wildlife areas to human access during crucial periods. Bald eagle nesting areas would also be signed in the entire planning area. Seasonal, localized impacts to recreation could occur if recreation activities or opportunities are restricted as a result of these wildlife closures. These actions would be an impact to recreation at first, but these actions would reduce conflicts between recreationists and resources. In the long-term benefits to wildlife would improve the recreation experience. This alternative would benefit recreation to a greater extent than Alternatives A and C, but would be slightly lower than Alternative D.

Issue No. 6: Management of Off-Highway Vehicles (OHVs)

Under this alternative, OHV trails would be reviewed with USFWS and IDF&G to identify conflicts with resources. Potential trails would be identified and designated. Limited routes would be designated in the planning area due to the sensitivity of resources, and abundant designated routes are available on the adjacent forest lands. Under this alternative, there would be no designated open areas, eliminating the opportunities for cross-country OHV travel; however, conflicts among user types would also be reduced, and natural resources important to high-value recreation opportunities and experiences would be further protected throughout the planning area. The designated routes would be clearly signed, enforced, and OHV designations would be explained. This alternative would provide additional motorized opportunities in the planning area improving the recreation experience for some recreationists. The alternative would also have changes to the physical, social, and administrative settings. Impacts to recreation would be considerably lower under this alternative compared to Alternatives A, but would be higher than Alternative C. Impacts to recreation under this alternative would be comparable to the impacts under Alternative D. However, under Alternative D one trail would be designated and all other trails would be designated on a case-by-case basis.

Under Alternative B, designated routes would be identified and mapped, a partnership would be developed to identify and report unauthorized uses, and the designated route and closed areas would be published in the Federal Register (giving law enforcement the ability to enforce closures). Motorized recreation experiences would be maintained and enhanced by route designation and working with partners to enforce the designations. Natural resources important

to recreation would be protected, and the elimination of open OHV use through the majority of the planning area would reduce resource damage and conflicts with other land uses. Allowing OHV use on designated routes throughout the planning area would accommodate demand for the trail-based type of motorized recreation most suitable for terrain in the planning area and to meet the goals of the ACEC. Conflicts with non-motorized recreation would be reduced, and natural resources would receive enhanced protection. Under this alternative, impact to recreation would be comparable to the impacts under Alternatives C and D, but would be lower than the impacts under Alternative A.

Under Alternative B, in addition to publishing OHV designations and closures on maps and the boaters guide, signs would be posted throughout the planning area to inform the public of OHV designations and areas closed to OHV use. This additional level of public education would inform the public of designated routes which would greatly reduce the amount of unauthorized OHV use in the planning area. Limiting OHV use to designated routes and signing the routes would maintain opportunities for trail-based OHV recreation while reducing conflicts with users seeking more primitive forms of recreation. It would also reduce the impacts to the physical and social settings. Impacts of signing designated trails under Alternative B would be considerably lower under this alternative compared to Alternative A, but would be higher than Alternative C. Impacts to recreation under this alternative would be comparable to the impacts under Alternative D except designated routes would be identified on a website, maps and aerial photos under Alternative D.

Under Alternative B, the BLM and USFS would coordinate with the Idaho Department of Lands to eliminate motorized access points on public land that provide access to the dry river channels below the high water mark. The agencies would also coordinate with counties on problem access areas (e.g., Fall Creek, Spring Creek, Heise, Twin Buttes, Lorenzo) and as others problem areas develop. This type of activity degrades river banks, channels, and riparian-wetland vegetation, thus, degrading the aesthetic value of an area. There would be modifications to the landscape, could diminish scenic quality, and could detract from recreation experience and opportunities. Conflicts with non-motorized recreation would be reduced, and natural resources would receive enhanced protection. However, there would be limited opportunities for motorized recreation. This alternative would result in considerably higher benefits to recreation compared to Alternative A. However, benefits under this alternative would be the same as Alternatives D and lower compared to Alternative C.

Issue No. 7: Management of River Corridor Uses

Under Alternative B, a capacity study to determine visitor use thresholds for the planning area would be conducted similar to Alternative A, and a limit on commercial permits would be set and issued on a case-by-case basis until the capacity study is completed to provide further guidance. This alternative would address potential conflicts between users or the impacts to the recreation experience as a result of uses that exceed the planning area's capacity. This alternative addresses the potential for continued recreation growth in the planning area and the possible user and resource conflicts that could occur. Based on the anticipated increase of recreational use in the planning area, impacts to recreation would be lower under this alternative compared to Alternatives A and C, but higher than Alternative D.

Issue No. 8: Management of Camping and Facilities

Impacts on recreation from a partnership with county and state agencies to manage and maintain the boat access facilities along the South Fork and an interagency fee program would be the same as those identified in Alternative A. In addition, a fee increase at boat access sites would be implemented as necessary and as recommended by working group to fund projects established by the South Fork Working Group in cooperation with the Recreation Resource Advisory Council. Although this fee increase would allow for opportunities to improve boat access sites, it could not be used to improve other degraded boat access facilities along the South Fork and Henrys Fork (such as Wolf Flats, Heise Bridge, Trestle Bridges, and Red Road Bridge) that fall outside the fee program. Not providing recreation opportunities does not allow the BLM and USFS to address the demand for opportunities, experiences, and beneficial outcomes identified by the public. Alternative B would provide higher benefits to recreation than Alternative A, but lower benefits compared to Alternatives C and D.

Under Alternative B, corridor-wide campground monitoring would be adjusted based on camp area conditions. If necessary, campsites would be hardened with gravel or wood chips to increase resiliency of campsites to continual use during summer months. Although the footprint of each campsite would become compacted, hardening would aid in expansion of campsites and encroachment on other campers. Monitoring the campsites, adjusting protocols, and hardening campsites would reduce conflicts, disturbance, and other impacts, and would maintain the physical setting and recreation experience as the popularity of the river continues to grow. Overall, the recreation experience would be more beneficial compared to Alternative A. Impacts under this alternative would be the same as Alternatives C and D.

Under Alternative B, only camping in designated campsites would be authorized throughout the planning area (no dispersed camping allowed) when camping by boat and campsites would be designated in high use areas when camping by vehicle. Allocation of campsites would be implemented through a check-in or reservation system when necessary, and group size would be limited to 16 people with the exception of large camping areas that could accommodate larger groups. This would aid in reducing the potential conflict between recreationists, the shift in the social setting, and limit impacts to resources. This alternative would result in fewer impacts to recreation compared to Alternatives A and C, but would have higher impacts than Alternative D.

Issue No. 9: Present and Future River Access Needs

Many of the projects identified for development or improvement would be carried forward from Alternative A. Alternative B includes measures in selected areas to harden campsites, define and limit parking, implement closures to human entry and motorized use, close campgrounds, maintain public access without additional new developments or facilities, close access points, close and rehabilitate user-created slides/boat access sites, and improve bike trails to prevent erosion. These measures would be implemented to protect resources in the planning area, but at the same time to provide opportunities for recreation. Providing recreation development opportunities and protecting resources would meet the anticipated increased demand for recreation through the life of the plan and preserve recreation opportunities and experiences in the planning area. Development or improvement of existing sites could be restricted if any Idaho BLM Sensitive Species or rare plant communities are found in proposed recreation site developments. These impacts would likely be short-term and temporary and could be mitigated

through protective measures and/or site-specific engineering or site relocation. This alternative would result in the lower impacts to recreation compared to Alternatives A and C, slightly higher compared to Alternative D.

Cumulative Impacts

Management actions proposed under Alternative B would reduce the potential for many of the conflicts listed in the first paragraph under Alternative A. Overall impacts on recreation would be reduced under Alternative B in comparison to Alternative A, and slightly greater than Alternatives C and D.

Recreation would continue to increase within the planning area. Because the federal agencies do not have jurisdiction over the waterways the impacts from motorized watercraft would be similar to those cumulative impacts described under Alternative A. This additional demand for recreational opportunities would be considered under the management actions under Alternative B. The increment of impacts from Alternative B, when added to the small increment from other land use activities in the planning area, would allow for improvement of recreation opportunities and experiences. Overall, this alternative would result in less cumulative impacts to recreation compared to Alternative A, but higher compared to Alternatives C and D.

4.5.3 Alternative C – Recreation Development Emphasis

Issue No. 1 – Education Tools/Media

Under Alternative C, the benefits of educating river users would be higher than Alternative A, but would be similar to Alternative B. This alternative would have slightly fewer benefits to recreation compared to Alternative D as a result of the partnerships with state and county organizations, irrigation companies, and commercial businesses proposed under Alternative D.

Issue No. 2 – Protection of Riparian Habitat

Under Alternative C, the impacts of livestock grazing would result in the same impacts to recreation as Alternative A

Under this alternative, the designation of selected non-motorized trails would be similar to Alternative B. However, under this alternative, BLM would look for opportunities to develop additional trails, providing additional opportunities for recreation. The potential for additional impacts to recreation would be similar to Alternative D. However, impacts would be lower than Alternatives A and B because the trails under Alternative C would be developed and maintained to reduce user conflicts and resource damage identified under Alternative A.

Under Alternative C, all users (both overnight and day users) in the South Fork Canyon would be required to carry out their human waste. However, under this alternative no requirements would be put in place for human waste removal on the remainder of the planning area. Although the aesthetic and recreational experience in the South Fork Canyon would be improved, the aesthetics, physical and social settings would be impacted and health risks would be a concern with the presence of human waste within the remainder of the planning area. Impacts to recreation under this alternative would be lower than Alternative A, but would be higher compared to Alternatives B and D.

Under Alternative C, the burning of firewood within designated boat camp areas in the planning area would be limited to dead and down wood. However, visitors would be required to provide fire pans or use agency provided fire rings, and to pack out ashes and partially burned trash. Agency provided fire rings would be installed if funding is available. Burning only dead and down wood would be convenient for campers because firewood would not need to be brought into the planning area by the user. Also under this alternative, the convenience of agency provided fire rings would be provided at designated campsites. The agency provided fire rings would confine fires to designated areas instead of encroaching into vegetation or other campsites and prevent the potential for wildfires. The recreational benefits would be high under this alternative. Impacts to recreation would be lower than Alternatives A, B, and D.

Issue No. 3: Protection of Watershed

Erosion control effects and vegetation management to recreation under Alternative C would be the same as described under Alternative A. In addition, under Alternative C vegetation management projects would benefit recreation. Recreationists could be temporally displaced from vegetation treatment areas until revegetation occurs. In the long-term the vegetation treatments would benefit recreationists by improving aesthetics of an area. Impacts of vegetation management on recreation would be slightly higher compared to Alternative B, lower compared to Alternative A and similar compared to Alternative D.

Under Alternative C, unauthorized slides/boat ramps would be identified for development where sites are desirable and would increase recreation opportunities in the planning area. This alternative has positive and negative impacts. By increasing opportunities for recreation, more users are able to access the planning area and recreate. However, with the additional recreationists in the planning area, there is potential for conflicts between user groups and conflicts with resources. The additional recreation sites could diminish natural character, resulting in greater impacts on the recreation experience in these areas. There are numerous boat ramps along the river corridor providing efficient recreation opportunities. There would be higher impacts to recreation compared to Alternatives A, B, and D.

Under Alternative C, impacts to recreation from undesirable species and noxious weeds would be the same as those identified for Alternative B. However, undesirable non-native species would not be treated. Native vegetative communities would be at risk with the encroachment of these species. This encroachment could impact the aesthetic natural character of the planning area. Under Alternative C, greater impacts on the recreation experience would occur compared to Alternatives A, B, and D.

Issue No. 4: Land Ownership

Under Alternative C, land ownership would be identified and posted at common public land access boundaries, in the boaters guide, and on maps. These venues would provide numerous opportunities for the public to determine land ownership in the planning area. Impacts to recreation are similar compared to Alternatives B and D, but are lower than Alternative A. Impacts to recreation from unauthorized use under Alternative C would be similar to what was described in Alternative B.

Under Alternative C, acquiring public access from willing land owners across private land would be considered at all public access locations where feasible. Access would be pursued with other agencies in order to avoid duplication. This would create additional recreation opportunities in the planning area. This increased recreation use would affect both users and the natural resources that are important to recreationists. A loss of recreation experiences could occur in the planning area because of the increase in recreation. Impacts under Alternative C would be higher compared to Alternatives A, B, and D.

Management of conservation easements and land acquisitions under alternative C would be similar to Alternative B, but public access for recreation activities would also be pursued under Alternative C. This alternative would increase the potential for recreation opportunities and would provide recreational benefits. Benefits to recreation would be greater under this alternative compared to Alternatives A, B, and D.

Issue No. 5: Protection and Enhancement of Fish, Wildlife, and Botany Resources

Under Alternative C, impacts on recreation from minimum streamflow water rights, inventory of fish passage areas, and inventory of diversions for fish entrainment would be the same as those identified for Alternative B.

Under Alternative C, snow removal would be allowed at federal boat access sites dependent on funding, yet Fullmer Boat Access would remain closed due to the USFS Travel Plan. This alternative would create opportunities for winter recreation in the planning area. This alternative would benefit recreation to a greater extent than Alternatives A, B, and D.

Also under this alternative the BLM would not close Stinking Springs and other wildlife areas to human access during crucial periods. Not applying protective measures for big game severe winter habitat could cause stress to big game species, degrading the opportunity and experience for both consumptive and non-consumptive recreational enjoyment of wildlife. Indirect impacts would occur on recreation from decreased opportunities and experience associated with hunting and wildlife observation as a result of focusing on decreasing big game populations. Bald eagle nesting areas would only be identified in the South Fork Canyon. Not applying protective measures for bald eagle nesting areas could cause stress to nesting bald eagles in the entire planning area, thus, degrading the opportunity and experience for non-consumptive recreational enjoyment of wildlife. This alternative would have higher impacts to recreation than Alternatives A, B, and D.

Issue No. 6: Management of Off-Highway Vehicles (OHVs)

Impacts on recreation from OHV management would be the same as those identified for Alternative B.

Under Alternative C, additional opportunities for OHV trails would be identified and pursued. No limitation on motorized access points on public land that provide access to the dry river channels below the high water mark. This alternative would provide even more motorized opportunities in the planning area than Alternatives A, B, and D improving the recreation experience for some recreationists. These additional routes have the potential to create user conflicts between motorized and non-motorized recreationists. Yet, it would limit route

proliferation and improve opportunities and experiences for motorized recreation use in the planning area.

Issue No. 7: Management of River Corridor Uses

Under Alternative C, a capacity study to determine visitor use thresholds for the planning area would be conducted similar to Alternative B. Under this alternative, commercial permits would be issued on a case-by-case basis with no implied limits until the visitor capacity study is completed to provide further guidance. This alternative would address potential conflicts between users or the impacts to the recreation experience as a result of uses that exceed the planning area's capacity. This alternative addresses the potential for continued recreation growth in the planning area and the possible user and resource conflicts that could occur. However, this alternative does not address the potential for user conflicts between commercial and non-commercial use of the planning area. Based on the anticipated increase of recreational use in the planning area, impacts to recreation would be lower under this alternative compared to Alternatives A, but higher than Alternative B and D.

Issue No. 8: Management of Camping and Facilities

Under Alternative C, there would be a partnership with county and state agencies to manage and maintain the boat access facilities and an interagency fee program (with fee increases) similar to what was outlined in Alternative B. However, under this alternative, other projects (e.g. Wolf Flats, Heise Bridge, Trestle Bridge) on the South Fork, Henrys Fork, and Main Snake would be considered for inclusion in the existing fee program. This alternative would improve boat access facilities and improve recreation opportunities and experiences throughout the entire planning area. These improvements would define an area where recreation use could occur through signs, barriers and parking areas. This would limit the size of these developments and identify areas where the public can recreate. It would also limit encroachment into the riparian areas, thus, improving the scenic quality that would improve the recreation experience. Alternative C would provide higher benefits to recreation than Alternative A and B, and the same as Alternative D.

Impacts on recreation from corridor-wide campground monitoring would be the same as those identified for Alternative B.

Under Alternative C, camping in designated areas is required in the South Fork Canyon. There is potential for expansion of the designated areas in the future. Dispersed camping by boat and by vehicle would be authorized anywhere throughout the rest of planning area. Campsite use throughout the planning area would be available on a first come-first served basis. However, during high periods of use (weekends and holidays), campsites would be allocated. Group size would have a higher limit compared to Alternative B. Under this alternative, campsites in the planning area could be affected by heavy recreation impacts to the point that the recreation experience is diminished and possible closures could result from these impacts. This would not likely meet the recreation demand and associated user and resource conflicts throughout the planning area. Increasing recreation use without increased management would affect both users and the natural resources that are important to recreationists. This alternative would result in fewer impacts than Alternative A, but higher compared to Alternatives B and D.

Issue No. 9: Present and Future River Access Needs

Although Alternative C proposes to adopt all the recreation development projects under Alternative A, some of the developments would be more substantial as they are focused on additional recreation opportunities. There would be higher public use of the planning area. This alternative would help meet the recreation demand for additional recreation developments. But, a loss of recreation opportunities and degraded recreation experiences could occur with increased use. Impacts to recreation would be slightly higher than Alternatives B and D and lower compared to Alternative A.

Cumulative Impacts

Under Alternative C, many cumulative impacts would be similar to Alternative A, but impacts would occur to a lesser extent. Cumulative impacts would be higher than Alternatives B and D. Under this alternative recreation opportunities and experiences would be enhanced by focused development. Many of the actions under this alternative benefit and enhance recreation. But, under the management actions of Alternative C there would be conflicts between resources and recreation. These conflicts could affect the aesthetics of the planning area and potentially diminish recreation experiences. Because the federal agencies do not have jurisdiction over the waterways the impacts from motorized watercraft would be similar to those cumulative impacts described under Alternative A. Requirements for human waste disposal, camp fires, erosion control, management of invasive plants, human closures, and group sizes at campsites, would be more lenient compared to Alternatives B and D.

Additional population growth in Bonneville, Fremont, Jefferson, and Madison counties is anticipated and out-of-area visitation has been on an upward trend for over a decade. These factors would likely result in additional demand for recreational opportunities. This additional demand for recreational opportunities would be considered under the management actions under Alternative C. Under Alternative C, the high recreational use and development for that use has the potential to diminish recreation experiences. The increment of impacts from Alternative C, when added to the small increment from other land use activities in the planning area, would not be discountable and would not allow for improvement of recreation opportunities and experiences. Overall, this alternative would result in higher cumulative impacts to recreation compared to Alternatives B, and D but would be lower compared to Alternative A.

4.5.4 Alternative D – Proposed Action

Issue No. 1 – Education Tools/Media

Alternative D is similar to Alternatives B and C, but under this alternative, partnerships with state and county organizations, irrigation companies, and commercial businesses have been proposed to assist with signing, issuing, and distributing updated boater's guides, maps of designated roads and trails, and advertising and/or linking to pod casts and websites related to management of the Snake River. This alternative would improve the administrative setting and would result in the best option for recreation compared to Alternatives A, B, and C.

Issue No. 2 – Protection of Riparian Habitat

Under Alternative D, the impacts of livestock grazing would result in the same impacts to recreation as Alternative B. Under this alternative, the designation of selected non-motorized

trails would be similar to Alternative B. However, under this alternative, BLM would designate or close user-created trails, reducing user conflicts. The potential for additional impacts to recreation would be similar to Alternative C. However, impacts would be lower than Alternatives A and B because the trails under Alternative D would be developed and maintained to reduce user conflicts and resource damage identified under Alternative A.

Under Alternative D, all users (day and overnight) along the river corridor in the riparian area would be required to carry out their human except where public facilities are available. The aesthetic, physical and social setting, and recreational experience in the planning area would be improved. The benefits of this requirement would be improving the aesthetic, ecological, and health qualities within the planning area. This requirement could burden the user and increase administrative management controls and visitor services to enforce. Impacts to recreation under this alternative would be lower than Alternatives A, B, and C because of reducing human waste in the planning area.

Under Alternative D, impacts to recreation from campfire requirements would be the same as described under Alternative B.

Issue No. 3: Protection of Watershed

Erosion control effects to recreation under Alternative D would be similar to Alternative A, B, and C. Under Alternative D, erosion occurring at unauthorized slides/boat ramps would be eliminated because these sites would be closed and rehabilitated. Impacts to recreation from erosion control at boat ramps would be the same as those identified in Alternative B.

Under Alternative D, vegetation management projects benefiting river restoration, wildlife, special status species habitat, recreation, and acceptable to the public would be considered. Recreationists could be temporarily displaced from vegetation treatment areas until revegetation occurs. In the long-term the vegetation treatments would benefit recreationists by improving aesthetics and the physical setting of the planning area. Impacts of vegetation management on recreation would be lower compared to Alternatives A, B, and C.

Under Alternative D, treatment of noxious weeds and non-native invasive species would be similar to Alternative A.

Issue No. 4: Land Ownership

Under Alternative D, impacts to recreation from identifying public access, identifying unauthorized uses, and acquiring public access from willing land owners would be the same as those identified in Alternative B. However, coordination with other agencies would aid in avoiding duplication of efforts. This alternative would result in lower impacts compared to Alternatives A, B, and C.

Under Alternative D, BLM and USFS would continue to work with non-profit partners to obtain conservation easements and acquisitions on private lands adjacent to public land from willing land owners. But, awareness of the project would be enhanced in maps, boaters guide and other avenues of information. Alternative D would result in more benefits to recreation compared to

Alternative A, B, and C because of preventing the fragmentation of land within the planning area.

Issue No. 5: Protection and Enhancement of Fish, Wildlife, and Botany Resources

Under Alternative D, impacts on recreation from pursuing opportunities for minimum instream-flow on tributaries, fish passage inventory, and fish entrainment inventory would be the same as those identified in Alternative B but with the additions of prioritizing tributary reconnects with IDF&G. Alternative D would aid in improving the fishery and recreation opportunities within the planning areas. This alternative would provide greater recreation benefits than Alternatives A, B or C.

Under Alternative D, snow would not be removed from the boat access sites, yet the sites would remain open for use. This alternative would create a minor inconvenience to the recreationists who wants to utilize the ramps in the winter. However, the ramps would remain open providing the recreation opportunity and limiting the administrative setting. Impacts to recreation under Alternative D would be the same as A, lower than Alternative B and slightly higher than Alternative C.

Under this alternative the BLM would close Stinking Springs and other wildlife areas to human access during crucial periods. This alternative would be similar to B with the exception of the authorized office removing the human entry closure if mule deer populations improve. Stinking Springs Trail would remain open to motorized use April 15 to November 15. Bald eagle nesting areas would also be signed in the entire planning area. Seasonal, localized impacts to recreation could occur if recreation activities or opportunities are restricted as a result of these wildlife closures. These actions would be an impact to recreation at first, but these actions would reduce conflicts between recreationists and resources. In the long-term benefits to wildlife would improve the recreation experience, physical and social settings. This alternative would benefit recreation to a greater extent than Alternatives A, B, and C.

Issue No. 6: Management of Off Highway Vehicles (OHVs)

Management of OHV trails and impacts to recreation under Alternative D would be similar to Alternative B. Designated routes would be signed, identified on maps and aerial photos and on posted on a website. This would assist in the public knowledge of designated routes, thus, improving the recreation experience and reducing user conflicts. Closure of the planning area to unauthorized OHV use would eliminate much of the resource damage and user conflicts that have historically occurred within the planning area. Impacts to recreation would be lower under this alternative compared to Alternatives A and C.

Under Alternative D, the impacts of eliminating motorized access on public land below high water mark would be similar to Alternative B.

Issue No. 7: Management of River Corridor Uses

Under Alternative D, a visitor capacity study to determine visitor use thresholds for the planning area would be conducted similar to Alternative B. New commercial permits would be granted on a yearly basis until a limit could be set based on the visitor capacity study. Specific permits may be assigned days of week (i.e., Monday through Thursday) and specific locations (i.e., below

Heise, lower Henrys Fork) to avoid conflicts with other commercial and general public activity. This alternative would also look at changes to commercial fishing stipulations to address public/outfitter conflicts. This alternative addresses the potential for continued recreation growth in the planning area and the possible user and resource conflicts that could occur. Based on the anticipated increase of recreational use in the planning area, this alternative deals with the anticipated growth in the most efficient manner. This alternative would also help manage the shifts in the physical, social, and administrative settings. Implementation of Alternative D would result in fewer impacts to recreation compared to Alternatives A, B, and C.

Issue No. 8: Management of Camping and Facilities

Corridor-wide management of recreation facilities with county and state partnerships and expansion of the fee program under Alternative D would be the same as Alternative C, and would provide higher benefits to recreation compared to Alternatives A and B.

Under Alternative D, the impacts of corridor-wide campground monitoring and hardening of campsites (when necessary) would result in the same impacts to recreation as Alternative B and C. Impacts would be lower compared to Alternative A.

Under Alternative D, only camping in designated campsites would be authorized along the river corridor in riparian areas (no dispersed camping allowed). However, designation of campsites would be a phased process. Vehicle camping would be limited to five days with the potential for additional campsite designations in the future. Campsites and group sizes would be allocated based on determinations of a capacity study and individual campsite capacities. A check-in or reservation system and a fee for camping (if needed) would be implemented if capacity thresholds are met. This alternative would result in shifts of the physical, social, and administrative settings. The alternative would also alleviate the potential to exceed capacity, and further impacts to resources, recreation opportunities, and experiences. Determining capacity would greatly improve management of the planning area, and would thus, result in fewer impacts to recreation compared to Alternatives A, B and C.

Issue No. 9: Present and Future River Access Needs

With few exceptions, projects proposed for recreation development under Alternative D would be very similar to Alternative B with similar impacts. Although some projects would increase recreation opportunities others would define, develop, and manage the physical setting more efficiently, providing an improved recreation experience. This alternative also disposes of some facility developments that were identified in the 1991 Snake River Plan that are no longer needed due to changes in management goals in the planning area. Overall, this alternative would result in lower impacts to recreation compared to Alternatives A, B, and C.

Cumulative Impacts

Management actions proposed under Alternative D would reduce the potential for many of the conflicts listed in the first paragraph under Alternative A. Overall impacts on recreation would be reduced under Alternative D in comparison to Alternative A and C, and slightly less compared to Alternative B. Aspects of Alternative D that would result in lower impacts to recreation compared to Alternative B are similar to what was described in the cumulative impacts section of riparian-wetland vegetation.

The increment of impacts from Alternative D, when added to the small increment from other land use activities in the planning area, would be discountable and would allow for improvement of recreation opportunities and experiences. The nonprofit partners that the BLM works with for land conservation also obtain conservation easements and acquisitions on private land from willing landowners separate from what the BLM accomplishes. The incremental impact of this action cumulatively adds to the work completed by the BLM for land conservation. As this occurs, preservation of a larger footprint of the planning area would take place cumulatively providing benefits over the life of the plan.

Recreation would continue to increase within the planning area. This additional demand for recreational opportunities would be considered under the management actions under Alternative D. Because the federal agencies do not have jurisdiction over the waterways the impacts from motorized watercraft would be similar to those cumulative impacts described under Alternative A. The increment of impacts from Alternative D, when added to the small increment from other land use activities in the planning area, would allow for improvement of recreation opportunities and experiences. Overall, this alternative would result in less cumulative impacts to recreation compared to Alternatives A, B, and C.

4.6 Soils/Surface Water/Floodplain/Water Quality

4.6.1 Alternative A – Existing Management Situation

This alternative, the No Action Alternative, has the greatest amount of impacts to the floodplain, soils, and to water quality. Though impacts are greatest as compared to the other three alternatives, the magnitude of impacts to these resources is small. For Issue #1, less information signage on rules and regulations and not showing designated trails on maps could result in more soil compaction and use of river banks, which would degrade the floodplain's functional condition and decrease water quality values by increased suspended sediment. For Issue #2, Alternative A would impact floodplain, soils, and water quality resources by not designating all of the trails, only requiring portable toilets for the canyon reach, and allowing dead and downed wood to be burned in camp fires.

This alternative would result in a greater potential for water quality impacts and soil and floodplain compaction compared to the other three alternatives. Livestock grazing impacts, however, do not vary greatly by alternative. Out of the 44 allotments assessed so far, only three did not meet floodplain, channel and water quality standards for Rangeland Health, due to livestock grazing. Jet boat use in the planning area would increase under all alternatives. Some of this use would increase bank soil erosion and turbidity, adding suspended sediment to the river from the bank, as well as stirring up some bed sediment and increasing turbidity of the river's water column. This amount of sediment recruitment, however is a minor impact to the river's water quality, and would be the same under all alternatives.

Alternative A would continue to impact floodplain, soils, and water quality resources more than the other alternatives, for Issues #3 and #5-9. Maintaining camping areas in the planning area in degraded condition and continue dispersed camping throughout the corridor would continue to compact, reduce cover and erode some of the floodplain soils, while adding suspended sediment from these sites, degrading water quality. Continued recreational impacts to Wolf Flat, Little Kelly, Heise Boat Access, and Trestle Bridge would continue to degrade these sites, with

continued soil erosion and reduction of functional condition for the floodplain. The increased compaction and erosion would result in more suspended sediment impacts to the river's water quality. These sites are in a degraded condition at the present time and are sediment sources to the river. This No Action Alternative would not improve these sites and reduce soil erosion. This alternative would result in more impacts to the floodplain and water quality than Alternative B, but only slightly more impacts than Alternative C and D.

Cumulative Impacts

Alternative A would continue to let high-use recreational areas, particularly motorized watercraft and OHVs, degrade more, reducing floodplain functionality, soil stability, and increasing suspended sediment to the river. Further compaction of floodplain soils and continued streambank and road erosion would increase suspended sediment loads to the river. Even though this alternative would have the highest impact of all the alternatives to floodplain, soils, and water quality, the overall magnitude of these non-point impacts is low. The incremental impacts from Alternative A, considering all the other cumulative impacts (past, present, and foreseeable) occurring in the planning area is also low, when comparing small, flat exposed campsites to agricultural land runoff, for instance.

4.6.2 Alternative B – Intensive Resource Management with Less Recreation Development

Alternative B would result in the least impact to the floodplain, soils and to water quality. This alternative would designate trails, educate river users, and demand the most protective restrictions to the environment. Thus, it would result in only slight impacts to the floodplain soils and water quality, mostly just during the construction phase of facility improvement projects, such as Wolf Flats, Little Kelly, Heise Boat Access, and Trestle Bridge. Attempting to eliminate OHV access to side channels, close and rehabilitate all unauthorized boat ramps, closing the Stinking Springs area, and closing all non-designated routes would result in the least amount of soil erosion and floodplain compaction of all the alternatives. Designating campsites along the river, hardening them if necessary, and reducing recreational impacts to the four above-mentioned sites would improve the floodplain, soil stability, and water quality from the present condition.

Minor impacts would still occur under this alternative, as newly-designated campsites are improved and maintained. Other sites that would be hardened or improved such as Heise Boat Access and Wolf Flats would undergo temporary disturbance and a small amount of soil erosion would occur. Some of this soil would result in increased turbidity and suspended sediment to the South Fork of the Snake River, but this minor water quality impact would be temporary (within hours of the final impact) and small (likely not impacting water quality more than 1/8 mile downstream).

Cumulative Impacts

Cumulatively, Alternative B has the least impact to the floodplain soils and water quality. Because of hardening presently eroding areas, designating existing dispersed campsites, and eliminating OHV access to side channels, this alternative would result in the smallest magnitude of cumulative impacts. The main incremental impact would be a temporary increase in suspended sediment to the river while the four previously-mentioned sites and other designated

campsites are being constructed. Because the federal agencies do not have jurisdiction over motorized watercraft, their impacts would be similar to Alternative A. These cumulative impacts are very low in magnitude and are extremely low when compared with other adjacent, past, present, and foreseeable impacts to the river's floodplain soils and water quality.

4.6.3 Alternative C – Recreation Development Emphasis

Alternative C would result in impacts to the floodplain, soils and water quality that are less than Alternative A but more than Alternatives B and D. This alternative has nearly the same level of river education, livestock grazing, correction of unauthorized uses and development of the previously-mentioned facilities. However, this alternative requires disposal of human waste in the South Fork Canyon only; it does allow burning of dead and down wood, it treats noxious weeds only (not invasive), it allows for snow removal at boat ramps (except Fullmer) and pursues new designated OHV trails. This alternative allows for a higher number of visitors at dispersed and designated campsites. Additional bike trails would be pursued; unauthorized boat ramps would be hardened. These actions would result in a reduced floodplain functional condition compared to Alternative's B and D by continuing to compact and erode the floodplain and bank soils. Water quality impacts would continue to include potential E. coli bacteria from human waste and suspended sediment from high-use area erosion and plowing boat ramps. Because of hardening some of these boat ramp and campsites, thereby reducing soil erosion and suspended sediment, this alternative would result in fewer impacts than Alternative A.

Cumulative Impacts

Cumulative impacts from this alternative would be less than from Alternative A, but greater than the cumulative impacts from Alternatives B and D. Incremental impacts to the floodplain and water quality are soil erosion and sedimentation from continued and increased dispersed camping, new designated OHV and non-motorized trails, construction of new facilities, plowing boat ramps and allowing unauthorized boat ramps. Because the federal agencies do not have jurisdiction over motorized watercraft, their impacts would be similar to Alternative A. Continued water quality impacts from human waste would persist in the planning area outside the South Fork Canyon. These cumulative impacts are very low in magnitude and are extremely low when compared with other adjacent, past, present and foreseeable impacts to the river's floodplain, soils, and water quality.

4.6.4 Alternative D – Proposed Action

Alternative D would result in floodplain, soils and water quality impacts that are slightly greater than Alternative B, but less than Alternatives A and C. River education would be nearly the same as Alternative B, except that with partnerships more users would be educated sooner, resulting in less impact to the floodplain and to water quality than Alternatives A and C. This alternative would allow for some designation of user-created trails. It would not allow human waste along the corridor, similar to Alternative B. It would require bringing in firewood, closing unauthorized boat ramps, not removing snow on boat ramps, and attempting to remove motorized activity from dry channels. This alternative would continue to develop the four facilities mentioned earlier, but would phase-in designated campsites all along the corridor.

Overall, floodplain, soils, and water quality impacts under this alternative would be only slightly greater than Alternative B, because of the temporary facility construction and phasing-in of designated campsites along the corridor. Impacts to water quality would be less than from Alternative A and C, because of trying to eliminate human waste from the entire planning area and eventually replacing dispersed campsites with designated campsites. Closing and hardening campsites would also reduce soil erosion and suspended sediment as compared to Alternatives A and C.

Cumulative Impacts

Cumulative impacts from this alternative would be slightly greater than Alternative B, but less than Alternative A and C. Incremental impacts to the floodplain, soils, and water quality would still result from temporary construction activities for the four facilities, the longer time allowed to phase-out dispersed camping and OHV and non-motorized trails. Because the federal agencies do not have jurisdiction over motorized watercraft, their impacts would be similar to Alternative A. However, marked improvements over Alternative C include the removal of human waste and eventual replacement of dispersed campsites to designated campsites. Incrementally, impacts from Alternative D are very low in magnitude and are extremely low when compared with other adjacent, past, present, and foreseeable impacts to the river's floodplain, soils and water quality.

4.7 Vegetation

4.7.1 Alternative A – Existing Management Situation

Riparian-Wetland Vegetation

Issue No. 1 – Education Tools/Media

Under Alternative A, no changes would be made to existing public education efforts. The public would continue to receive valuable information about the Snake River system through existing kiosk information, the boater's guide, the East Idaho Visitor Information Center (EIVIC), and the Conant Visitor Center. However, signs and maps to inform visitors about authorized use areas and federal rules and regulations would be more limited than those proposed under Alternatives B, C and D. Websites and pod casts for the river would not be constructed under this alternative, as is proposed under Alternatives B, C, and D. Overall, visitor education regarding the importance of and proper care and maintenance of riparian-wetland areas would take place to a lesser degree compared to Alternatives B, C, and D. Under this alternative, public recognition of the rare and fragile riparian-wetland ecosystem would occur at a lower rate than under Alternatives B, C or D. Consequently, the areas currently impacted by recreational activities would continue to decline, and additional encroachment into intact riparian-wetland areas would result in a net loss of riparian-wetland habitat.

Issue No. 2 – Protection of Riparian Habitat

Under Alternative A, BLM would continue to manage livestock grazing in the river corridor under general and site-specific management (SSM) classes. Current annual indicator guidelines for livestock grazing management would be retained, and grazing management would remain in

accordance with the Code of Federal Regulations Title 43 Part 4100. Grazing leases under SSM Classes IA and IB would not be retired as outlined in the 1991 plan because a land use plan amendment has not been completed to implement relinquishment of the affected allotments.

Under Alternative A, livestock grazing in 21 active BLM allotments that border riparian-wetland areas would be permitted in accordance with current federal regulations. The breakdown of active and inactive allotments in the various riparian-wetland areas is as follows:

| Allotment Summary | Riparian-Wetland Areas |
|--------------------------------------|--|
| 29 allotments (16 active; 13 vacant) | South Fork Snake River |
| 4 allotments (2 active; 2 vacant) | Henrys Fork Snake River |
| 2 allotments (1 active; 1 vacant) | Main Snake River |
| 2 allotments (both active) | Other streams (tributaries to Snake River) |

The primary use in the active BLM allotments would be during the cool seasons, thus enabling riparian-wetland areas to withstand grazing pressures and to recover more quickly compared to hot season grazing. BLM lands unallocated for grazing would continue to receive no livestock impacts. The 16 allotments that are currently vacant would continue to be available for grazing. Riparian-wetland areas under this alternative would be expected to maintain or make progress towards proper functioning condition. However, under this alternative, impacts from livestock grazing on riparian-wetland areas would be the same as Alternatives B, C, and D.

Under this alternative, designation of non-motorized trails would be limited to a few major trails. With a lack of adequate authorized trails, the illegal creation of new trails would continue unchecked, and encroachment into riparian-wetland areas would persist. Although non-motorized trailing creates a much lower impact on resources compared to motorized use, riparian-wetland areas may still be susceptible to degradation if the use is substantial. As natural vegetation is removed and soils are disturbed, the biodiversity of the existing plant communities would diminish, and the potential for invasion from non-native plants and noxious weeds would increase. Riparian-wetland impacts of designating just a few non-motorized trails under Alternative A would result in higher impacts compared to Alternatives B, C and D.

Under Alternative A, human waste disposal systems would be required for overnight camping in the South Fork Canyon. Although this would decrease human waste in the riparian-wetland areas, day users would not be required to carry out their waste. As a result, human waste would continue to be an issue, both aesthetically and ecologically in the riparian-wetland areas. This alternative does not address human waste issues in the remainder of the planning area. Impacts to riparian-wetland areas under this alternative would be higher than Alternatives B, C, and D.

Under Alternative A, the burning of dead and down wood would be allowed, and campfires would be allowed anywhere within the planning area. Cutting down live or standing dead trees for firewood would be prohibited. This would prevent the deforestation of the cottonwood galleries and other woody communities along the river. However, the removal of downed timber would reduce fuels that would otherwise carry a natural wildfire, and thus, ecological processes necessary to maintain a natural riparian-wetland system would be altered. Allowing for the removal of dead and down wood under Alternative A would continue the decrease in habitat for

plant and fungi species that are dependent on decaying wood. In addition, the removal of dead and down material could destabilize the soil, resulting in erosion that would preclude establishment and maintenance of healthy riparian-wetland vegetation. Under this alternative, the dead and down camp fire policy would have a greater impact on natural ecological processes in riparian-wetland areas compared to Alternatives B, C, and D.

Issue No. 3: Protection of Watershed

The control of upland erosion in the watershed would reduce the contribution of sediment and seed sources to the river that may result in establishment of noxious weeds or other undesirable plants in the riparian-wetland areas. This would aid in preventing alteration of the vegetative communities and channel stability. Surface erosion in the Stinking Springs area can be excessive. However, a 2007 project to stabilize and relocate portions of the trail system is expected to decrease erosion in the long-term. Erosion control under Alternative A would have similar impacts on riparian-wetland areas as Alternatives B and D, but would be slightly higher than Alternative C.

Under Alternative A, projects to manage vegetation in the planning area would be limited, and thus non-native or invasive plants would have an opportunity to increase their populations by encroaching upon native riparian-wetland vegetation. With deleterious impacts to the riparian-wetland areas, wildlife habitat, and special status plants and animals would be directly affected. Limited vegetation management projects under this alternative would have a greater long-term impact on riparian-wetland areas compared to Alternatives B, C, or D.

Under Alternative A, treatment of noxious weeds and non-native invasive species would be a high priority. Noxious and invasive species in riparian-wetland areas would primarily be treated with biological control measures. Label directions would be strictly adhered to in rare instances where chemical treatment is warranted in riparian-wetland areas. Biological Assessment (BA) and/or Biological Opinion (BO) requirements for the Ute ladies'-tresses (*Spiranthes diluvialis*) would be followed, avoiding direct chemical application of herbicides to these plants. Although mechanical treatment may be employed, Ute ladies' tresses populations would be avoided to eliminate excess disturbance. A ½-mile buffer would be required for chemical applications around Ute ladies'-tresses populations. Although this buffer would be used for the majority of chemical applications, some case-by-case exceptions would be given if individual weeds or invasive plants can be targeted without impacts to Ute ladies'-tresses populations. The control of noxious weeds and non-native invasive species would greatly improve the stability, health and vigor of riparian-wetland areas in the planning area. Impacts of Alternative A would be the same as Alternatives B and D, but would be lower compared to Alternative C.

Issue No. 4: Land Ownership

Under Alternative A, public access across private land would be pursued with willing land owners. Although this may appear to be advantageous to the public, this may result in damage to riparian-wetland areas and/or private property in some instances if resource values are not considered. This alternative does not take into consideration the potential damage that may occur if certain public access points are obtained. Impacts to riparian-wetland areas would be higher under this alternative compared to Alternatives B and D, but would be similar to Alternative C.

Under Alternative A, BLM and USFS would continue to work with non-profit partners to obtain conservation easements and acquisitions on private lands adjacent to public land from willing landowners. As this occurs, preservation of a larger footprint of the planning area would take place, and fragmentation of riparian-wetland habitat would be greatly reduced. This alternative would result in slightly less preservation of riparian-wetland areas in the planning area compared to Alternatives B, C, and D, because the other alternatives would provide additional resources through coordination with federal and state agencies to pursue land acquisitions and easements. However, impacts under Alternative A would be slightly less compared to Alternative C because of the active pursuit of public access for recreation activities proposed under Alternative C.

Issue No. 5: Protection and Enhancement of Fish, Wildlife, and Botanical Resources

Under Alternative A, no minimum streamflow water rights would be pursued on streams tributary to the Snake River within the planning area. Without minimum streamflow water rights, the potential exists for streams to be dewatered through actions such as irrigation diversions or hydro power projects. Dewatering these streams would result in a net loss of riparian-wetland areas through a decline in the health, vigor, and diversity of the habitat. This alternative would result in greater impacts to riparian-wetland areas compared to Alternatives B, C, and D.

Issue No. 6: Management of Off-Highway Vehicles (OHVs)

Under the existing Snake River Activity/Operations Plan (Alternative A), undeveloped sites that are not identified for OHV trail development, improvement, or maintenance would be closed to motorized access. Under this alternative, no OHV trails in addition to those identified in the existing plan would be considered for development. This alternative would potentially create higher impacts to riparian-wetland areas compared to Alternatives B, C, and D, because considerations of existing designations with erosion problems, conflicts with big game wintering habitat, Ute ladies'-tresses, other critical habitats, or areas currently recovering from the 1997 flood would not be addressed.

Although designated OHV trails would be identified on maps and in the boaters guide, signing to provide information to the public on OHV designations and closed areas would be minimal Under Alternative A. The lack of additional signing information would result in OHV use in closed areas. Vegetative impairment in riparian-wetland areas would continue as recreationists encroach into intact native vegetation. Trees and shrubs would be depleted, bare ground would increase, and undesirable herbaceous vegetation would replace native graminoids and forbs. Minimal signing under alternative A would result in higher impacts to riparian-wetland areas compared to Alternatives B, C, and D.

The 1991 plan does not provide any direction for management of motorized use below the high water mark. BLM and the Forest Service have no jurisdiction to enforce closures below the ordinary high water mark, and no coordination with the Idaho Department of Lands would be done to eliminate motorized access to these areas. Four-wheel drive and OHV trailing below the high water mark would continue to degrade the river banks, channel, and riparian-wetland vegetation. As native vegetation is removed and soils are disturbed, the biodiversity of the existing plant communities would diminish, and the potential for invasion from non-native plants and noxious weeds would increase. Alternative A would result in considerably higher impacts to

riparian-wetland areas compared to Alternatives B, and D, but would be the same as Alternative C.

Issue No. 7: Management of River Corridor Uses

Under Alternative A, a capacity study to determine visitor use thresholds for the planning area would be conducted, but no limit on commercial permits would be set. Although this alternative would address potential conflicts between users and the resource damage that may occur as a result of uses that exceed the planning area's capacity, overall impacts to riparian-wetland communities would be higher under this alternative compared to Alternatives B, C, and D.

Issue No. 8: Management of Camping and Facilities

Under Alternative A, corridor-wide management of recreation facilities would involve partnerships with county and state agencies to maintain boat access facilities in the planning area. A fee program is in place that would fund maintenance and improvements of these facilities. Although the fee program and partnerships would aid in mitigating impacts to riparian-wetland communities, the benefits of this alternative would be smaller compared to Alternatives B, C, and D because these alternatives would involve expansion of the fee program.

Under Alternative A, existing camp areas throughout the planning area would be evaluated using monitoring protocols to determine if closure and rehabilitation is needed. Limited physical improvements, such as hardening with wood chips or gravel, would be made to increase the resiliency of campsites to continual use during summer months. As a result, the impacted areas at these campsites would become excessively compacted and dominated with weedy herbaceous plants or bare ground, even if temporary closures are implemented. Non-native invasive or other undesirable herbaceous plants would spread throughout the surrounding riparian-wetland areas and result in degraded conditions outside the footprint of the camp areas. Impacts to riparian-wetland areas would be higher under Alternative A compared to Alternatives B, C, and D.

Under Alternative A, with the exception of the South Fork canyon reach, dispersed camping by boat, and by vehicle would be authorized anywhere throughout the planning area. In the South Fork Canyon, only use of designated camp areas would be authorized, but the potential would exist for additional campsites to be designated in the future. Campsite use throughout the planning area would be available on a first come-first served basis, and group sizes would have no limit. During high periods of use or with use by large groups, campsites would have the potential to exceed capacity, and encroachment into intact riparian-wetland areas would increase the footprint size of camp areas, thus resulting in degradation of the plant communities. Use of the encroached areas would perpetuate, and formerly intact riparian-wetland areas would have increased bare ground and undesirable herbaceous plants, and decreased amounts of trees, shrubs, and other stabilizing ground cover. This alternative would result in higher impacts to riparian-wetland areas compared to Alternatives B, C, and D.

Issue No. 9: Present and Future River Access Needs

Under Alternative A, numerous recreation developments including boat ramps, parking areas, interpretive signs, trails, campgrounds, toilets, fences, day-use areas, and a visitor center would be proposed. Many of these areas are already impacted, and the proposed projects would be implemented to protect additional encroachment into intact riparian-wetland areas. However,

several projects would propose more recreation opportunities that would involve expansion of current use. Increased use in the planning area would increase the susceptibility of riparian-wetland areas to degradation. Biodiversity of existing plant communities would diminish, and ecological processes necessary to maintain a natural riparian-wetland system would be altered. Overall, this alternative would result in higher impacts to riparian-wetland areas compared to Alternatives B, C, and D.

Cumulative Impacts

Many factors can contribute to the integrity of the riparian-wetland areas associated with the planning area. Activities such as road building, vegetation treatments, off highway vehicle (OHV) traffic, mountain biking, horseback riding, developed and dispersed camping, unimproved boat ramps, parking areas, human waste, other dispersed recreational uses, controlled releases from Palisades Dam, irrigation diversions, development, clearing, and land uses resulting in a reduction of disturbance to the riparian/wetland vegetation (e.g., grazing non-use in adjacent allotments, conservation easements, conservation buyers), and similar activities on adjacent federal and private lands, all affect the character of riparian-wetland communities. Roads, trails, and off-site logging in the upper portion of the drainage may introduce sediment and seed sources to the river and other wetland areas and thus, may slightly alter the vegetative community.

Under Alternative A, high-use recreational areas would continue to degrade riparian-wetland communities. The functionality, biodiversity, and overall ecological processes necessary to sustain a healthy riparian-wetland system would be diminished. Elevated use in the planning area would increase the susceptibility of riparian-wetland areas to degradation. Biodiversity of existing plant communities would diminish, and ecological processes necessary to maintain a natural riparian-wetland system would be altered. The increment of impacts from Alternative A, when added to the small increment from other land use activities in the drainage, would not be discountable and would not allow for improvement of riparian-wetland resources. Overall, this alternative would result in higher cumulative impacts to riparian-wetland areas compared to Alternatives B, C, and D.

Upland Vegetation

Direct impacts to upland native vegetation communities result from physical damage or removal of all or portions of plants. Physical damage removes leaf surface area available for photosynthesis and may lead to decreased vigor over time depending on the timing and extent of damage. Physical damage and decreased vigor may weaken the plant thereby decreasing resistance to insects and making the plant susceptible to disease. Indirect impacts to native vegetation result from increased soil compaction and expansion of noxious weeds in disturbed habitat. Increased compaction reduces water infiltration and restricts root growth. Reduced water infiltration may lead to overland flows and increased erosion depending on soils and slope. Noxious weeds compete with native vegetation and have the potential to dominate sites, and in the case of cheatgrass, increase fire potential. These impacts may result from livestock or wildlife grazing, wildfires, off-road travel both motorized and non-motorized, or weather impacts.

Under Alternative A, there would be no changes in the current management of the planning area. The impacts of livestock grazing has been assessed on all of the allotments which are currently leased or permitted and all were determined to be meeting the Idaho Standards for Rangeland Health for native plant communities. Impacts of off-road travel occur on a small portion of the uplands within the planning area resulting in site specific damage which may alter native communities. Impacts to upland vegetation under this alternative would be higher compared to Alternatives B, C, and D.

Cumulative Impacts

Many factors can contribute to the integrity of the upland native vegetation communities within the planning area. Activities such as road building, vegetation treatments, off highway vehicle (OHV) traffic, mountain biking, horseback riding, developed and dispersed camping, parking areas, human waste, other dispersed recreational uses, clearing, and land uses resulting in a reduction or disturbance to the upland native vegetation communities. Under Alternative A, high-use recreational areas would continue. However recreation impacts on the upland native vegetation communities has been limited under current management. The majority of the recreation activity occur in or directly adjacent to the wetland-riparian vegetation and the impact on native communities would remain at their current level under Alternative A.

Endangered, Threatened, Proposed, Candidate, and Sensitive Plant Species

Issue No. 2: Protection of Riparian Habitat

The current grazing program within the planning area incorporates season of use changes to avoid grazing at critical growth and reproductive times for Ute ladies'-tresses. These mitigations for the protection of Ute ladies'-tresses would remain in place for all alternative analysis in this Environmental Assessment.

Leaving the current non-motorized trails intact that are increasing riparian habitat damage would have a direct effect on native plants and would continue to threaten habitat essential for Ute ladies'-tresses. Under Alternative A the closing of trails and rehabilitation of the native plants would be limited. Resource protection would be better under Alternatives B and D, and impacts lower compared to Alternative C.

Allowing unlimited removal of dead and downed wood under Alternative A would result in a higher impact to TES plants compared to Alternatives B, C and D because removing large dead and down woody debris decreases habitat for plant and fungi species that are dependent on decaying wood. This removal would also decrease the nutrient cycling of the dead and decaying wood that is required for healthy riparian habitat.

Issue No. 6: Management of Off Highway Vehicles (OHV)

Several Ute ladies'-tresses occurrences along the Snake River are threatened from physical disturbance and trail development by unauthorized off-highway vehicle (OHV) recreation (Murphy, 2001a). In 2004, after vehicle trails were located through Ute ladies'-tresses wetland habitat, the USFO issued a one-year emergency closure to OHV access on Annis Island. Occupied and potential habitat for Ute ladies'-tresses needs to be evaluated for closure to OHVs under all alternatives.

The current level of OHV use and amount of user-created trails is having a high impact to native plants and their habitat. Creation of new trails leads to soil compaction which hinders moisture and root penetration, increases the spread of undesirable plants and noxious weeds, and increase mortality to plants when driven upon or uprooted. Each of these impacts leads to loss of healthy native plant habitat and decreases the diversity of plants and biological soil crusts. Under Alternative A, specifying designated routes and closing undeveloped areas would be inadequate to protect native plant habitat. Currently the pressures of increased OHV users are putting a high demand on public land for riding opportunities. If more designated routes are not identified, the users would continue to create routes to support their numbers and needs. Specific closures for Ute ladies'-tresses habitat would need to be implemented. Resource protection would be greater under Alternatives B, C, and D.

Issue No. 8: Management of Camping and Facilities

Native vegetation is highly impacted in areas of current dispersed camping where the users are continuously expanding the existing campsites and creating new campsites to meet the growing numbers of users. The impacts from dispersed camping are similar to those of OHV use. An indirect effect of the increase in general camping is the girdling of live trees to create future firewood supplies in areas of high camping use (i.e. Wolf Flats, TNC Island, and Mud Bar Rookery). The removal of the cottonwood trees near campsites is threatening the integrity of the cottonwood gallery that directly supports special status plant species and the diversity of native plants that create a healthy habitat for many species. Resource Protection would be greater under Alternatives B, C, and D.

Cumulative Impacts

Many factors can contribute to the recovery or extinction of a listed species. Ute ladies'-tresses have requirements to sustain a healthy population and maintain numbers towards recovery. The information currently known for the factors that would lead towards recovery include management practices that simulate natural disturbance events and maintain adequate soil moisture levels (Allison, 2001; Arft, 1995). The criteria of simulating natural disturbance in Idaho is lacking due to the regulations of the Palisades Dam. It was determined by the USFWS that the dam would not appreciably reduce the likelihood of the species' survival or recovery over the next 30 years (USDI-BOR, 2004). The population trends from 1996 to 2005 show a variable fluctuation in population numbers across the South Fork populations. Some of the causes could be climatic and flow related. Monitoring Ute ladies'-tresses along the South Fork provides information useful for managing its habitat. Effectively managing Ute ladies'-tresses depends upon detecting and responding to threats, particularly the most manageable threats (i.e., recreation). Continued responsive management by the BLM and USFS is important to Ute ladies'-tresses and its long-term persistence (IDCDC, 2006).

The USFWS identified habitat loss and modification (through urbanization, water development, and conversion of wetlands to agriculture), over collection, competition from exotic weeds, and herbicides as the main current and potential threats to the long term survival of Ute ladies'-tresses (USDI-FWS, 1992).

In Idaho, long-term reduction in new alluvial surfaces and early seral vegetation conditions is likely to prevent establishment of new orchid populations to replace those that would be lost as

sites become dominated by riparian shrub and woodland communities (Moseley, 2000; Murphy, 2001b).

Ute ladies'-tresses is adapted to early to mid seral conditions where competition for light, space, water, and other resources is normally kept low by periodic or recent disturbance events. Non-native weedy plants are frequently adapted to similar environments and act as highly effective competitors with Ute ladies'-tresses because they are often under less pressure from herbivores and disease, or spread and reproduce more rapidly. Competition from exotic plants has been identified as a serious threat at 50% of all extant orchid populations, making this the second most frequent threat after flood control and dewatering. Nearly 50 non-native plant species commonly co-occur with Ute ladies'-tresses. Control of exotic plants with herbicides, however, can potentially have negative impacts on Ute ladies'-tresses and possibly on pollinators that are now dependent on exotic plants for pollen and nectar (Pierson and Tepedino, 2000). The state of Idaho has initiated a program to control noxious weeds along the Snake River using biological control insects (Moseley, 2000; Murphy, 2001b). In the absence of periodic disturbance, such as flooding, fire, or grazing, the composition of riparian and wet meadow vegetation is likely to become more shaded and woody over time, reducing the quality of such sites for the establishment or persistence of Ute ladies'-tresses (Allison, 2001; Arft, 1995; Moseley, 1998a). Several populations in Colorado and Idaho with dense and well-shaded cover of shrub or riparian woodland vegetation have low or declining orchid populations (Coyner, 1990; Jennings, 1989, Moseley, 2000b; Murphy, 2001a).

Ute ladies'-tresses may be susceptible to broadleaf herbicides applied in hay meadows to control noxious weeds. More significantly, the plant's pollinators may be vulnerable to insecticides used to control grasshoppers and other agricultural pests on rangelands (Sipes and Tepedino, 1995). While riparian areas are usually not directly sprayed, wide-ranging bee species can easily contact insecticides that are applied beyond the standard 500-foot buffer zones surrounding watercourses (Pierson and Tepedino, 2000).

Competition from non-native plants is considered the second most widespread threat to this species range wide. Survival of pollinators, vegetation succession, herbicides, intrinsic rarity, and lack of coordinated management across ownership boundaries are considered additional threats.

Under Alternative A, high-use recreational areas would continue to degrade riparian habitat that supports Ute ladies'-tresses. The continued spread of noxious weeds would have an even greater threat to occupied and potential habitat. Overall, this alternative would result in higher cumulative impacts to riparian-wetland areas compared to Alternatives B, and D and the same as C.

4.7.2 Alternative B – Intensive Resource Management with Less Recreation Development

Riparian-Wetland Vegetation

Issue No. 1 – Education Tools/Media

Under Alternative B, in addition to existing kiosk information, the EIVIC, and the Conant Visitor Center, public education efforts would be greatly increased in the form of brochures,

signs, videos, maps, websites, and frequent updates to the boater's guide. Outfitters and guides, camp hosts, and recreation technicians would be provided with training and handout materials to educate the public about the rare and fragile riparian-wetland ecosystem and about the importance of and proper care and maintenance of riparian-wetland areas within the Snake River ecosystem. The boaters guide would provide travel maps, including designated trails and areas authorized for off-highway vehicle (OHV) use. The combination of these resources would provide the BLM and USFS with a valuable tool that would encourage the public to recognize the consequences of past actions along the river system and to foster recreation practices that would allow preservation and protection of the riparian-wetland areas in the Snake River ecosystem. This alternative would result in better public recognition of the need to preserve and restore riparian-wetland areas compared to Alternative A, but would be similar to Alternative C. This alternative would have fewer benefits to riparian-wetland areas compared to Alternative D as a result of the partnerships with state and county organizations, irrigation companies, and commercial businesses proposed under Alternative D.

Issue No. 2 – Protection of Riparian Habitat

Under Alternative B, livestock grazing would not be managed under the SSM classes and their corresponding annual indicator guidelines. Grazing management would instead be managed on an allotment basis in accordance with federal regulations to allow for greater flexibility and more appropriate applications of utilization levels and stubble height requirements. This alternative would also identify currently vacant allotments in the planning area to become unallocated for livestock grazing in a future resource management plan revision. The actions proposed under Alternative B would be more beneficial to riparian-wetland areas compared to Alternatives A and C, but would be the same as Alternative D.

Under this alternative, the designation of specific trails for non-motorized use would attract visitors by making the public aware of improvements to these areas. Diverting the public's interest to designated trails would aid in reducing impacts to other unimproved areas that have historically received impacts causing disturbance to the native riparian-wetland plant communities, excessive bare ground, or increased undesirable plant populations. The Cress Creek Nature Trail designation would be located along a small stream that does not connect to the South Fork. Although minor impacts to the riparian-wetland areas along the stream would occur from foot traffic, the majority of the trail is outside the riparian zone. The levee trails are primarily along the fringes of the riparian zone or are located in drier portions of the riparian-wetland communities. The Wolf Flats trail would be designated in an already impacted mature cottonwood stand, but expansion of the trail would be limited through barrier placement. The Lorenzo Trail would also be designated in a mature, well-armored cottonwood community that has the ability to withstand non-motorized traffic. Foot traffic, horses, and mountain biking would impact a narrow strip of vegetation in these areas, but the riparian-wetland areas as a whole would maintain their natural characteristics. Under Alternative B, the designation of selected trails would result in fewer impacts compared to Alternatives A, C, and D.

Under Alternative B, all users (both overnight and day users) in the entire planning area would be required to carry out their human waste. This would greatly reduce the aesthetic and ecological impacts that have historically occurred along the river. Impacts to riparian-wetland areas under this alternative would be lower than Alternatives A, C, and D.

Under Alternative B, requiring all visitors to furnish their own fire pan and to pack out ashes and partially burned trash would greatly improve the health and vigor of riparian-wetland communities in the planning area. The allowance of burning dead and down wood would remove fuels that would carry a natural wildfire and that would maintain soil stability, thus sustaining ecological processes that would promote a healthy riparian-wetland system. However, enforcement of a ban on girdling or cutting live or standing dead trees and the prohibition of chainsaws would eliminate the removal of large trees and would thus contribute to the protection and preservation of a self-sustaining ecosystem. Firewood requirements under this alternative would result in lower impacts to riparian-wetland areas compared to Alternatives A and C, but would be to the same as Alternative D.

Issue No. 3: Protection of Watershed

Erosion control effects to riparian-wetland areas under Alternative B would be the same as Alternatives A and C, but would be slightly higher than alternative D.

Increased vegetation management projects would benefit restoration of riparian-wetland areas, particularly in areas where projects are implemented to reduce non-native or invasive plants. Improvements to the riparian-wetland vegetative communities would result in improved wildlife habitat and would benefit special status plants and animals. Overall health, vigor, diversity and stability of riparian-wetland habitat under Alternative B would be substantially greater compared to Alternative A and C, but would be similar to Alternative D.

Riparian-wetland impacts of treating noxious weeds and non-native invasive species under Alternative B would be the same as Alternatives A and D. However, impacts would be lower compared to Alternative C.

Issue No. 4: Land Ownership

Under Alternative B, acquiring public access from willing land owners across private land would be considered only where conflicts with resource values could be avoided, and minimal impacts to wildlife could be achieved. This alternative would allow riparian-wetland communities to maintain or improve health conditions by avoiding additional recreation impacts. Impacts under Alternative B would be lower compared to Alternatives A and C, but would be similar to Alternative D.

Under Alternative B, BLM and USFS would continue to work with non-profit partners to obtain conservation easements and acquisitions on private lands adjacent to public land from willing landowners. In addition, coordination with federal and state agencies to purchase land acquisitions and easements would also be pursued. These additional resources would supplement an already successful program to defragment and preserve riparian-wetland habitat in the planning area. With additional support from other federal and state agencies, Alternative B would result in more benefits to riparian-wetland areas compared to Alternative A. This alternative would also result in more benefits than Alternative C, because of the potential for additional public access for recreation activities, and thus more impacts to riparian-wetland areas, under Alternative C. Although Alternative B would be similar to Alternative D, the overall riparian-wetland benefits would be slightly lower because of the additional coordination

with non-profit partners, promotion of the program through maps and the boater's guide, and additional education with the public and outfitters that would be stressed under Alternative D.

Issue No. 5: Protection and Enhancement of Fish, Wildlife, and Botanical Resources

Under Alternative B, opportunities for minimum streamflow water rights would be pursued on selected streams tributary to the Snake River within the planning area. These water rights would ensure that streams are not dewatered as a result of irrigation diversions or hydro power projects. Adequate streamflows would aid in maintaining or restoring riparian-wetland areas in proper functioning condition. This alternative would benefit riparian-wetland habitat to a greater extent than Alternative A, the same as Alternative C, but would provide fewer benefits compared to Alternative D.

Issue No. 6: Management of Off-Highway Vehicles (OHVs)

Under Alternative B, a review of all existing OHV routes on BLM (both designated and undesignated) to identify erosion problems and conflicts with big game wintering habitat, Ute ladies'-tresses, other critical habitats, or areas currently recovering from the 1997 flood would occur. This exercise would identify key areas that have the potential for OHV use that fit within the goals of an ACEC, and it would eliminate current OHV trails, both designated and undesignated, that are not consistent with these goals. All trails not meeting these criteria would be closed to OHV use. Impacts to riparian-wetland areas would be considerably lower under this alternative compared to Alternatives A and C, but would be similar to Alternative D.

Under Alternative B, in addition to publishing OHV designations and closures on maps and the boaters guide, signs would be posted throughout the planning area to inform the public of OHV designations and areas closed to OHV use. This additional level of public education would greatly reduce the amount of unauthorized OHV use in riparian-wetland areas. Closed areas that have historically been impacted by heavy OHV use would begin to recover. Bare areas would begin to revegetate, desirable native woody and herbaceous plants would increase, and an overall improvement in stability, health and vigor of the riparian-wetland vegetation would occur. Impacts of signing designated trails under Alternative B would be less compared to Alternative A and Alternative C, but would be comparable to Alternative D.

Under Alternative B, the BLM and Forest Service would coordinate with the Idaho Department of Lands and the counties to eliminate all motorized access points that allow access to the dry river channels below the ordinary high water mark. Degraded river banks, channels, and riparian-wetland vegetation associated with these access points would begin to recover as native vegetation re-establishes, biodiversity increases, and bare ground and invasive plants decrease. This alternative would result in considerably higher benefits to riparian-wetland areas compared to Alternatives A and C. However, benefits under this alternative would be the same as Alternative D.

Issue No. 7: Management of River Corridor Uses

Under Alternative B, a capacity study to determine visitor use thresholds for the planning area would be conducted, and a limit on commercial permits would be set on a case-by-case basis until the study is completed. This alternative would address potential conflicts between users and the resource damage that may occur as a result of uses that exceed the planning area's

capacity. Impacts to riparian-wetland communities as a result of the visitor capacity study would be the same as Alternatives A, C and D. However, impacts from the management of special recreation permits would be lower under this alternative compared to Alternatives A and, C, but would be similar to Alternative D.

Issue No. 8: Management of Camping and Facilities

Alternative B would include the fee programs and partnerships with county and state agencies as outlined in Alternative A. In addition, a fee increase at river access sites would be implemented as necessary to fund projects established by the South Fork Working Group in cooperation with the Recreation Resource Advisory Council. Although this fee increase would allow for opportunities to improve boat access sites, it could not be used to improve other degraded riparian-wetland areas (such as Wolf Flat, Trestle Bridge, and Heise Bridge areas) that fall outside the fee program. Alternative B would provide higher benefits to riparian-wetland areas than Alternative A, but lower benefits compared to Alternatives C and D.

Under Alternative B, corridor-wide campground monitoring would be adjusted based on camp area conditions. If necessary, campsites would be hardened with gravel or wood chips to increase resiliency of campsites to continual use during summer months. Although the footprint of each campsite would become compacted, hardening would aid in keeping weedy plants under control, both within camp areas and surrounding riparian-wetland areas. Overall, plant communities outside the camp areas would maintain more diverse and vigorous conditions compared to Alternative A. Impacts under this alternative would be the same as Alternatives C and D.

Under Alternative B, only camping in designated campsites would be authorized throughout the planning area (no dispersed camping allowed). Allocation of campsites would be implemented through a check-in or reservation system when necessary, and group size would be limited to 16 people except in larger areas that can accommodate more people. This would aid in reducing the potential to exceed capacity and further encroachment into intact riparian-wetland areas. This alternative would result in fewer impacts to riparian-wetland communities compared to Alternatives A and C, but would have higher impacts than Alternative D.

Issue No. 9: Present and Future River Access Needs

Although several projects for recreation development would be carried forward from Alternative A, Alternative B includes a number of measures in selected areas to harden sites, define and limit parking, implement closures to human entry and motorized use, close campgrounds, maintain public access without additional new developments or facilities, close access points, close and rehabilitate user-created slides/boat access sites, and improve bike trails to prevent erosion. Many of the proposed projects would be implemented to protect additional encroachment into intact riparian-wetland areas. Although some projects would increase recreation opportunities, the susceptibility of riparian-wetland areas to degradation would be low, biodiversity of existing plant communities would be maintained, and ecological processes necessary to sustain a natural riparian-wetland system would continue. Overall, this alternative would result in the lowest impacts to riparian-wetland areas compared to Alternatives A, C, and D.

Cumulative Impacts

Although many of the cumulative impacts would be similar to those listed in the first cumulative impacts paragraph under Alternative A, overall impacts on riparian-wetland communities would be greatly reduced under Alternative B in comparison to Alternatives A and C, and slightly greater than Alternative D. Educating the public on authorized uses, designating and hardening campsites with limited group sizes, designating trails, requiring users to carry out their human waste, requiring users to provide their own fuel source for campfires, erosion control, improved vegetation management, control of noxious weeds and other undesirable plants, improved management of public access points, cooperative efforts to obtain conservation easements and land acquisitions, pursuit of minimum stream flows, eliminating motorized access below the high water mark, and initiating partnerships with county, state and private organizations would result in the highest benefit to riparian-wetland communities. The increment of impacts from Alternative B, when added to the small increment from other land use activities in the planning area, would be discountable and would allow for improvement of riparian-wetland qualities such as diversity and health of vegetative communities, wildlife habitat, and scenic values.

Upland Vegetation

Direct and indirect impacts to upland native vegetation communities would be similar to Alternative A. Under Alternative B, there would be increased efforts in the education of resources users, designation of non-motorized and motorized trails, and closure of non-designated areas to OHV travel. These measures would reduce the level of impacts to native vegetation compared with Alternative A and C. Level of impacts would be similar to Alternative D.

Cumulative Impacts

Cumulative Impacts of Alternative B would be similar to Alternative A.

Endangered, Threatened, Proposed, Candidate, and Sensitive Plant Species

Issue No. 2: Protection of Riparian Habitat

Impacts from livestock grazing would be the same as Alternatives A, C, and D. Alternative B would have more designated trails for non-motorized use than Alternative A. This would give more controlled areas for users to recreate, decreasing the need for users to create new trails. The user created trails that are present would be closed and rehabilitated back to native vegetation. Closure of the areas around Ute ladies'-tresses populations would help reduce the threats of trailing and disturbance within the habitat. The rehabilitation of these trails would increase the health of the native plant habitat. Resource protection would be better under Alternative B than in Alternatives A, C, or D.

Enforcement of a ban on girdling or cutting down live or dead standing trees, and the prohibition of chainsaws would eliminate the removal of large trees. This would contribute to the protection and preservation of native plant habitat for those species that require dead and decaying trees to survive. Firewood requirements under this alternative would result in lower impacts to riparian-wetland areas compared to Alternatives A and C, but would be to the same as Alternative D.

Issue No. 6: Management of Off Highway Vehicles (OHV)

The designation of specified routes and closure of undesiguated routes would be the most beneficial for Ute ladies'-tresses. Specific closures for Ute ladies'-tresses occupied and potential habitat would need to be implemented. Resource protection would be greatest under Alternative B and the same as in Alternative D. Alternatives A and C do not provide for as much resource protection and opportunity for closures of sensitive habitat.

Issue No. 8: Management of Camping and Facilities

The limitations that would be set under Alternative B would better protect native plant habitat and occupied and potential habitat for Ute ladies'-tresses. Resource Protection would be greater under Alternative B, than in Alternatives A and C, but not as good as D.

Cumulative Impacts

Alternative B would be the most beneficial to Ute ladies'-tresses allowing for more resource protection for the riparian areas and closures to occupied and potential habitat. Although resource protection would be higher, the criteria of simulating natural disturbance is lacking due to the regulations of the Palisades Dam (BOR, 2004). Without the scouring and deposition of new habitat for Ute ladies'-tresses, the continued existence for this species on the South Fork would be in question.

4.7.3 Alternative C – Recreation Development Emphasis

Riparian-Wetland Vegetation

Issue No. 1 – Education Tools/Media

Under Alternative C, the benefits of educating river users would be higher than Alternative A, but would be similar to Alternative B. This alternative would have slightly fewer benefits to riparian-wetland areas compared to Alternative D as a result of the partnerships with state and county organizations, irrigation companies and commercial businesses proposed under Alternative D.

Issue No. 2 – Protection of Riparian Habitat

Impacts from livestock grazing under Alternative C would be the same as Alternative A, but would be higher compared to Alternatives B, and D.

The designation of selected non-motorized trails would be similar to Alternative B. However, under this alternative, BLM would look for opportunities to develop additional trails, some of which may occur in riparian-wetland areas. The potential for additional impacts to riparian-wetland areas that are currently undisturbed would result in higher impacts compared to Alternatives B and D. However, impacts would be lower than Alternative A because the trails under Alternative C would be developed and maintained as opposed to being created without authorization and allowed to cause substantial resource damage as discussed under Alternative A.

Under Alternative C, all users (both overnight and day users) in the South Fork Canyon would be required to carry out their human waste. However, no requirements would be put in place for human waste removal on the remainder of the planning area. Although the aesthetic and ecological values of the riparian-wetland areas along the South Fork would be improved, the rest of the planning area would continue to be impacted by human waste issues. Impacts to riparian-wetland areas under this alternative would be lower than Alternative A, but would be higher compared to Alternatives B and D.

Under Alternative C, the burning of dead and down wood in the entire planning area would be allowed. However, visitors would be required to provide their own fire pans or use agency provided fire rings, and to pack out ashes and partially burned trash. Burning only dead and down wood would prevent the deforestation of the cottonwood galleries and other woody communities along the river. However, the removal of downed timber would reduce fuels that would otherwise carry a natural wildfire, and thus, ecological processes necessary to maintain a natural riparian-wetland system would be altered. Allowing for the removal of dead and down wood under Alternative B would decrease the habitat for plant and fungi species that are dependent on decaying wood. In addition, the removal of dead and down material could destabilize the soil, resulting in erosion that would preclude establishment and maintenance of healthy riparian-wetland vegetation. Impacts to natural ecological processes in riparian-wetland areas under this alternative would be lower compared to Alternative A, but greater than Alternatives B and D.

Issue No. 3: Protection of Watershed

Erosion control effects on riparian-wetland areas under Alternative C would be the same as Alternatives A and B, but be slightly higher than Alternative D.

Under Alternative C, all vegetation management projects would benefit recreation. As the majority of recreation that occurs in the planning area takes place in riparian-wetland areas, some projects may cause vegetative impairment resulting in a decline in health, vigor, diversity and stability of riparian-wetland habitat. Consequently, habitat for wildlife and special status plants and animals would be affected. Impacts of vegetation management on riparian-wetland areas under this alternative would have higher impacts compared to Alternatives A, B, and D.

Under Alternative C, noxious weeds would be treated according to Idaho state law, and requirements of the Ute ladies'-tresses BA would be adhered to, but other undesirable non-native species would not be treated. With unchecked encroachment of non-native forbs, annual grasses and exotic trees, these species would have opportunity to replace riparian-wetland species, making native communities susceptible to degradation and destabilization. Impacts under Alternative C would be considerably higher than Alternatives A, B, and D.

Issue No. 4: Land Ownership

Under Alternative C, all public access locations through private land would be pursued with willing landowners whenever feasible. Coordination with other agencies would aid in avoiding duplication of efforts. Although this proposal may appear to be advantageous to the public, it may result in damage to riparian-wetland areas and/or private property in some instances if resource values are not considered. This alternative does not take into consideration the potential

damage that may occur if certain public access points are obtained. Impacts to riparian-wetland areas under Alternative C would be higher compared to Alternatives B and D, but would be similar to Alternative A.

Management of conservation easements and land acquisitions under alternative C would be similar to Alternative B, but public access for recreation activities would also be pursued under Alternative C. This alternative would increase the potential for recreation impacts, and would thus provide fewer benefits to riparian-wetland areas compared to Alternatives B and D. However, Alternative C would result in more benefits to riparian-wetland areas than Alternative A.

Issue No. 5: Protection and Enhancement of Fish, Wildlife, and Botanical Resources

The pursuit of minimum streamflows under Alternative C would be the same as Alternative B. Although adequate streamflows would aid in maintaining or restoring selected riparian-wetland areas in proper functioning condition, this alternative would benefit riparian-wetland habitat as a whole to a lesser degree compared to Alternative D. However, the benefits would be greater than Alternative A.

Issue No. 6: Management of Off-Highway Vehicles (OHVs)

Under Alternative C, routes would be designated and new opportunities for motorized trails would be pursued without consideration of conflicts with critical habitats including riparian-wetland areas or goals of the Snake River ACEC. This alternative would result in vegetative impairment of riparian-wetland areas through increased bare ground, an increase in the spread of noxious weeds and other non-native invasive species, a decline in establishment and regeneration of preferred trees and shrubs, and an increase in dead and decadent trees and shrubs. The overall stability and vigor of riparian-wetland areas in the planning area would be threatened.

Alternative C would result in considerably higher impacts compared to Alternatives A, B or D. Under Alternative C, the impacts of signing designated trails, along with identifying routes on maps and in the boater's guide would be the same as Alternative B and Alternative D and lower than Alternative A.

Under Alternative C, no limitations would be set on motorized access points on public lands that provide access to the dry river channels below the high water mark. Four-wheel drive and OHV trailing below the high water mark would continue to degrade the river banks, channel and riparian-wetland vegetation. As native vegetation is removed and soils are disturbed, the biodiversity of the existing plant communities would diminish, and the potential for invasion from non-native plants and noxious weeds would increase. The impacts of motorized closures (including four-wheel drive trucks and OHVs) below the ordinary high water mark would be considerably higher than Alternatives B and D, but would be the same as Alternative A.

Issue No. 7: Management of River Corridor Uses

Under Alternative C, a capacity study to determine visitor use thresholds for the planning area would be conducted, but no implied limit on commercial permits would be set. Impacts to riparian-wetland communities as a result of the visitor capacity study would be the same as

Alternatives A, B, and D. However, impacts from the management of special recreation permits would be higher under this alternative compared to Alternatives A, B, and D.

Issue No. 8: Management of Camping and Facilities

Alternative C would include the fee programs (including fee increases) and partnerships with county and state agencies as outlined in Alternative B. However, Wolf Flat, Trestle Bridge and Heise Bridge would be included in the fee program. This would allow for opportunities to improve these high-use recreation areas with degraded riparian-wetland areas. These improvements would better define the footprint of each use area through installation of barriers, signs and parking areas that would eliminate further encroachment into intact riparian-wetland vegetation. Although recreation impacts would still continue to occur in these areas, improvement and hardening of these sites would confine the use into one area, thus allowing recovery and re-establishment of adjacent riparian-wetland areas. The additional funds available to protect these high-use areas would result in greater improvements to riparian-wetland areas compared to Alternatives A and B, but would be the same as Alternative D.

Under Alternative C, the impacts of corridor-wide campground monitoring and hardening of campsites (when necessary) would result in the same impacts to riparian-wetland areas as Alternative B and D. Impacts would be lower compared to Alternative A.

Under Alternative C, with the exception of the South Fork Canyon, dispersed camping by boat and by vehicle would be authorized anywhere throughout the planning area. Along the South Fork, only use of designated camp areas would be authorized, but the potential would exist for additional campsites to be designated in the future. Campsite use throughout the planning area would be available on a first come-first served basis. However, during high periods of use (weekends and holidays), campsites would be allocated. Group size would have a higher limit (25 people) compared to the limit of 16 people under Alternative B, with the exception of bigger sites that can accommodate larger groups. Camp sites would have the potential to exceed capacity, and encroachment into intact riparian-wetland areas would increase the footprint size of camp areas, thus resulting in degradation of the plant communities. Use of the encroached areas would perpetuate, and formerly intact riparian-wetland areas would have increased bare ground and undesirable herbaceous plants, and decreased amounts of trees, shrubs, and other stabilizing ground cover. This alternative would result in fewer impacts than Alternative A, but higher compared to Alternatives B and D.

Issue No. 9: Present and Future River Access Needs

Although Alternative C proposes to adopt all the recreation development projects under Alternative B, some of the developments would be more substantial as they are focused on additional recreation opportunities. The differences under Alternative C would include four parking areas, four boat access improvements, five camping areas, four trails, and a temporary human entry closure as opposed to a permanent closure. Higher public use of the planning area would increase the susceptibility of riparian-wetland areas to degradation. Biodiversity of existing plant communities would diminish, and ecological processes necessary to maintain a natural riparian-wetland system would be altered. Overall, this alternative would result in higher impacts to riparian-wetland areas compared to Alternatives B, and D. However, lower impacts

than Alternative A would occur as six of the projects proposed under Alternative A would not be adopted under this alternative.

Cumulative Impacts

Under Alternative C, many cumulative impacts would be similar to Alternative A, but impacts would occur to a lesser extent. Cumulative impacts would be higher than Alternatives B and D. This alternative would seek additional recreation opportunities such as increases in non-motorized and motorized trails, public access points regardless of resource conflicts, snow removal at federal boat access sites, campsites, boat ramps, commercial permits, parking areas, and user-created boat slides. Requirements for human waste disposal, camp fires, erosion control, management of invasive plants, human closures, and group sizes at campsites, would be more lenient compared to Alternatives B and D.

Under Alternative C, high-use recreational areas would continue to degrade riparian-wetland communities. The functionality, biodiversity, and overall ecological processes necessary to sustain a healthy riparian-wetland system would be diminished. Elevated use in the planning area would increase the susceptibility of riparian-wetland areas to degradation. Biodiversity of existing plant communities would diminish, and ecological processes necessary to maintain a natural riparian-wetland system would be altered. The increment of impacts from Alternative C, when added to the small increment from other land use activities in the drainage, would not be discountable and would not allow for improvement of riparian-wetland resources. Overall, this alternative would result in higher cumulative impacts to riparian-wetland areas compared to Alternatives B and D, but would be lower compared to Alternative A.

Upland Vegetation

Direct and indirect impacts to upland native vegetation communities would be similar to Alternative A. Under Alternative C, there would be an increased emphasis on recreation development, including the development of more trails, both motorized and non-motorized. Under Alternative C, impacts to upland native vegetation would be higher than under Alternative B and D, but less than under Alternative A.

Cumulative Impacts

Cumulative Impacts of Alternative C would be similar to Alternative A.

Endangered, Threatened, Proposed, Candidate, and Sensitive Plant Species

Issue No. 2: Protection of Riparian Habitat

Impacts from livestock grazing would be the same as Alternatives A, B, and D.

Alternative C would identify additional potential trails for non-motorized use. This would give more controlled areas for users to recreate, decreasing the need for users to create new trails. The user created trails that are present would not be closed, so the addition of new trails would add to the amount of use occurring. With no rehabilitation on existing trails to areas that are causing resource damage, the health of the native plant habitat would continue to be threatened.

Resource protection under Alternative C would be similar to A and would be less protective than Alternatives B or D.

Issue No. 6: Management of Off Highway Vehicles (OHV)

Alternative C would be similar to Alternative A, with the addition of seeking out more opportunities to add even more trails. Increasing the number of trails could lead to more visitor use and possibly more unauthorized use than currently exists. Specific closures for Ute ladies'-tresses occupied and potential habitat would need to be implemented. Alternatives A and C do not provide for as much resource protection and opportunity for closures of sensitive habitat as Alternatives B and D.

Cumulative Impacts of Alternative C

Cumulative impacts would be the same as Alternative A.

4.7.4 Alternative D – Proposed Action

Riparian-Wetland Vegetation

Issue No. 1 – Education Tools/Media

Alternative D is similar to Alternatives B and C, but under this alternative, partnerships with state and county organizations, irrigation companies and commercial businesses have been proposed to assist with signing, issuing and distributing updated boater's guides, maps of designated roads and trails, and advertising and/or linking to pod casts and websites related to management of the Snake River. Alternative D would result in the best public recognition of the need to preserve and restore riparian-wetland areas compared to Alternatives A, B, and C.

Issue No. 2 – Protection of Riparian Habitat

Impacts from livestock grazing under Alternative D would be the same as Alternative B, but would be lower compared to Alternatives A and C.

The designation of selected non-motorized trails would be similar to Alternative B. However, under Alternative D, user-created trails may be designated or closed depending on the appropriateness of each trail. The potential for designating additional trails would result in lower impacts to riparian-wetland areas compared to Alternatives A and C, but higher impacts compared to Alternative B.

Under Alternative D, all users in the entire planning area would be required to carry out their human waste except where public facilities are available. Impacts to riparian-wetland areas under this alternative would be lower than Alternative A and C, but would be to the same as Alternative B.

The campfire requirements under Alternative D would have the same impacts on riparian-wetland areas in the planning area as Alternative B

Issue No. 3: Protection of Watershed

Under Alternative D, upland erosion control would be similar to Alternatives A, B, and C, but additional monitoring would be conducted to identify unauthorized uses that have resulted in erosion. This would aid in eliminating erosion problems before they cause extensive damage to riparian-wetland areas in the planning area. Erosion control effects on riparian-wetland areas under Alternative D would be lower compared to Alternatives A, B, and C.

Under Alternative D, vegetation management projects would benefit river restoration, wildlife habitat, special status species, recreation, and would be favored by the public. Overall health, vigor, diversity, and stability of riparian-wetland areas would improve while providing a favorable environment for public recreation and suitable habitat for wildlife and special status species. Impacts of vegetation management projects on riparian-wetland areas under this alternative would be lower compared to Alternatives A, B, and C.

Under Alternative D, control of noxious weeds and other undesirable species would have the same impacts on riparian-wetland communities as Alternatives A and B, but the impacts would be lower compared to Alternative C.

Issue No. 4: Land Ownership

Under Alternative D, the impacts on riparian-wetland areas related to acquiring public access from willing land owners would be similar to Alternative B. However, coordination with other agencies would aid in avoiding duplication of efforts. Like Alternative B, this alternative would consider conflicts with resource values and would require minimal impacts to wildlife. This alternative would allow riparian-wetland communities to maintain or improve health conditions by avoiding additional recreation impacts. This alternative would result in lower impacts compared to Alternatives A and C.

The pursuit of conservation easements and land acquisitions with willing landowners under Alternative D would be similar to Alternative B, but with the addition of continued work with non-profit partners, promotion of the land acquisition and conservation easement program in maps and the boater's guide, and additional education with the public and outfitters about the program. Compared to Alternatives A, B, and C, this alternative would be the most effective in supplementing the existing program to defragment and preserve riparian-wetland habitat in the planning area.

Issue No. 5: Protection and Enhancement of Fish, Wildlife, and Botanical Resources

The pursuit of minimum stream flows under alternative D would be the same as Alternative B, but with the addition of working with the IDF&G to determine and prioritize tributary reconnects. Although disconnected tributaries may have adequate riparian-wetland communities, the natural continuity with the river system has been interrupted, and vegetative communities have been altered as a result. This alternative would provide an opportunity to restore native riparian-wetland communities and their associated ecological processes. Alternative D would aid in maintaining and restoring riparian-wetland areas to a greater extent compared to Alternatives A, B, or C.

Issue No. 6: Management of Off Highway Vehicles (OHVs)

Management of OHV trails under Alternative D would be similar to Alternative B, but under Alternative D only one trail would be designated. Designated routes would be mapped and available to the public. This additional public knowledge of trail designations is expected to result in higher compliance levels, and would thus, aid in protection of riparian-wetland areas in the planning area. Closure of the planning area to unauthorized OHV use would eliminate much of the resource damage that has historically occurred in the riparian-wetland areas. With reduced disturbance and impairment, existing plant communities would become more vigorous and diverse, and the potential for increased non-native plants and noxious weeds would be reduced. Impacts to riparian-wetland areas would be considerably lower under this alternative compared to Alternatives A, and C.

Under Alternative D, in addition to publishing OHV designations and closures on maps and the boater's guide, and posting signs throughout the planning area to inform the public of OHV designations and closures, a website would be made available with information about motorized access in the planning area. Although impacts would be similar compared to Alternative B the inclusion of a website to better educate the public would result in fewer impacts to riparian-wetland areas compared to Alternatives A and C.

Under Alternative D, the impacts of motorized closures (including four-wheel drive trucks and OHVs) of access points below the ordinary high water mark would be the same as Alternative B, but would be considerably lower than Alternatives A and C.

Issue No. 7: Management of River Corridor Uses

Under Alternative D, a capacity study to determine visitor use thresholds for the planning area would be conducted. New non fishing commercial permits would be granted on a yearly basis until a limit could be set based on the capacity study. These permits would be issued for varying locations and days of the week to reduce conflicts with resources and other recreationists. Implementation of Alternative D would result in fewer overall impacts to riparian-wetland areas compared to Alternatives A, B, and C.

Issue No. 8: Management of Camping and Facilities

Corridor-wide management of recreation facilities with county and state partnerships and expansion of the fee program under Alternative D would be the same as Alternative C, and would provide higher benefits to riparian-wetland areas compared to Alternatives A and B.

Under Alternative D, the impacts of corridor-wide campground monitoring and hardening of campsites (when necessary) would result in the same impacts to riparian-wetland areas as Alternatives B and C. Impacts would be lower compared to Alternative A.

Under Alternative D, only camping in designated campsites would be authorized along the river corridor in the riparian area (no dispersed camping allowed). However, designation of campsites for boat camping would be a phased process. Vehicle camping would be limited to five days with the potential for additional campsite designations in the future. Campsites would be allocated, and group sizes would be based on determinations of a capacity study. A check-in or reservation system and a fee program (if needed) would be implemented if capacity thresholds

are met. This alternative would alleviate the potential to exceed capacity, and further encroachment into intact riparian-wetland areas would be averted. Determining visitor thresholds would greatly improve management of the planning area, and would thus, result in fewer impacts to the riparian-wetland system compared to Alternatives A, B, and C.

Issue No. 9: Present and Future River Access Needs

With few exceptions, projects proposed for recreation development under Alternative D would be very similar to Alternative B. The exceptions under this alternative include a parking area, a boat ramp, and a trailhead in addition to the proposals under Alternative B, and two bike trails (non-motorized). Although some projects would increase recreation opportunities, the susceptibility of riparian-wetland areas to degradation would be low, biodiversity of existing plant communities would be maintained, and ecological processes necessary to sustain a natural riparian-wetland system would continue. Overall, this alternative would result in lower impacts to riparian-wetland areas compared to Alternatives A and C, but slightly higher impacts than Alternative B.

Cumulative Impacts

Although many of the cumulative impacts would be similar to those listed in the first paragraph under Alternative A, overall impacts on riparian-wetland communities would be greatly reduced under Alternative D in comparison to Alternatives A and C, and impacts would be slightly less than Alternative B. Aspects of Alternative D that would result in lower impacts compared to Alternative B include more frequent updates to the boater's guide, partnerships with state, county and private organizations for public education and access issues, promotion of the conservation easement/land acquisition program with the public and outfitters, cooperation with IDF&G to prioritize tributary reconnect projects, providing maps of designated trails to the public, posting motorized access information on a public website, including additional facilities in the fee program, and adopting more restrictions on new commercial permits.

Conversely, aspects of Alternative D that would result in higher impacts than Alternative B include designating user-created trails, designating additional campsites in the South Fork Canyon, developing additional parking at Irwin, and developing a trailhead for the levee trail.

The increment of impacts from Alternative D, when added to the small increment from other land use activities in the planning area, would be discountable and would allow for improvement of riparian-wetland qualities such as diversity and health of vegetative communities, wildlife habitat, and scenic values.

Upland Vegetation

Direct and indirect impacts to upland native vegetation would be similar to Alternative A. Under Alternative D, vacant allotments would be identified for a change in status from available to unallocated for livestock grazing. Selection of Alternative D would have no immediate impact on the availability of these allotments for livestock grazing, but would identify them for consideration in a Land Use Plan revision for a change in status to unallocated. Because these allotments are small parcels with limited access and many have been vacant for an extended period, there would be little to no discernable difference in upland native plant community

condition. Impacts on upland native plant communities under Alternative D would be similar to Alternative B and less than either Alternative A or C.

Cumulative Impacts

Cumulative Impacts of Alternative D would be similar to Alternative A.

Endangered, Threatened, Proposed, Candidate, and Sensitive Plant Species

The effects from livestock grazing would be the same as in Alternative A.

Impacts from non-motorized trails would be the same as Alternative B.

Impacts from camp fires would be the same as Alternative B.

Issue No. 6: Management of OHVs

Under Alternative D, benefits to TES and other native plant communities would be greater compared to Alternatives A, B, and C because more information about public lands and appropriate uses would be distributed to the public.

Issue No. 8: Management of Camping and Facilities

The extra group size and length of stay restrictions in Alternative D make this the most protective for native plant habitat and Ute ladies'-tresses occupied and potential habitat compared to Alternatives A, B, and C.

Cumulative Impacts

Cumulative impacts for TES plans would be the same as those described under Alternative B.

4.8 Wildlife and Aquatic Species Habitat Management

4.8.1 Alternative A – Existing Management Situation

Threatened, Endangered and Sensitive Species, Wildlife, Migratory Birds

Issue No. 1: Education of River Users

Under Alternative A, no changes would be made to existing public education efforts. The public would continue to receive valuable information about the Snake River system through existing kiosk information, the boater's guide, the EIVIC, and the Conant Visitor Center. These activities are proving beneficial for fish, threatened, endangered and sensitive (TES) species, migratory birds, and other wildlife and plant species.

Current signs and maps to inform visitors about authorized use areas and federal regulations would be more limited than those proposed under Alternatives B, C, and D. Websites and pod casts for the river would not be constructed under this alternative, as is proposed under Alternatives B, C, and D. Overall, visitor education regarding the importance of and proper care and maintenance of riparian-wetland areas would take place to a lesser degree compared to

Alternatives B, C, and D. Under this alternative, public recognition of the rare and fragile riparian-wetland ecosystem would occur at a lower rate than under Alternatives B, C, or D. Consequently, the areas currently impacted by recreational activities would continue to decline, and additional encroachment into intact riparian-wetland areas would result in a net loss of riparian-wetland habitat. Consequently, habitat for special status species, migratory birds, and other wildlife species would continue to decline at a faster rate compared to Alternatives B, C, and D.

Issue No. 2: Protection of Riparian Habitat

The BLM manages domestic livestock grazing in accordance with the Code of Federal Regulations 43 CFR 4100 under all Alternatives. The BLM authorizes allotment specific terms, conditions, and guidelines based upon the regulations and applicable resource values and concerns.

The majority of grazing within the planning area occurs in the spring. This provides an opportunity for vegetation to recover and provide forage and cover for TES species, migratory birds, and other wildlife species. Current grazing practices in the majority of allotments are meeting standards and providing habitat needs for TES species, migratory birds, and other wildlife species. However, grazing in riparian habitats may result in a loss of existing roost or perch trees; and potential nest, roost, or perch trees required by bald eagles, other raptors, songbirds, and small mammals. Loss of perch trees may reduce prey availability and require additional energy to be expended during foraging. Additionally, grazing may reduce the density of willow and eliminate cottonwood and willow reproduction reducing cover and nesting opportunities for small mammals and migratory songbirds. Permitting available vacant grazing allotment would result in reduced cover and browse for wildlife. Under Alternative A, impacts to TES, migratory birds, and other wildlife would be similar to Alternative C, and greater impacts compared to Alternatives B and D.

The lack of designated trails and the increase of recreational uses have resulted in increased adverse impacts to fish, TES, migratory songbird and other wildlife and plant habitat. Currently, under Alternative A, there are few designated and many user-created non-motorized trails. User created trails have resulted in an increase in habitat disturbance by several trails and offshoots of trails all leading to the same areas. User created trails may fragment habitat required by TES species, migratory songbirds and other wildlife for foraging, nesting and breeding and the resultant human traffic may disrupt the natural biorhythms of these species. Continued management under Alternative A may result in greater impacts to TES, migratory bird, and other wildlife required habitats and species than Alternatives B, C, or D.

The use of portable toilets to contain human waste by outfitters and guides within the canyon help protect the natural resources found there. The lack of containment and proper disposal of human waste throughout the planning area and within the South Fork Canyon by day users may result in humans traveling deeper into vegetation with resultant disturbance of TES, migratory bird and other wildlife habitat as well as disturbance of TES, migratory bird, and other wildlife species.

The requirement of a human waste carryout system for overnight campers along the South Fork Canyon reduces the impacts to habitat and TES species, migratory songbirds and other wildlife species along that stretch of the river. However, encroachment into currently undisturbed habitats by day users throughout the planning area has resulted in impacts to potential habitat for TES species, migratory songbirds and other wildlife species and disturbance during critical seasons such as breeding, nesting or wintering. Failure to remove all human waste may have modified behavior of some wildlife and increased more generalist species (such as ravens, crows and raccoons) into specific habitats. This may have reduced the desirability of limited habitats to TES species and may also result in predation of TES nests by ravens, crows and other generalist species. Impacts to TES species, migratory songbirds and other wildlife species and habitats under Alternative A would be greater than impacts under Alternatives B, C, or D.

Allowing unlimited removal of dead and downed wood under Alternative A would result in a higher impact to wildlife species compared to Alternatives B, C and D. This activity would remove cover, foraging and perching habitat for TES species and would expand bare areas created by campers which could lead to further disturbance of existing vegetation and TES species, migratory songbirds and other wildlife species. Snags (standing dead or dying trees) and downed wood (logs lying on the forest floor) provide important habitat resources for many wildlife species. Approximately 20 percent of wildlife species found in forests rely on dead and dying wood. Hollow cavities provide homes for many birds and small mammals, insects in the bark provide a food source, and the space between the bark and trunk provide homes for bats, tree frogs, and beetles. Snags also provide perches for raptors to hunt from, feed, roost and nest on. Amphibians, reptiles, and insects use snags and downed wood as store houses. Lichens, mosses, and fungi found on dead wood and snags return nutrients to the soil through the nitrogen cycle as well as provide food for a variety of wildlife species. Decaying logs also provide habitat for the establishment of seedlings and saplings increasing the complexity of the forest and providing additional habitat for wildlife species. Removal of these snags and downed wood removes wildlife habitat.

Issue No. 3: Protection of Watershed

Limiting erosion reduces habitat disturbance and sediment introduction into the aquatic ecosystem.

Due to soil types in the Stinking Springs area erosion can be at high levels. Current projects being developed are designed to significantly reduce erosion in this area and rehabilitate heavily eroded areas. Reducing erosion and rehabilitating disturbed upland areas would provide cover for prey species of bald eagles. Limiting development to protect resources would also protect the integrity of the planning area. Limiting projects may result in long term declines in the health of the habitat. Under Alternative A, impacts to TES species, migratory songbirds, and other wildlife species and habitats would be greater than those under Alternative B, C, or D.

Habitat is the key to wildlife and limiting vegetation improvement projects would fail to maximize habitat potential for TES species, migratory songbirds, and other wildlife species. Limiting projects would reduce immediate impacts to TES species, migratory songbirds, and other wildlife species but would increase long-term impacts as habitat health declined. Impacts

to TES species, migratory songbirds, and other wildlife species under Alternative A would be greater than Alternative B but less than Alternatives C or D.

Many noxious weeds grow in thick, shrubby, patches if not controlled. Current weed treatment plans have resulted in some instances of monocultures of noxious weed patches. While thick shrubby vegetation provides cover and food for wildlife species, patches of noxious weeds remove native plants and reduce habitat and forage for native TES species, migratory songbirds, and other wildlife species. Modification of plant community composition would also lead to modifications of wildlife community composition and may attract more generalist species such as magpies, crows, ravens, raccoons, etc. Invasive aquatic plants (e.g., *eurasion millefoil*) if found and left uncontrolled in the Snake River ecosystem could eventually reduce forage availability and quality of waterfowl forage, provide habitat and increase mosquito populations which may increase the spread of West Nile Virus, may ultimately change aquatic wildlife species composition and population numbers. Current treatment plans include chemical, biological, mechanical, and cultural controls. Impacts to TES species, migratory songbirds, and other wildlife species under Alternative A are the same as Alternatives B and D but less than Alternative C.

Fish play a major role in the diet of bald eagles and other wildlife species. An invasion of undesirable aquatic species may change the fish community within the Snake River ecosystem. Different fish species exhibit different ecological and life-history characteristics which may influence vulnerability and seasonal differences in their exploitation by eagles (Grainger et al. 2002). Without public outreach on the identification and importance of controlling undesirable aquatic species, the fish community could change, resulting in lower foraging success for bald eagles and other wildlife species. Impacts on TES species, migratory songbirds and other wildlife species under Alternative A would be greater than under Alternatives B, C, and D.

Issue No. 4: Land Ownership

Under Alternative A, current levels of signing, monitoring for unauthorized use and limited public access has resulted in high use and damage to resources at specific sites. Unauthorized use has resulted in buildings, agricultural fields, and roads established on public lands without permits, easements, or right of ways. These activities have removed habitat for TES species, migratory songbirds and other wildlife species. Impacts to TES species, migratory songbirds, and other wildlife species under Alternative A would be greater than those under Alternatives B and D but less than Alternative C.

Conservation easements and land acquisitions are providing perpetually conserved habitat for TES species, migratory songbirds, and other wildlife species. This program has far reaching effects for protecting the environment and reducing impacts from increased human activities within the planning area. The impacts to TES species, migratory songbirds and other wildlife species under Alternative A would be greater than Alternatives B and D but less than Alternative C.

Issue No. 5: Protection and Enhancement of Fish, Wildlife, and Botanical Resources

Lack of snow removal at boat access sites limits disturbance to wintering wildlife. The planning area provides crucial habitat for wintering big game and perching and foraging habitat for bald

eagles. Noise and activity from snow removal vehicles would disturb those species during critical seasons of the year. Impacts to TES species and other wildlife species under Alternative A would be the same as Alternative D, less than Alternative C, and greater than Alternative B.

Recently the IDF&G has requested that the BLM close public lands near Stinking Springs and Wolf Flats to human entry during critical seasons of the year for big game. Disturbance of big game (deer, moose, and elk) during the winter season has resulted in reduced birth rates, reduced fawn weights and mortality of fawns and does. Activity within and adjacent to key wintering areas adds stress and increases energy drain for animals. They may be forced to move about more than normal and even relocate to less favorable habitat. Winter closure in this area would reduce disturbance to big game during critical times of the year and also provide undisturbed wintering habitat for other wildlife species. Spring closures within ¼ mile of nesting bald eagles prevent added stress during critical breeding and nesting bald eagles. Undue disturbance could result in nest abandonment by eagles ultimately reducing their productivity and survivorship. Closures within ¼ mile of nesting bald eagles currently only along the SFSR would also reduce stress and disturbance to other wildlife species during their reproductive season. Current levels of use and designation of campsites has limited habitat and wildlife disturbance to specific areas. Impacts to TES species and other wildlife species under Alternative A would be less than Alternatives C or D but greater than greater than Alternative B.

Issue No. 6: Management of Off-Highway Vehicles (OHV)

OHV use results in negative impacts to fisheries, wildlife and botanical resources due to erosion, soil compaction, noise disturbance, and the spread of undesirable and noxious weeds.

Designating specific routes and closing all other unauthorized routes would limit disturbance of habitat and wildlife to specific areas. Designated trails would be designed or rerouted to avoid habitat important to sensitive species (bald eagles, YBCUs, etc). Limiting trail width would prohibit increased habitat disturbance to existing trails. Currently there are steep climbs that are exhibiting high rates of erosion. Failure to control erosion in these areas would result in further disturbance, such as deeper gullies, wider trails (to avoid gullies), increased water and wind erosion which may result in large areas devoid of vegetation and devoid of wildlife. Impacts to TES species, migratory songbirds, and other wildlife species under Alternative A would be less than those under Alternative C, and slightly greater than under Alternatives B or D.

Current patrol levels have resulted in adverse impacts to fisheries, wildlife, and botanical resources. Recreationists are accessing public lands near Stinking Springs and Wolf Flats that are closed to human entry from December 1 to April 30 during the closure. Current levels of law enforcement are unable to monitor the area effectively. This results in disturbance to big game that winter there, which lowers survivability. Current levels of law enforcement have also allowed many user created trails to be developed resulting in crisscrossing trails, many trails leading to the same locations, high erosion areas and steep hill climbs. Impacts to TES species, migratory songbirds, and other wildlife species under Alternative A are greater than those under Alternatives B, C, or D.

A lack of signs limits public knowledge of access points which benefits resources by minimizing visitor impacts. High use at known access points has resulted in increased and spreading

disturbance at these sites. Impacts to TES species, migratory songbirds, and other wildlife species under Alternative A are greater than those under Alternatives B, C, or D.

OHV use below the high water line potentially disturbs TES species, migratory songbirds, and other wildlife that use the river for drinking, bathing, and foraging. Closing OHV travel below the high water line except on designated routes would limit disturbance to those species. Impacts to TES species, migratory songbirds, and other wildlife species are similar Alternative C and greater than those under Alternatives B, and D.

Issue No. 7: Management of River Corridor Uses

Increased use within the planning area has led to conflicts between users and increased impacts to TES species, migratory songbirds and other wildlife species. Conducting a visitor capacity study would identify those conflicts and impacts allowing BLM and USFS to manage them appropriately resulting in fewer impacts to habitats and wildlife.

Commercial permits are currently evaluated on a case-by-case basis however, no studies have been conducted to identify when impacts to wildlife and habitat may be exceeded. Limits may be unintentionally exceeded without some controls in place.

Impacts to TES species, migratory songbirds and other wildlife species are greater under Alternative A than Alternatives B, C, or D.

Issue No. 8: Management of Camping and Facilities

Due to the potential for an increase in visitor use, current guidelines may be inadequate to protect and conserve natural resources in both dispersed and designated campgrounds. Camp facilities are inadequate, group sizes too large, and the continued and amount of use overwhelms the ability of fisheries, wildlife, and botanical resources to be protected. Current monitoring guidelines are unable to cope with actual impacts.

Impacts to TES species, migratory songbirds and other wildlife species under Alternative A would be greater than those under Alternatives B, C, or D.

Issue No. 9: Present and Future River Access Needs

Current level of use at existing undeveloped river access points has led to the degradation of habitat around these sites. Further development of the existing user created areas would stretch maintenance and monitoring resources which would result in continued habitat degradation around these sites.

Current levels of use, expanding areas of habitat degradation (i.e. new homes and roads in planning area), and activity in unmonitored and uncontrolled user created sites has a potential influence on the relocation of some bald eagle nests near some of these sites and displacement of big game during critical seasons to areas with reduced human activity and disturbance. Allowing continued high levels of use at undeveloped sites and user created access points would intensify disturbance of TES species, migratory songbirds, and other wildlife. Impacts to TES species,

migratory songbirds and other wildlife under Alternative A is greater than under Alternatives B, C, or D.

Cumulative Impacts

Activities that occur on public and private lands all affect wildlife use patterns, the quantity and quality of habitats, and population health. Cumulative impacts within the planning area include livestock grazing, wintering big game, hunting, fishing, OHV use, hiking, biking, camping, wildlife viewing, farming, and boating.

Under the 1991 plan, active bald eagle nests have increased from 11 to 25 throughout the planning area. Signage and closures within Zone 1 of active nests have assisted eagles in achieving a reproductive rate within the planning area that exceeds the statewide reproductive rate. Even with the increase in active bald eagle nests, some nests have relocated away from high disturbance areas. Recent winter closures near Stinking Springs and Wolf Flats have reduced winter mortality of big game. Conservation easements and acquisitions of lands have protected and conserved habitat within the planning area required by TES species, migratory birds, and other wildlife for survival. However, year-long fishing likely disturbs winter roosts of bald eagles and may disturb big game and other wildlife using the river for drinking, bathing, or foraging.

Other results of cumulative impacts to TES species, migratory birds, and other wildlife under the 1991 Snake River Plan are obvious and include habitat degradation around dispersed campsites, user created OHV trails resulting in crisscrossing trails, increased erosion and trail miles, garbage left in dispersed campsites, disturbance of big game during critical wintering seasons, and bald eagle nest relocation.

Continued activity under Alternative A would likely continue to degrade habitats in ever increasing areas and disturb TES species, migratory birds, and other wildlife during critical seasons more than under Alternatives B, C, or D.

Aquatic Species

The education activities that are being conducted under the present Snake River Action Plan are proving beneficial for aquatic species in the project area. Information provided at the Conant and Eastern Idaho Visitor Information Centers, within the boaters guide and at riverside recreation site kiosks have kept river users informed about current river fishing issues, and management directions.

Annual outfitter and guide updates, and training for hosts and recreation technicians provide information to those people that have the greatest contact with a large portion of river users who impact the fisheries resources directly and indirectly.

Signing on the river has for the most part been for recreational safety and protection from disturbance to bald eagles and thus, has not discussed aquatic resources.

Grazing can have adverse impacts to aquatic resources by increased sediment introduction, mechanical bank damage and removal of vegetation that provides shading cover, and habitat for terrestrial insects that provide a food source for aquatic species. Due to adaptive management of grazing only 3 of the 44 allotments (7%) within the project area were not meeting the Idaho riparian standards due to the impacts of present or past livestock grazing. Changes were made to the terms and conditions of the permits/leases of the three allotments to ensure that riparian conditions would begin to improve toward meeting standards

The impacts of present recreation uses in the project area which include non-motorized trail use, human sanitation, firewood use, and camping have their greatest impact to aquatic species on the tributaries to the South Fork and Henrys Fork. Bank alteration and vegetation removal, soil and vegetation disturbance, and removal of dead wood can impact aquatic resources by introducing sediment, removing potential cover and macroinvertebrate habitat, decreasing shading, removing nutrients, and removing habitat for terrestrial insects that are a food source for aquatic species. Impacts on the South Fork and Henrys Fork are far less due to the size and discharge quantity of these rivers.

Large woody debris (LWD) may originate from fire, disease or human harvest and may be delivered to the stream channel by way of wind, bank undercutting and/or soil movement. Once in the channel, it may be immediately deposited on a bar or the bank, or it may be transported downstream. It may be deposited in the channel in a single-piece structure or in large multi-piece jams. LWD has a significant importance to aquatic species habitat. It provides banks stability and influences channel structure by developing pools and slowing flow. In addition, it provides cover and nutrients for aquatic species.

The emphasis on acquiring land outright or obtaining conservation easements in the 1991 plan have benefited aquatic species by limiting uses that could have resulted in increased sediment and nutrient introduction, and loss of instream habitat. Watershed protection actions in the 1991 plan have also benefited aquatic species. Erosion control and vegetation management have decreased sediment transport by addressing gullies and washouts. Treating fuels has also benefited aquatic species by protecting some areas from large fires, brought on by unnaturally heavy fuel loads. These potential fires could remove surface vegetation and overheat soils making them more susceptible to erosion. Noxious weed/undesirable species treatments have improved bank stability by allowing native riparian species with greater soil holding ability and erosion resistance to populate banks on the larger rivers and their tributaries.

At the time the 1991 plan was developed, aquatic nuisance species (ANS) did not pose as large a risk to native aquatic species as they do at this time. The lack of actions in the 1991 plan to address this threat may increase the potential for invasions due to the high use of the South Fork from anglers and boats coming from outside the drainage and potentially from infected waters. ANS invasions can adversely affect habitat quality, fish health, and agricultural and hydroelectric water use. Potential impacts to YCT by ANS could be another factor that would merit a federal listing of this species.

The 1991 plan provides a number of developed river access sites and the removal of non-approved or undeveloped “slide in” access sites. The developed sites may increase river user

numbers. If the number of anglers increased, along with their harvesting of rainbow trout, this would benefit the YCT. But it also could lead to increased hooking mortality to brown trout, cutthroat and whitefish populations in the river, which would have an adverse impact. The use of limited developed sites as opposed to numerous “slide in” sites could also reduce the amount of sediment introduction into the rivers.

The 1991 plan does not address tributary stream flow, fish passage, and diversion screening which are important to those fluvial fish populations that use the tributaries for spawning and thermal refuge. However some fish passage projects have been completed on both BLM and USFS administered lands.

Winter access to boat ramps may help to remove rainbow trout from the rivers throughout the year and thus help to protect YCT populations. However, the increased fishing pressure may also adversely impact the overall fish populations in the river.

Fish passage inventory identified in the plan has been conducted and completed on the USFS portion of the project area. The BLM portion is still being inventoried. The 1991 plan does not identify fish passage treatment projects. Fish passage barriers cut off movement of fish into important spawning and thermal refuge areas. Identification and correction of these spots is important to protect these populations.

The 1991 plan does not identify an inventory of diversions that can cause fish entrainment. Diversions along the main rivers and the tributaries adversely impact aquatic populations by allowing individuals access to irrigation networks that terminate in fields or in canals that are dried up at the end of irrigation season with no method of escape.

The 1991 plan commits to analyzing the affects to all listed and candidate species within the plan area through Section 7 consultation with the USFWS to ensure actions would not adversely affect the species or its habitat. Conservation measures would be implemented to protect and recover listed species. In addition the plan direction would maintain or improve habitats that are currently or potentially suitable to sustain TES and candidate species.

The 1991 plan would support the IDF&G, IDCDC, OSC, and other agencies to sustain wildlife, fish, and plant conservation strategies in Idaho. It would also direct both the USFS and the BLM to work with state and other federal agencies to support the Ecologically Based Systems Management Project to maintain hydrologic regimes needed to maintain long-term health of the ecosystem

The 1991 plan directs the USFS and BLM to work with state and other federal agencies to preclude listing of all wildlife, fish, or plant species that are experiencing an appreciable reduction in number, habitat availability, or habitat condition. In addition, it directs the two agencies to ensure compliance with conservation agreement actions between the USFWS and BLM for listed and candidate species and to follow USFS and BLM guidance for sensitive species management.

The present Off Highway Vehicles (OHV) direction has not been adequate to deal with the large increase in OHV use since the 1991 plan was developed. OHV use can lead to accelerated erosion in tributaries which leads to destruction of habitat for aquatic species. Full size four wheel drive vehicles and OHV use below the high water mark in the river could lead to adverse impacts to aquatic species through the introduction of chemical pollutants such as petroleum products that could impact the aquatic habitat as water levels rise and fill these channels.

Overall, while this alternative would have some benefits to aquatic species, it would not protect the habitat for these species as well as the other alternatives that have been proposed. In addition, it would not address the rainbow trout/Yellowstone cutthroat issue either.

Cumulative Impacts

River flow timing and quantity, based on irrigation demands, probably has the largest impacts on aquatic species in the rivers. When flows occur at a time and in sufficient magnitude to flush the river gravels after rainbow trout have spawned, but previous to Yellowstone cutthroat trout spawning, there is a benefit to the cutthroat population in the rivers. The actions proposed in the alternatives should not impact water demand of reservoir releases and thus should not impact fisheries.

The controlled releases in the South Fork, as opposed to the natural river hydrograph, may have reduced the maintenance of side channel habitat which is important juvenile and over wintering habitat for salmonids. Along with this the reduction in winter flows has reduced the availability of this habitat. Alternative A would not provide any further protection to these side channels by working with the Idaho Department of Lands to curtail motor vehicle use below the high water line.

The release of cooler water in the summer due to high reservoir levels, may directly benefit species by providing cooler more oxygenated water in the summer. However if reservoir levels are low summer discharge temperatures may be higher with lower oxygen level and may stress fish population levels. The actions proposed in the alternatives should not impact water temperatures in the main rivers and thus should not impact fisheries. The increase in recreational developments and both motorized and non-motorized vehicle use as proposed in Alternatives A could impact the amount riparian vegetation along tributaries and thus have a negative impact on fisheries by increasing tributary water temperatures.

The impacts of unscreened irrigation diversions have been discussed. Return irrigation water is also a concern. This water transports increased sediment loads and residues from irrigated fields. These flows may carry pesticides and herbicides that are toxic to aquatic species along with fertilizer residues. The actions proposed in the Alternative A should not cause significant increases in sediment and other foreign substances in the main rivers and thus should not impact fisheries. The increase in recreational developments and both motorized and non-motorized vehicle use as proposed in Alternatives A could increase the amount sediment introduced to tributaries, and also contribute other foreign substances and have a negative impact on tributary fisheries in the project area.

Because of the notoriety of the South Fork and Henrys Fork sport fisheries they are destination fisheries. The proximity of these streams to other fisheries that have been invaded by nuisance aquatic species makes infestation of the South Fork and Henrys Fork very possible. A fisherman could fish an infected stream in the morning and be one of these two streams in the afternoon. This could have a very adverse impact on aquatic species in these waters. Alternative A could contribute to these invasions by providing access to fisherman and boats thus having a negative impact to aquatic species.

4.8.2 Alternative B – Intensive Resource Management with Less Recreation Development

Threatened, Endangered and Sensitive Species, Wildlife, Migratory Birds

Issue No. 2: Protection of Riparian Habitat

Under Alternative B, identifying vacant BLM grazing allotments for change in status from available to unallocated for grazing in the RMP revision would ensure cover and browse would be provided for TES, migratory birds and other wildlife. Impacts under this alternative would be similar to Alternative D, and less compared to Alternatives A and C.

Under Alternative B, a planned increase in trails may prevent spur trails from developing and contain use to specific non-critical areas. The development of designated trails may reduce further user-created trails which could fragment critical TES, migratory songbirds and other wildlife habitat and lead to disturbance of TES species, migratory songbirds, and other wildlife species. Failure to identify future potential routes may result in an increase in user created trails similar to what currently exists. However, providing trails in specific areas may limit the potential of TES species, migratory songbirds and other wildlife species to expand their range into potentially suitable habitat. Alternative B would result in less habitat fragmentation and disturbance of TES species, migratory songbirds and other wildlife species than Alternative A or C but may result in an increase in habitat fragmentation and disturbance of TES species, migratory songbirds and other wildlife species compared to Alternative D.

Human waste disposal requirements would limit human activities and disturbance throughout the planning area. Requiring a human waste carryout system for all users in the planning area, both overnight and day use would reduce the potential for human encroachment into undisturbed areas and reduce the likelihood of disturbance of TES species, migratory songbirds, and other wildlife species. Removal of all human waste may reduce the desirability of the planning area to species such as ravens and crows reducing potential threats of nest predation on TES species, migratory songbirds, and other wildlife species. Alternative B would result in fewer impacts to TES species, migratory songbirds and other wildlife species and habitats than Alternatives A, C, or D.

Agency provided fire rings would limit expansion of individual and numbers of camping areas and resultant disturbance. Preventing the removal of live wood, girdling live trees and the removal of large dead and downed wood would maintain the integrity of the cottonwood gallery. The removal of trash and ashes would also help to maintain the integrity of the cottonwood gallery.

Enforcement of a ban on girdling or cutting live or dead standing trees, and the prohibition of chainsaws would eliminate the removal of large trees. This would contribute to the protection and preservation of habitat that provides cover, foraging, and perching habitat for TES species, migratory songbirds and other wildlife species. Impacts to TES species, migratory songbirds and other wildlife species and habitats under Alternative B would be the same as Alternative D and less than those under Alternatives A and C.

Issue No. 3: Protection of Watershed

Impacts from erosion would be the same as Alternative A and closing unauthorized boat ramps would improve and slightly increase riparian habitat along the river providing potential perching, nesting, and foraging habitat for TES species, migratory songbirds and other wildlife species. Impacts to TES species, migratory songbirds and other wildlife species and habitats under Alternative B would be less than those under Alternative A and C, but greater than Alternative D.

Vegetation improvement projects may result in short term negative impacts but provide future improved habitat health. Under Alternative B habitat improvement projects that benefit river restoration, wildlife habitat, and protect special status species would be actively pursued. Projects would be designed to limit short-term impacts to TES species, migratory songbirds and other wildlife species yet increase the long term health of the river ecosystem. Impacts to TES species, migratory songbirds and other wildlife species would be less under Alternative B than under Alternatives A, C, or D.

Impacts of noxious weed control under Alternative B are the same as those for Alternative A and D. Therefore, impacts to TES species, migratory songbirds and other wildlife species under Alternative B are the same as Alternatives A and D and less than those for Alternatives C.

Developing a public outreach program, conducting periodic monitoring for undesirable aquatic species and working with other agencies to develop a response plan for aquatic species would lessen the potential impacts of undesirable aquatic species. Impacts under Alternative B would be the same as Alternatives C and D and less than those under Alternative A.

Issue No. 4: Land Ownership

Impacts under Alternative B would result in a greater number of access points which may increase use of public lands and spread disturbance over a broader area than currently in use. Increased monitoring and reporting of unauthorized use, if caught in time, would reduce the removal of important habitat for TES species, migratory songbirds, and other wildlife species and may limit disturbance. Impacts to TES species, migratory songbirds, and other wildlife species under Alternative B would be slightly more than Alternative D but less than Alternatives B and C.

Extending partnerships to other federal and state agencies in addition to the measures in Alternative A would provide opportunities to protect larger and more tracts of land. Impacts to TES species, migratory songbirds, and other wildlife species under Alternative B would be less than those under Alternatives A and C but slightly greater than those under Alternative D.

Issue No. 5: Protection and Enhancement of Fish, Wildlife, and Botanical Resources

Alternative B would be similar to Alternative A, but by prohibiting snow removal it would further limit disturbance to wintering wildlife and reduction of rainbow trout harvest. Impacts to TES species and other wildlife species under Alternative B would be less than those under Alternatives A, C, and D.

Alternative B would be similar to Alternative A, but permanent wintering closures would reduce the potential for unknowing users to violate the closure resulting in disturbance of big game. Expanding bald eagle nest closures along the Henrys Fork would increase the amount of habitat to remain undisturbed for bald eagles, other TES species, migratory songbirds, and additional wildlife. However, this may also serve to focus increased visitor use on smaller areas potentially increasing the disturbance to habitat and wildlife in those areas. Impacts to TES species and other wildlife species under Alternative B would be less than those under Alternatives A, C, or D.

Issue No. 6: Management of Off-Highway Vehicles (OHV)

Designating specific routes, avoiding sensitive resource areas and minimizing use in high erosion areas and within the high water mark of the river would significantly benefit fish, wildlife, and botanical resources.

Working with IDF&G and USFWS would ensure that all aspects of wildlife protection and conservation are adhered to. Identifying and designating additional routes that fit within the ACEC guidelines would disturb previously undisturbed habitat and would alter behaviors of migratory songbirds and other wildlife species that are currently using those areas. Impacts would be reduced by ensuring routes follow ACEC guidelines and requesting IDF&G and USFWS input on route locations. Erosion control measures would limit erosion and subsequent habitat modification. Implementing a new travel management plan that dovetails with the Targhee Travel Plan would provide seamless use for recreationists between the two land types. This would provide through access and may reduce or limit recreationists traveling to the edge of one land type and turning around which would reduce potential disturbance to TES species, migratory songbirds and other wildlife. This would also limit large turn around areas between land types. A travel plan that dovetails with the USFS may also increase visitor use on trails which may lead to increased impacts to TES species, migratory songbirds, and other wildlife. Impacts to TES species, migratory songbirds and other wildlife species under Alternative B would be less than those under Alternatives A and C, but similar to Alternative D.

Increased observation and reporting of unauthorized use, as well as using USFS and BLM LEO's would limit continued unauthorized use reducing adverse impacts to fisheries, wildlife, and botanical resources. Completing periodic BLM/FS law enforcement and recreation technician patrols, correcting unauthorized use, and developing partnerships with other agencies and local groups to identify and report unauthorized motorized uses would reduce the amount of unauthorized access into closed areas. This would lessen disturbance to big game during the crucial wintering season and potentially increase survivability. This would also limit the creation of new trails and disturbance of habitat and wildlife. Impacts to TES species, migratory songbirds and other wildlife species under Alternative B would be less than under Alternatives A and C, but the same as Alternative D. Under Alternative B impacts to TES species, migratory

songbirds and other wildlife species would be the same for Alternative D and are less than those under Alternatives A and C.

Identifying public access sites may increase visitor use resulting in disturbance of habitats and wildlife. Signing may also reduce access in sensitive areas. Signing provides public control opportunities reducing negative impacts to habitat health. Under Alternative B impacts to TES species, migratory songbirds and other wildlife species would be the same for Alternative D and would be less than those under Alternatives A and C.

Reduction of all motorized OHV use below the high water line would improve fishery habitat and reduce pollutants in the planning area. Closing all OHV travel below the high water line would limit disturbance to TES species, migratory songbirds, and other wildlife that use the river for drinking, bathing, and foraging. Under Alternative B impacts to TES species, migratory songbirds and other wildlife species would be the same as Alternative D and would be less than those under Alternative A and C.

Issue No. 7: Management of River Corridor Uses

Increased use within the planning area has led to conflicts between users and increased impacts to TES species, migratory songbirds, and other wildlife species. Conducting a visitor capacity study would identify those conflicts and impacts allowing BLM and USFS to manage them appropriately resulting in fewer impacts to habitats and wildlife.

Commercial permits are currently evaluated on a case-by-case basis however, no studies have been conducted to identify when impacts to wildlife and habitat may be exceeded. Determining acceptable limits to commercial activities early would reduce the potential to exceed acceptable impacts to wildlife and habitats.

Impacts to TES species, migratory songbirds and other wildlife species under Alternative B are less than those under Alternatives A and C but greater than those under D.

Issue No. 8: Management of Camping and Facilities

Incorporating new camping practices, hardening some campsites, identifying group campsites, limiting group size, initiating a check-in and reservation system (contingent on capacity study findings) during high season use would help to protect fisheries, wildlife and botanical resources by limiting erosion, concentrating disturbance areas, reducing noise, and activity disturbance levels while reducing the user footprint. However, limiting groups to 16 people per campsite might have adverse impacts in campsites where capacity might be smaller. Impacts to TES species, migratory songbirds and other wildlife species under Alternative B would be less than those under Alternatives A and C but would be greater than those under Alternative or D.

Issue No. 9: Present and Future River Access Needs

Hardening the heavier, more popular sites and closing sites that are causing resource damages would help focus use and reduce impacts to wildlife and botanical resources.

Determining and developing specific river access points while closing other user created river access points would limit disturbance to TES, migratory songbirds, and other wildlife to specific

areas. Vegetation would have an opportunity to regenerate in closed sites providing increased habitat for TES, migratory songbirds, and other wildlife. Redesigning and reconstruction of existing bike trails would disturb wildlife during construction phase but would limit disturbance to habitat in the long term. Impacts to TES, migratory songbirds, and other wildlife under Alternative B would be less than those under Alternatives A, C, or D.

Cumulative Impacts

Activities that occur on public and private lands all affect wildlife use patterns, the quantity and quality of habitats, and population health. Cumulative impacts within the planning area include livestock grazing, wintering big game, hunting, fishing, OHV use, hiking, biking, camping, wildlife viewing, farming, and boating.

Under Alternative B natural resources would be more protected. Fewer roads, campsites, trails, and parking areas would be developed, campsites, and areas would be designated, all areas would be closed to OHV use except designated routes, rehabilitation, and restoration work would be undertaken to reverse habitat degradation trends, an aggressive weed control program would be implemented, camp group sizes would be limited, continuous camping days would be limited. These activities would enhance existing habitat, restore degraded habitat and reduce disturbance of TES species, migratory songbirds, and other wildlife.

Improving the habitat and providing improved and designated campsites may result in increased visitor use throughout the corridor which may result in an increase of disturbance on wildlife. However, limiting the number of campsites and parking would limit the number of daily visitors. Additionally, areas of impact would be limited to specific areas and if TES species, migratory birds, and other wildlife are being negatively impacted, immediate closures of those areas and increased patrols by law enforcement personnel would serve to limit those impacts.

Activity under Alternative B would result in increased habitat and reduced disturbance for TES species, migratory songbirds, and other wildlife than Alternatives A, C, and D. Impacts to TES species, migratory songbirds and other wildlife species are less under Alternative B than those under Alternatives A, C, or D.

Aquatic Species

The increased educational activities, including a website to inform the public and river users of the issues and concerns regarding the river proposed in Alternative B, would be beneficial to aquatic species. With the increased education on aquatic species issues that would be brought to river users' attention, such as the benefit of rainbow trout harvest and actions the public can take to avoid introduction or transport of aquatic nuisance species, desirable aquatic species may benefit. Increasing meetings and education of those making day to day contact with project area users (campground hosts, recreation technicians, outfitters, and guides) may also benefit aquatic resources by getting these messages out to the public in a timelier manner.

Because this alternative would not change the grazing management from that of Alternative A, impacts to aquatic species would be the same as described under that alternative.

The impacts of recreation management under this alternative should benefit aquatic species by reducing sediment transport, protecting riparian vegetation and by not depleting woody materials on the tributaries and, to a lesser extent, on the large rivers. In addition, there would be an expanded effort to educate users on how they can help to control concerns such as the spread of nuisance aquatic species and protecting native fisheries.

Increased watershed protection through vegetation management projects that benefit river restoration, noxious and invasive species treatment, erosion control and an extensive outreach program for dealing with aquatic nuisance species should benefit aquatic species. Increased emphasis on protecting resources in the planning area by acquiring lands outright or through conservation easements should benefit aquatic species by limiting activities that adversely impact bank stabilization, riparian vegetation and by reducing sediment introduction. Acquiring public access in those areas where it does not conflict with resource values could have some minimal impacts on aquatic species by increasing harvest on both native and non-native species.

Maintaining existing tributary stream flow projects and pursuing new opportunities for minimum instream-flow could beneficial impact aquatic species. BLM inventorying of tributary streams within the planning area, and then prioritizing and pursuing fish passage and screening projects could provide more opportunity for spawning and thermal refuge for species in the system.

Leaving boat access sites open for use year round, but not removing snow at federal access sites, could still help to remove non-native rainbow trout but may inversely impact other species of fish through increased hooking mortality.

An interagency inventory of diversions for fish entrainment and then working with the irrigation companies, private right-of-way holders and an interagency work group to prioritize diversion screening where feasible may benefit aquatic species populations by removing the possibility of entrainment in those diversions.

Special status species management and protection would be the same as described in Alternative A.

The Off Highway Vehicle (OHV) management activities in this alternative should be beneficial to aquatic species particularly in the tributary portions of the project area and may have some limited beneficial impact on the larger rivers.

By identifying areas that have the potential for OHV use that fit within the goals of the ACEC, limiting use in high erosion areas, designating routes, and closing non-designated areas, correcting unauthorized use by providing more compliance should benefit aquatic resources. The tributary areas, and to a lesser extent the large rivers, should be expected to have less adverse impacts from sediment delivery, bank destabilization, and destruction of riparian vegetation.

Working with the Idaho Department of Lands to eliminate motorized access below the high water mark should lessen the possibility of petroleum products entering the aquatic environment and reduce erosion/sedimentation.

In relation to the other alternatives proposed, this alternate should provide for greater benefits to aquatic species than either Alternatives A or C and provide the same benefits as Alternative D. It would protect the habitat for these species, and it addresses the rainbow trout/Yellowstone cutthroat interaction concerns.

Cumulative Impacts

River flow timing and quantity, based on irrigation demands, probably has the largest impacts on aquatic species in the rivers. When flows occur at a time and in sufficient magnitude to flush the river gravels after rainbow trout have spawned, but previous to Yellowstone cutthroat trout spawning, there is a benefit to the cutthroat population in the rivers. The actions proposed in the alternatives should not impact water demand of reservoir releases and thus should not impact fisheries.

The controlled releases in the South Fork, as opposed to the natural river hydrograph, may have reduced the maintenance of side channel habitat which is important juvenile and over wintering habitat for salmonids. Along with this the reduction in winter flows has reduced the availability of this habitat. Alternatives B would provide some further protection to these side channels by working with the Idaho Department of Lands to curtail motor vehicle use below the high water line and this should be beneficial to fisheries in the project area.

The release of cooler water in the summer due to high reservoir levels, may directly benefit species by providing cooler more oxygenated water in the summer. However if reservoir levels are low summer discharge temperatures may be higher with lower oxygen level and may stress fish population levels. The actions proposed in Alternative B should not impact water temperatures in the main rivers and thus should not impact fisheries. The controlled recreational development and limits on both motorized and non-motorized vehicle use as proposed in Alternatives B should not impact the amount riparian vegetation along tributaries and thus have a positive impact on fisheries by keeping tributary water temperatures from increasing.

The impacts of unscreened irrigation diversions have been discussed. Return irrigation water is also a concern. This water transports increased sediment loads and residues from irrigated fields. These flows may carry pesticides and herbicides that are toxic to aquatic species along with fertilizer residues. The actions proposed in Alternative B should not cause increases in sediment and other foreign substances in the main rivers and thus should not impact fisheries. The controlled recreational development and limits on both motorized and non-motorized vehicle use as proposed in Alternatives B would decrease the amount sediment introduced to tributaries, and limit the introduction other foreign substances that might have a negative impact on tributary fisheries in the project area.

Because of the notoriety of the South Fork and Henrys Fork sport fisheries they are destination fisheries. The proximity of these streams to other fisheries that have been invaded by nuisance aquatic species makes infestation of the South Fork and Henrys Fork very possible. A fisherman could fish an infected stream in the morning and be one of these two streams in the afternoon. This could have a very adverse impact on aquatic species in these waters. Alternatives B does not specifically limit the increase in fisherman and boating use but it proposes controlling the

growth of these activities and this would be more beneficial to the fisheries and other desirable aquatic species.

4.8.3 Alternative C – Recreation Development Emphasis

Threatened, Endangered and Sensitive Species, Wildlife, Migratory Birds

Issue No. 2: Protection of Riparian Habitat

Impacts from livestock grazing would be the same as Alternative B.

Impacts of non-motorized trails would be similar to Alternative B but identifying additional potential trails may minimize impacts to natural resources as recreation use increases.

Unrestricted trails may result in fragmenting crucial habitat and disturbing sensitive species.

Identifying and designating future non-motorized trails may reduce the number of potential user created trails. Due to the number and location of user created trails and development of specific designated trails. Under Alternative C, an increase in designated trails other than those currently proposed under Alternative B would require additional parking and camping facilities and would result in an increase in the number of users and potential disturbance of TES species, migratory songbirds, and other wildlife species. Alternative C would result in greater fragmentation of existing habitat and disturbance to TES, migratory songbirds, and other wildlife species than either Alternatives A, B, or D.

The use of portable toilets and human waste disposal requirements would limit human activities and disturbance throughout the South Fork Canyon. The lack of human waste disposal throughout the rest of the river stretch leads to increased human activities and disturbance.

Under Alternative C all visitors throughout the South Fork Canyon would be required to remove all human waste. This would limit potential encroachment on TES, migratory songbirds and other wildlife habitat and disturbance of species within the canyon, however, TES species, migratory songbirds, and other wildlife species and habitats are not limited to the canyon and disturbance of TES, migratory songbirds, and other wildlife habitat and species would continue to occur throughout the rest of the planning area. Impacts under Alternative C would be greater to TES species, migratory songbirds and other wildlife species and habitats than Alternatives B or D, but less than Alternative A.

Under Alternative C all visitors would be allowed to burn dead and down wood within designated camp rings or fire pans. Removal of down and dead wood removes cover, foraging, and perching habitat for TES species, migratory songbirds, and other wildlife species and expands bare areas created by campers which could lead to further disturbance of existing vegetation and TES species, migratory songbirds, and other wildlife species. Development of agency provided fire rings and restricting use to designated fire rings, or pans would reduce human encroachment into undisturbed vegetation limiting potential disturbance to TES species, migratory songbirds and other wildlife species. Impacts to TES species, migratory songbirds, and other wildlife species and habitats under Alternative C would be less than those under Alternatives A but greater than those under Alternative B or D.

Issue No. 3: Protection to Watershed

Alternative C would be similar to Alternative B, plus unauthorized boat ramps would not be closed or rehabilitated. This would limit potential perching, nesting and foraging habitat for TES species, migratory songbirds, and other wildlife species along specific areas of the planning area. Impacts to TES species, migratory songbirds, and other wildlife species and habitats under Alternative C would be less than those under Alternative A but greater than B and D.

Under Alternative C vegetation projects designed to enhance recreation activities would be considered. Management projects that benefit recreation may include removing low limbs on trees, removing shrubby understory, removing vegetation to develop trails, camping areas, or parking areas. Those types of projects would remove important foraging and cover habitat for TES species, migratory songbirds, and other wildlife species. Impacts to TES species, migratory songbirds, and other wildlife species would be greater under Alternative C, than alternatives A, B or D.

Impacts to TES species, migratory songbirds and other wildlife species under Alternative C would be the same as those under Alternatives A, B, and D except that treatment would be limited to noxious weeds. Failure to control undesirable plants species would result in more patches of undesirable plants (such as sow thistle) with resultant plant community composition modification. Impacts to TES species, migratory songbirds, and other wildlife species under Alternative C would be greater than those under Alternatives A, B, or D as there would be less treatment of undesirable species.

Impacts from undesirable aquatic species under Alternative C would be the same as those under Alternative B.

Issue No. 4: Land Ownership

The impacts of unauthorized use would be the same as Alternative B.

Providing public access for recreation activities would increase accessibility and traffic to areas that may have little existing recreation use. This would potentially increase disturbance to habitat and wildlife. Impacts to TES species, migratory songbirds and other wildlife species under Alternative C would be greater than those under Alternatives A, B, and D.

Issue No. 5: Protection and Enhancement of Fish, Wildlife, and Botanical resources

Regular snow removal at federal boat access sites, except Fullmer Boat Access, all winter or starting in late March would displace wintering wildlife during critical seasons of the year. Wildlife may become accustomed to the noise and activity but more than likely would learn to avoid those habitats. This would serve to reduce the amount of available habitat for wintering for TES species and other wildlife. Impacts to TES species, migratory songbirds and other wildlife species under Alternative C would be greater than those under Alternatives A, B, and D.

Failure to consider human entry closures or bald eagle nesting territories has already resulted in mortality, reduced birthrate, low birth weights of big game species and disturbance of bald eagles. Continued avoidance of this issue would result in further mortality and reduced productivity and survivorship. Additionally, winter use in these crucial areas may result in

increased mortality, productivity and survivorship of other TES species and wildlife. Activity within and adjacent to key wintering areas adds stress and increases energy drain for animals. They may be forced to move about more than normal and even relocate to less favorable habitat. Impacts to TES species and other wildlife species under Alternative C would be greater than those under Alternatives A, B, or D.

Issue No. 6: Management of OHVs

Under Alternative C, OHV trails and closures would have similar impacts to Alternative B. However, identifying and designating new routes would further increase habitat, TES species, migratory songbirds, and other wildlife disturbance in previously undisturbed areas. Impacts to TES species, migratory songbirds and other wildlife species under Alternative C would be greater than those under Alternatives A, B, or D.

The effects of unauthorized motorized access, signing of designated trails, and motorized closures would be the same as Alternative B.

Allowing continued and potentially increased motorized OHV use below the high water mark would decrease fishery habitat and increase pollutants in the planning area. This would also potentially disturb TES species, migratory songbirds and other wildlife that use the river for dinking, bathing, and foraging. Closing all OHV travel below the high water mark would limit disturbance to those species. Additionally, allowing OHV use below the high water mark would provide increased access and potentially new trails in previously limited use areas. Under Alternative C, impacts to TES species, migratory songbirds and other wildlife species would be the same as Alternative A, and greater than Alternatives B and D.

Issue No. 7: Management of River Corridor Uses

Increased use within the planning area has led to conflicts between users and increased impacts to TES species, migratory songbirds, and other wildlife species. Conducting a visitor capacity use study would identify those conflicts and impacts allowing BLM and USFS to manage them appropriately resulting in fewer impacts to habitats and wildlife.

Commercial permits are currently evaluated on a case-by-case basis however, no studies have been conducted to identify when impacts to wildlife and habitat may be exceeded. Determining acceptable limits to commercial activities early would reduce the potential to exceed acceptable impacts to wildlife and habitats.

Impacts to TES species, migratory songbirds, and other wildlife species under Alternative C are less than those under Alternatives A but greater than those under Alternatives B and D.

Issue No. 8: Management of Camping and Facilities

An increase in recreation use would result in an increase in the adverse impacts to fisheries, wildlife and botanical resources as described in Alternative A. New developments at Wolf Flats, etc. would limit disturbance to the riparian areas by reducing user concentrations to hardened sites, reducing erosion, and limiting expansion into the riparian habitat. However, allowing group sizes of 25 at all campsites would result in an ever increasing zone of disturbance on wildlife and botanical resources. Impacts to TES species, migratory songbirds, and other

wildlife species under Alternative C would be less than those under Alternative A but greater than those under Alternatives B or D.

Issue No. 9: Present and Future River Access Needs

Current levels of use within the planning area are threatening habitat for TES, migratory songbirds, and other wildlife. Paving roads, installing additional boat ramps, developing new trails and parking areas would provide additional access to the river potentially resulting in overuse and degradation of habitat used by TES species, migratory songbirds, and other wildlife. Developing user created access points may result in additional user-created access points, campgrounds, and trails being generated. Impacts to TES species, migratory songbirds, and other wildlife would be greater under Alternative C than under Alternatives A, B, or D.

Cumulative Impacts

Activities that occur on public and private lands all affect wildlife use patterns, the quantity and quality of habitats, and population health. Cumulative impacts within the planning area include livestock grazing, wintering big game, hunting, fishing, OHV use, hiking, biking, camping, wildlife viewing, farming, and boating.

Under Alternative C river access points would be increased, OHV trails would be increased, campsites would not be designated nor improved, length of stay would not be reduced, garbage would continue to collect in campsites, group sizes would be have a higher limit, there would be minimal human waste disposal requirements, dead and down wood could be burned. Current levels of monitoring and patrols by law enforcement personnel and recreation technicians are inadequate to maintain or limit disturbance in the corridor. Increased use would allow disturbance to continue and even increase. Activity within the planning area would be increased under Alternative C resulting in increased disturbance to habitat, TES species, migratory songbirds and other wildlife, and impacts would be greater compared to Alternatives A, B, and C.

Aquatic Species

The impacts of this alternative's educational activities on aquatic species would be the same as Alternative B.

Because this alternative would not change the grazing management from that of Alternative A, impacts to aquatic species would be the same as described under that alternative.

The impacts of this alternative's recreation activities on aquatic species would be the same as Alternative A.

Watershed Protection projects in this alternative should benefit aquatic species by limiting erosion, protecting native riparian plant communities by treating noxious and undesirable plants and by doing some vegetation management projects. In addition an extensive outreach program for dealing with nuisance aquatic species should benefit aquatic species.

The impacts of this alternative's conservation easement and land acquisition activities on aquatic species would be the same as Alternative B.

This alternative's emphasis on acquiring river access may benefit Yellowstone cutthroat by providing more harvest of rainbow trout from more angler opportunity. It may also have the opposite effect on other fish populations due to increased hooking and handling mortality.

The impacts of this alternative's fish habitat activities on aquatic species would be the same as Alternative B.

Special status species management and protection in the alternative would be the same as described in Alternative A.

The impacts of this alternative's OHV activities on aquatic species would be the same as Alternative B.

This alternative should benefit aquatic species more than Alternative A but would probably not be as beneficial as Alternatives B and D due to the increase in recreational development.

Cumulative Impacts

River flow timing and quantity, based on irrigation demands, probably has the largest impacts on aquatic species in the rivers. When flows occur at a time and in sufficient magnitude to flush the river gravels after rainbow trout have spawned, but previous to Yellowstone cutthroat trout spawning, there is a benefit to the cutthroat population in the rivers. The actions proposed in the alternatives should not impact water demand of reservoir releases and thus should not impact fisheries.

The controlled releases in the South Fork, as opposed to the natural river hydrograph, may have reduced the maintenance of side channel habitat which is important juvenile and over wintering habitat for salmonids. Along with this the reduction in winter flows has reduced the availability of this habitat. Alternatives C would provide some further protection to these side channels by working with the Idaho Department of Lands to curtail motor vehicle use below the high water line and this should be beneficial to fisheries in the project area.

The release of cooler water in the summer due to high reservoir levels, may directly benefit species by providing cooler more oxygenated water in the summer. However if reservoir levels are low summer discharge temperatures may be higher with lower oxygen level and may stress fish population levels. The actions proposed in the alternatives should not impact water temperatures in the main rivers and thus should not impact fisheries. The increase in recreational developments and both motorized and non-motorized vehicle use as proposed in Alternative C could impact the amount riparian vegetation along tributaries and thus have a negative impact on fisheries by increasing tributary water temperatures.

The impacts of unscreened irrigation diversions have been discussed. Return irrigation water is also a concern. This water transports increased sediment loads and residues from irrigated fields. These flows may carry pesticides and herbicides that are toxic to aquatic species along with

fertilizer residues. The actions proposed in the alternatives should not cause significant increases in sediment and other foreign substances in the main rivers and thus should not impact fisheries. The increase in recreational developments and both motorized and non-motorized vehicle use as proposed in Alternative C could increase the amount sediment introduced to tributaries, and also contribute other foreign substances and have a negative impact on tributary fisheries in the project area.

Because of the notoriety of the South Fork and Henrys Fork sport fisheries they are destination fisheries. The proximity of these streams to other fisheries that have been invaded by nuisance aquatic species makes infestation of the South Fork and Henrys Fork very possible. A fisherman could fish an infected stream in the morning and be in one of these two streams in the afternoon. This could have a very adverse impact on aquatic species in these waters. Alternative C could contribute to these invasions by providing more access to fisherman and boats thus having a negative impact to aquatic species.

4.8.4 Alternative D – Proposed Action

Threatened, Endangered and Sensitive Species, Wildlife, Migratory Birds

Issue 2 - Protection of Riparian Habitat

Same as Alternative B plus designating or closing user created trails may minimize impacts to natural resources as recreation use increases. Additionally, closures of user created trails would provide an opportunity for regeneration of vegetation to occur.

Alternative D would result in less habitat fragmentation and disturbance of TES species, migratory songbirds, and other wildlife species than Alternatives A, B, or C.

Requiring human waste disposal systems for all overnight visitors throughout the planning area would reduce the amount of encroachment and disturbance to TES, migratory songbirds, and other wildlife habitats and species. However, the presence of any human waste would likely result in some users not using their portable disposal systems which would lead to encroachment of TES, migratory songbirds, and other wildlife habitats and potential disturbance of TES species, migratory songbirds, and other wildlife species. Additionally, any human waste has the potential to attract generalist species such as ravens, crows, raccoons, etc. to the area potentially modifying behaviors of TES species, migratory songbirds, and other wildlife species and increasing predation on nests of TES species, migratory songbirds, and other wildlife species. Impacts under Alternative D would be greater than Alternative B, but less than A and C.

The effects of campfires would be similar to Alternative B. Impacts to TES species, migratory songbirds, and other wildlife species and habitats under Alternative D would be the same Alternative B and less than those under Alternatives A or C.

Issue No. 3: Protection of Watershed

Erosion control measures would have the same effects as Alternative B.

Same as Alternative B however, as some vegetation management projects would not be acceptable to the public this would limit potential vegetation management and may limit habitat that would be beneficial to fish, wildlife, and botanical resources.

Vegetation management projects would be similar to Alternatives B and C, but limiting projects to those acceptable to the general public may limit habitat that would be beneficial to TES species, migratory songbirds, and other wildlife species. Modifying projects to meet public acceptance would likely slow the vegetation management processes, increase costs, and reduce beneficial effects (such as doing mechanical thinning rather than prescribed fire). Impacts to TES species, migratory songbirds, and other wildlife species under Alternative D would be greater than those for Alternative B, but less than those for Alternatives A and C.

Impacts of undesirable aquatic species to TES species, migratory songbirds, and other wildlife species under Alternative D would be the same as those under Alternatives A and B and less than Alternative C. Educating the public on identification of both noxious and undesirable plant species and the importance of controlling for those species can have far reaching effects for TES species, migratory songbirds, and other wildlife species. The public can share this knowledge with others, refuse to buy noxious plants at local nurseries, ensure boats, and trailers are cleaned between launchings and streams, and contact BLM with locations of weedy areas and in effect reduce and limiting invasive species. Impacts from undesirable aquatic species under Alternative D would be the same as those under Alternative B and C and less than those under Alternative A.

Issue No. 4: Land Ownership

The effects of the conservation easement and land acquisition program would be similar to Alternative B, but educating the public and outfitter guides would increase public awareness and appreciation for programs and actions that protect the scenic value of the planning area and provide relatively intact habitat for wildlife. Impacts to TES species, migratory songbirds and other wildlife species would be less under Alternative D than Alternatives A, B, or C.

Issue 5 - Protection and Enhancement of Fish, Wildlife, and Botanical Resources

Impacts from winter access at boat ramps would be similar to Alternative B, but opening closed areas upon increased productivity and survivorship of wintering big game species would result in once again disturbing species during critical seasons of the year which would reduce productivity and survivorship. Impacts to TES species and other wildlife species under Alternative D would be greater than those under Alternative B but less than those under Alternatives A and C.

Issue No. 6: Management of OHVs

Under Alternative D, impacts from OHV trails, trail closures, and unauthorized motorized access would be similar to Alternative B and less than Alternatives A and C. Impacts to TES species, migratory songbirds, and other wildlife species from signing of designated trails would be the same as Alternatives B and C but less than Alternative A.

Reduction of all motorized OHV use below the high water mark would improve fishery habitat and reduce pollutants in the planning area. Closing all OHV travel below the high water mark would limit disturbance to TES species, migratory songbirds and other wildlife that use the river

for drinking, bathing, and foraging. Under Alternative D, impacts to TES species, migratory songbirds, and other wildlife species would be similar to Alternative B, and would be less than Alternatives A and C.

Issue No. 7: Management of River Corridor Uses

Increased use within the planning area has led to conflicts between users and increased impacts to TES species, migratory songbirds, and other wildlife species. Conducting a visitor capacity use study would identify those conflicts and impacts allowing BLM to manage them appropriately resulting in fewer impacts to habitats and wildlife.

Commercial permits are currently evaluated on a case-by-case basis however, no studies have been conducted to identify when impacts to wildlife and habitat may be exceeded. Determining acceptable limits to commercial activities early would reduce the potential to exceed acceptable impacts to wildlife and habitats.

Impacts to TES species, migratory songbirds, and other wildlife species under Alternative D are less than those under Alternatives A, B, and C.

Issue No. 8: Management of Camping and Facilities

Evaluation of campsites for group size capacity would help to minimize impacts to wildlife and botanical resources. Alternative D would have less impacts to TES species, migratory songbirds, and other wildlife species than Alternatives A, B, and C.

Limiting camping to five days may increase general traffic to the area which would increase potential disturbance to TES species, migratory songbirds, and other wildlife. Impacts to TES species, migratory songbirds and other wildlife species under Alternative D are less than those under Alternatives A, B, or C.

Issue No. 9: Present and Future River Access Needs

Impacts of recreation development would be similar to Alternative B, but a levee trail would allow more visitors increased access to bald eagle nests and YBCU habitat. Closing the trail at certain times of the year would limit direct impacts to those species. Access during non-critical seasons may lead to habitat degradation to those areas resulting in a lower quality of habitat for TES species, migratory songbirds, and other wildlife. Impacts to TES species, migratory songbirds, and other wildlife under Alternative D would be less than those under Alternatives A and C but slightly greater than those under Alternative B.

Cumulative Impacts

Activities that occur on public and private lands all affect wildlife use patterns, the quantity and quality of habitats, and population health. Cumulative impacts within the planning area include livestock grazing, wintering big game, hunting, fishing, OHV use, hiking, biking, camping, wildlife viewing, farming, and boating.

Under Alternative D many activities would benefit habitat for TES species, migratory songbirds, and other wildlife. These include closing some hiking and OHV trails while redesigning and reconstructing others to reduce erosion and avoid impacts to habitats and wildlife, removing

human waste, prohibiting removal or burning of dead and down wood or girdling and taking of live trees and shrubs, installation of erosion controls, implementing an aggressive weed control program and habitat restoration projects that improve and increase habitat. Other activities such as improving boat access sites, campsites and areas, improving existing trails and adding other trails, increased monitoring of users by law enforcement personnel, and writing a travel management plan that dovetails with the existing Targhee Forest and Travel Plans would provide recreation opportunities and increase visitor satisfaction.

Observing wildlife in nature increases user satisfaction. Many activities under Alternative D would benefit TES species, migratory songbirds, and other wildlife while other activities may result in an increase in visitors which may result in some disturbance of these same species. However, the mandate for BLM is multiple use. Alternative D would provide opportunities for conserving species, yet it would provide recreational opportunities.

Aquatic Species

The impacts of this alternative's educational activities on aquatic species would be the same as Alternative B.

Because this alternative would not change the grazing management from that of Alternative A, impacts to aquatic species would be the same as described under that alternative.

The impacts of this alternative's recreation activities on aquatic species would be the same as Alternative B.

The impacts of this alternative's Watershed Protection projects on aquatic species would be the same as Alternative B including the outreach program for awareness of nuisance aquatic species.

The impacts of this alternative's conservation easement and land acquisition activities on aquatic species would be the same as Alternative B.

The impacts of this alternative's river access projects on aquatic species would be the same as Alternative B.

The impacts of this alternative's fish habitat activities on aquatic species would be the same as Alternative B.

Special status species management and protection in the alternative would be the same as described in Alternative A.

The impacts of this alternative's OHV activities on aquatic species would be the same as Alternative B.

This alternative should be the most beneficial of the alternatives for aquatic species.

Cumulative Impacts

River flow timing and quantity, based on irrigation demands, probably has the largest impacts on aquatic species in the rivers. When flows occur at a time and in sufficient magnitude to flush the river gravels after rainbow trout have spawned, but previous to Yellowstone cutthroat trout spawning, there is a benefit to the cutthroat population in the rivers. The actions proposed in the alternatives should not impact water demand of reservoir releases and thus should not impact fisheries.

The controlled releases in the South Fork, as opposed to the natural river hydrograph, may have reduced the maintenance of side channel habitat which is important juvenile and over wintering habitat for salmonids. Along with this, the reduction in winter flows has reduced the availability of this habitat. Alternatives B would provide some further protection to these side channels by working with the Idaho Department of Lands to curtail motor vehicle use below the high water line and this should be beneficial to fisheries in the project area.

The release of cooler water in the summer due to high reservoir levels, may directly benefit species by providing cooler, more oxygenated water in the summer. However, if reservoir levels are low, summer discharge temperatures may be higher with lower oxygen level and may stress fish population levels. The actions proposed in Alternative D should not impact water temperatures in the main rivers and thus should not impact fisheries. The controlled recreational development and limits on both motorized and non-motorized vehicle use as proposed in Alternatives D should not impact the amount of riparian vegetation along tributaries and thus have a positive impact on fisheries by keeping tributary water temperatures from increasing.

The impacts of unscreened irrigation diversions have been discussed. Return irrigation water is also a concern. This water transports increased sediment loads and residues from irrigated fields. These flows may carry pesticides and herbicides that are toxic to aquatic species along with fertilizer residues. The actions proposed in Alternative D should not cause increases in sediment and other foreign substances in the main rivers and thus should not impact fisheries. The controlled recreational development and limits on both motorized and non-motorized vehicle use as proposed in Alternatives D should decrease the amount sediment introduced to tributaries, and limit the introduction other foreign substances that might have a negative impact on tributary fisheries in the project area.

Because of the notoriety of the South Fork and Henrys Fork sport fisheries, they are destination fisheries. The proximity of these streams to other fisheries that have been invaded by nuisance aquatic species makes infestation of the South Fork and Henrys Fork very possible. A fisherman could fish an infected stream in the morning and fish at one of these two streams in the afternoon. This could have a very adverse impact on aquatic species in these waters. Alternative D does not specifically limit the increase in fisherman and boating use but it proposes controlling the growth of these activities, and this would be more beneficial to the fisheries and other desirable aquatic species.

CHAPTER 5. ENVIRONMENTAL ASSESSMENT PREPARERS AND CONSULTATION AND COORDINATION

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Consultation and coordination was sought and provided by the following agencies/groups: Fremont, Madison, Jefferson and Bonneville Counties; Shoshone-Bannock Tribes; IDF&G; South Fork Watershed Council, and the BLM Idaho Falls District Resource Advisory Committee (RAC).

Glossary

Area of Critical Environmental Concern (ACEC) - An area within the public lands where special management attention is required to protect and prevent irreparable damage to important historic, cultural or scenic values, fish and wildlife resources or other natural systems or processes, or to protect life and safety from natural hazards. ACEC management objectives are formulated to protect an area's important resources and values without unnecessarily or unreasonably restricting uses that are compatible with that protection. All designated ACECs receive first priority for planning and management over other areas in the field office boundaries.

Camp Area - A designated camp area is a large area where camping can occur anywhere within the area.

Campsite - A designated campsite is an individual, specific site location where camping can occur. For example, Lufkin Bottom is a designated camp area, but there are numerous individual campsites within the area.

Greenline - The first perennial vegetation that forms a lineal grouping of community types on or near the water's edge. Most often it occurs at or slightly below the bankful stage (Winward, 2000).

Hydric - Water-loving.

National Important Bird Area (IBA) – Sites that provide essential habitat for one or more species of bird. IBAs include sites for breeding, wintering, and/or migrating birds. IBAs may be a few acres or thousands of acres, but usually they are discrete sites that stand out from the surrounding landscape. IBAs may include public or private lands, or both, and they may be protected or unprotected.

National Natural Landmark (NNL) – A NNL is a nationally significant natural area that has been designated by the Secretary of the Interior. These sites must be one of the best examples of a type of biotic community or geologic feature in its physiographic province. Examples of this natural diversity include terrestrial and aquatic ecosystems, features, exposures, and landforms that record active geologic processes as well as fossil evidence of biological evolution. The goal of the National Natural Landmarks Program is to identify, recognize, and encourage the protection of sites containing the best examples of geological and ecological components of the nation's landscape.

National Recreation Trail (NRT) – A NRT may be designated by the Secretary of Interior to recognize exemplary trails of local and regional significance. Through designation, NRTs are recognized as part of America's national system of trails. The trail must be open to public use and be designed, constructed, and maintained according to best management practices, in keeping with the use anticipated.

Research Natural Area (RNA) – Acreage within BLM public lands established and managed to protect ecological processes, conserve their biological diversity, and provide opportunities for

observational activities associated with research and education. Activities within these areas may only be allowed if they do not interfere with natural processes.

Special Recreation Management Area (SRMA) – a public lands unit identified in land use plans to direct recreation funding and personnel to fulfill commitments made to provide specific, structured recreation opportunities (i.e., activity, experience, and benefit opportunities). Both land use plan decisions and subsequent implementing actions for recreation in each SRMA are geared to a strategically identified primary market – destination, community, or undeveloped.

Special Recreation Permits - The basic objectives of the Special Recreation Permit (SRP) system are to satisfy recreation demand within allowable use levels in an equitable, safe and enjoyable manner while minimizing resource impacts and user conflicts. SRP's are issued as a means to manage visitor use, protect natural and cultural resources, and as a mechanism to accommodate commercial and competitive recreational uses.

Commercial Use: Commercial Use is defined as recreational use of public lands and related waters for business or financial gain. When any person, group, or organization makes or attempts to make a profit, receive money, amortize equipment, or obtain goods or services, as compensation from participants in recreational activities occurring on public lands, the use is considered commercial.

An activity, service, or use is commercial if anyone collects a fee or receives other compensation that is not strictly a sharing of, or is in excess of, actual expenses incurred for the purposes of the activity, service or use.

Use by scientific, educational, and therapeutic institutions or non-profit organizations is considered commercial when the above criteria are met and subject to a permit when the above conditions exist.

Example: Outfitters and guides, jeep tours, horse trail and wagon train rides, and photography associated with a recreational activity.

Competitive Use: Competitive Use means any organized, sanctioned, or structured use, event, or activity on public land in which two or more contestants compete and either (1) participants register, enter, or complete an application for the event, or (2) a predetermined course or area is designated.

Examples: OHV races, horse endurance rides, mountain bike races, dog trials, and kayak rodeos

Vending. Permits are required for anyone who sells goods or services on public lands in conjunction with a recreation activity.

If the vending is associated with a permitted event, the permittee may include the vending under their permit. Permittee would be responsible for paying fees on gross sales,

providing required insurance for the vendor, and ensuring that the vendor complies with the terms of the permit.

If the vending is not associated with a permitted event (for example, selling fishing gear at a fishing access point, selling firewood at a campground, or renting an ATV at an OHV play area), the vendor is responsible for obtaining the permit, paying commercial use fees, and obtaining bonding or insurance as deemed necessary by the authorized officer. The vending should directly support or enhance the recreation experience, and be appropriate for the ROS class of the area. The authorized officer must obtain a list of all goods and services being sold to ensure that all the items are legal. Vending is usually regulated by state and local commercial laws and regulations (for food handling, sales tax requirements, etc), and the vendor must be able to demonstrate compliance with these regulations.

Commercial filming of recreation events or activities may be handled under a vending permit. If the vendor films recreation activities, such as whitewater rafting or competitive hill climbs, and sells the photos to participants or spectators the fee schedule for commercial recreation use should be used (3% of gross income or current fee schedule).

If the vendor films an event or activity for subsequent sale to TV, movies, videos, or for advertising purposes; the permit can be issued using either a 2920 (land use authorization) or a 2930 (special recreation) permit. Fees for this type of use shall be calculated using the fee schedule found in the lands program under 2920.

Organized Group Activity and Event Use: Permits may be required for organized group outdoor recreation activities or events which are neither commercial nor competitive. The authorized officer determines when a permit is required based on planning decisions, resource concerns, potential user conflicts, or public health and safety issues. A group is loosely defined as more than one person participating in a recreation activity or event.

The threshold size of a group requiring a permit would be impossible to establish on a statewide basis. The threshold, if any, must be determined for each area. For example, 10 people in a sensitive riparian area may constitute an organized group, but a less sensitive upland area may be able to handle 200 people without the need for special management. Thresholds must be based upon planning, resource concerns, potential user conflicts, or public health and safety. Field Offices are encouraged to develop thresholds through land use planning, including when permits are required for organized groups and events and for what specific types of recreation activities, land areas, or resource settings.

Examples of groups or events that may require a permit include a large scout camp out, a fraternity activity, a large family reunion held at a BLM recreation site or participating in recreation activities on public lands, or a dual sport event.

Wild and Scenic River – Wild and Scenic River Act (1968) expresses Congressional policy for America's rivers: It is hereby declared to be the policy of the United States that certain selected

rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, shall be preserved in free-flowing condition, and that their immediate environments shall be protected for the benefit and enjoyment of present and future generations. The congress declares that the established national policy of dam and other construction at appropriate sections of the rivers of the United States needs to be complemented by a policy that would preserve other selected rivers or sections thereof in their free-flowing condition to protect the water quality of such rives and to fulfill other vital conservation purposes.

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