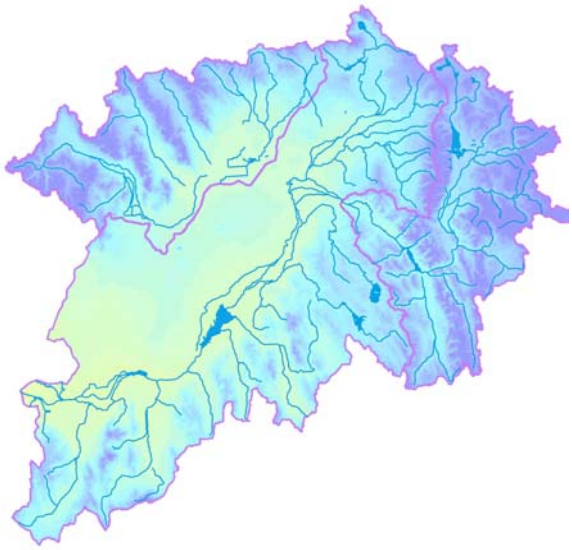
Draft Management Plan
Upper Snake Province

Submitted To

The Northwest Power and Conservation Council
Portland, Oregon



Prepared by

CH2MHILL

December 2004

Contents

Appendixes

Tables **Page**

Figure

CHAPTER 1

Introduction

Upper Snake Province Plan

The overall goal of the Upper Snake Province (USP) Plan is to protect, mitigate, and enhance aquatic and terrestrial habitats, species assemblages, and ecological functions in the USP over the next 10 to 15 years. The Plan will help direct project funding to the Upper Snake Closed, Snake Headwaters, and Upper Snake Subbasins as part of the Northwest Power and Conservation Council's (NPCC) Fish and Wildlife Program (FWP). The function of the FWP is to mitigate damages to fish and wildlife caused by the development and operation of the Columbia River's hydropower system. The goal of the USP Plan encompasses more than fish and wildlife corrective actions by including other issues such as urban sprawl, water diversions, and public land management issues. By documenting a more inclusive list of ecological health issues beyond hydropower effects on fish and wildlife, the Plan will give planners and scientists a broader perspective for effecting change in the subbasins, while providing an opportunity for leveraging resources within their respective programs.

The USP Plan covers three of the 62 subbasins in the Columbia River Basin — the Upper Snake Closed, Snake Headwaters, and Upper Snake Subbasins. These three subbasins compose 14 percent of the land area and 14 percent of the surface water runoff within the Columbia Basin. These subbasins do not directly support anadromous fish but do provide flows to the Lower Snake River that are important for fry/smolt migrations and spawning redd survival.

Subbasin and province plans were developed in an open public process that included the participation of a wide range of State, Federal, local, and Tribal governments; local managers; land owners; and other stakeholders, a process the NPCC hopes will ensure support of the final USP Plan and direct funding to the best fish and wildlife projects that will do the most good.

Plan Components

The USP Plan is composed of three components: the Assessment, Inventory, and Management Plan. The Assessment was produced in May 2004. The Assessment forms the scientific and technical foundation of the USP Plan and identifies the limiting factors impeding the biological performance of fish and wildlife populations. The Assessment also identifies focal habitats and focal species used for evaluating protective and restorative activities (progress) of the Plan's implementation. An Addendum to the Assessment was prepared in December 2004 to better provide a rationale for the selection of focal habitats and focal species. The Inventory was produced in December 2004 and identifies fish and wildlife projects over the past 5 years and their status in improving ecological conditions in the three USP subbasins. The Management Plan presented here describes a vision for the USP and identifies the limiting factors preventing the USP from being a vibrant, diverse, and ecologically balanced riverine ecosystem. In addition, the Management Plan describes

biological objectives and strategies designed to address the limiting factors. The Management Plan also includes information about the relationship between the objectives and strategies and their consistency with the Endangered Species Act (ESA) and the Clean Water Act (CWA). The Plan content is consistent with the Technical Guide (NPPC 2001b) and recommendations made by the Independent Scientific Review Panel (ISRP).

Planning Process

The process used to prepare all components of the USP Plan is described in Appendix A. It includes lists of the Technical Team and Planning Team members who helped create this Plan and an earlier effort. Need to describe the planning team members in this section.

Northwest Power and Conservation Council

The NPCC is responsible for developing and periodically revising the Columbia River Basin Fish & Wildlife Program. In the 2000 revision, the NPCC proposed that 62 locally developed subbasin plans, as well as plans for the mainstem Columbia and Snake Rivers, be developed and adopted into its Fish & Wildlife Program The NPCC has administered subbasin planning contracts pursuant to requirements in its Master Contract with the BPA (NPPC 2002). The NPCC is responsible for review an adopting each subbasin plan, including ensuring that it is consistent with the visions, biological objectives, and strategies adopted at the Columbia Basin and province levels.

Bonneville Power Administration

The BPA is a federal agency established to market power produced by the federal dams in the Columbia Basin. As a result of the Northwest Power Act of 1980, BPA is required to allocate a portion of power revenues to mitigate the damages caused to fish and wildlife populations and habitat from federal hydropower construction and operation. These funds are provided and administered through the Lower Snake River Compensation Plan (LSRCP). BPA provide the funding to the NPCC for subbasin planning.

Shoshone-Bannock Tribes

The Shoshone-Bannock Tribes (SBT) served as the lead entity and fiscal agent for the planning effort for the Upper Snake River subbasin, managing the contract with the NPCC and contracting for other services, as required, to prepare the subbasin plan. The SBT will pursue, promote, and where necessary, initiate efforts to rehabilitate the Snake River system and affected unoccupied lands to a natural condition. This includes the rehabilitation of component resources to conditions that most closely represent the ecological features associated with the natural riverine ecosystem. In addition, the SBT will work to ensure the protection, preservation, and where appropriate – the enhancement of Rights reserved by the SBT under the Fort Bridger Treaty of 1868 and any inherent aboriginal rights.

Idaho Department of Fish and Game and Other Appropriate Agencies

Idaho Department of Fish and Game (IDFG) was contracted by the NPCC to complete the USP Assessment and Inventory prior to the SBT completing the Management Plan. IDFG organized a Technical Team of natural resource specialists familiar with the USP and completed their drafts of the documents by May 2004. An overview of the Technical Team's process and their participants are presented in Appendix A-1.

Scientific Framework of the Plan

The FWP provided a technical guide that identified planning elements for this and other plans that were created for the 62 subbasins across the Columbia River ecosystem. A Management Plan is intended to be a living document that will be updated every 3 to 5 years, and will include new information to guide revision of the biological objectives, strategies, and project implementation. The NPCC views plan development as a continual process of evaluation and refinement of the region's efforts through adaptive management, research, and evaluation. More information about subbasin planning can be found at http://www.nwcouncil.org.

Location and Physical Description of the Upper Snake Province

The USP is the uppermost province of the Snake River system and includes areas within Idaho, Wyoming, Utah, and Nevada (Figure 1). It includes the Snake River and all its tributaries from its headwaters in Wyoming and Idaho to Shoshone Falls, Idaho, as well as the closed basins on the northern edge of the Snake River Plain. The USP is divided into three subbasins: Snake Headwaters, Upper Snake, and Upper Snake Closed. It encompasses 28,902 square miles with elevations ranging from 3,300 feet (1,006 meters) at the lower boundary of the province at Shoshone Falls to 13,770 feet (4,197 meters) at the summit of the Grand Teton near the eastern edge of the USP in Wyoming. The headwaters of the Snake River, the largest tributary of the Columbia River, originate on the Yellowstone Plateau within and just outside the boundaries of Yellowstone National Park in Wyoming and Idaho. Surface waters originating in the Upper Snake Closed Subbasin flow onto the Snake River Plain where they drain to the subsurface, then discharge to the Snake River at Thousand Springs below Shoshone Falls.

Vision Statement

The vision for the Upper Snake Province Plan is to pursue, promote, and, where necessary, initiate efforts to protect and restore the Upper Snake River ecosystem. The vision for the USP Plan is to enhance, establish, maintain, and protect a healthy ecosystem that supports a diversity of aquatic and terrestrial species and will offer a diverse array of ecological environments that have been altered or lost. Such conditions will provide for the diverse social, cultural, tribal, and economic needs as established by treaty and law including recovery of Federally listed and State and Tribal sensitive species. This vision will support the NPCC's FWP's principles of mitigating the adverse effects to fish and wildlife caused by the development and operation of the hydrosystem and the guiding principles for the Upper Snake Province.

All Applicable Laws, Policies, and Regulations

The USP Plan and Assessment, and subsequent programs and actions that are adopted to implement the Plan's vision statement and biological objectives, shall expressly comply with existing local, State, Tribal, and Federal laws, regulations, and policies. This is to include private property rights, including water rights and local land and water use planning. All proposed actions to benefit fish and wildlife shall not be interpreted to compromise, influence, or preclude any government or agency from carrying out any past, present, or future duty or responsibility that it bears or may bear under any authority. Nothing in this

Plan or the participation in its development constitutes a waiver or release of any rights, or is intended to compromise, influence, or preclude any government or agency from carrying out its mandates, including eminent domain and condemnation proceedings, or interfere with or injure private property rights, including water rights or contracts held by spaceholders within the U.S. Bureau of Reclamation's (USBR's) reservoir projects.

Fish and Wildlife Program Principles

The development of the USP Plan vision, objectives, and strategies has been guided by the vision, scientific principles, and basin-level fish and wildlife objectives found in the NPCC 2000 FWP. As such, they are consistent with the key sections of the FWP that follow.

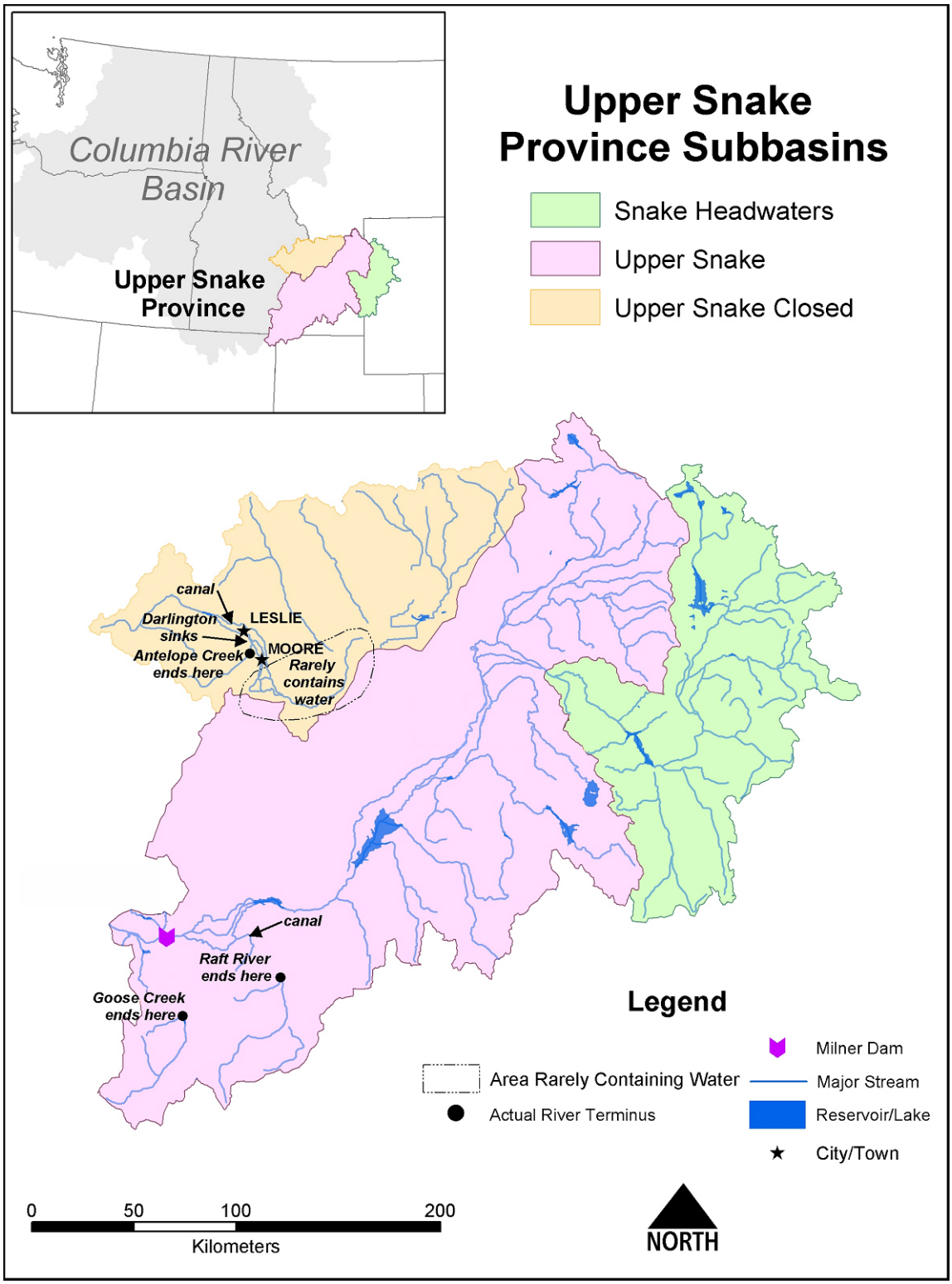


FIGURE 1
Map of the Snake Headwaters, Upper Snake, and Upper Snake Closed Subbasins

The FWP will work to protect and restore the natural ecological functions, habitats, and biological diversity of the Columbia River Basin. It will mitigate the adverse effects to fish and wildlife caused by the development and operation of the hydropower system. In those places where this is not feasible, other methods that are compatible with naturally reproducing fish and wildlife populations will be used. Where impacts have irrevocably changed the ecosystem, the FWP will protect and enhance the habitat and species assemblages compatible with the altered ecosystem.

The NPCC FWP can be accessed at: http://www.nwcouncil.org/library/2000/2000-19/Default.htm)

Guiding Principles for the Upper Snake Province Plan

The following principles will help guide implementation of all USP objectives and strategies:

- Recognize and support the province-wide objectives for resident fish losses in the NPCC's FWP.
- Recognize and support the basin-wide objectives for wildlife losses in the NPCC's FWP.
- Identify and prioritize projects and utilize resources to implement the USP Plan and the Pacific Northwest Electric Power Planning and Conservation Act, including the ESA and local, State, Federal, and Tribal programs, obligations, and authorities.
- Protect Tribal cultural resource properties. These include less-tangible Tribal religious and cultural values that are tied to natural resources within the USP.
- Protect non-Tribal cultural resource properties within the USP.
- Respect and honor private property rights and recognize projects implemented by individuals, partnerships, and corporations that have protected, improved, or restored ecosystems.
- Respect, recognize, and honor the legal authority, jurisdiction, reserved tribal treaty rights, and executive orders.
- Recognize and respect the diverse economic benefits of consumptive and non-consumptive fish and wildlife resources and outdoor recreation associated with healthy, properly functioning ecosystems.
- Promote local participation, including private property owners, in natural resource problem solving and subbasin-wide conservation efforts to restore and protect public resources and ecological function.
- Utilize a scientific foundation for diagnosing ecosystem problems, designing and prioritizing projects, implementing monitoring, and evaluating projects to improve results of future efforts.
- Provide information and opportunities to residents of the USP to promote understanding and appreciation of the value of healthy and properly functioning ecosystems.

- Protect, enhance, and restore those treaty rights that are important to Tribal subsistence, including fish, wildlife, and plant resources.
- Utilize incentive-based and educational approaches to promote ecologically sound use of natural resources.
- Inform the public of the diverse economic benefits associated with healthy and properly functioning ecosystems.
- Protect, perpetuate, enhance, and restore habitats in a way that will sustain and recover aquatic and terrestrial species with emphasis on the recovery of ESA-listed and native species. Provide adequate protections for unique habitats that play an important ecological role.
- Improve and maintain water quality throughout the subbasins.
- Protect and enhance open space that contain natural habitat areas for the benefit of native fish and wildlife.
- Expect ecosystem enhancement and stewardship of natural resources, while recognizing all components of the ecosystem, including the human component.
- Recognize that opportunities for natural resource-based extraction economies can coexist with fish and wildlife resources when they participate in the protection and recovery of aquatic and terrestrial species, water quality, and other elements of a healthy, valuable ecosystem.

CHAPTER 2

Ecological Issues, Focal Habitats, Focal Species, and Limiting Factors

Ecological Issues

There are primary ecological or over-arching anthropogenic impacts that have collectively and independently led to the altered and fragmented habitats as well as the existing species conditions and compositions within the USP. Primary ecological issues that were identified by the authors and Technical Team members during the development of the original Assessment (May 2004) were further refined during the re-evaluation process for this Management Plan. The issues identified within the USP (Table 1) formed the basis for identifying the limiting factors. The purpose of identifying the issues here is to provide a background understanding for framing the limiting factors.

TABLE 1
Issues Identified within the USP*

Aquatic Species and Habitats	Terrestrial Species and Habitats
Physical barriers created by the construction and operation of dams and diversions.	Fire management (that is, fire suppression) within the USP and the impacts on vegetation diversity.
The lack and loss of water from streams by irrigation diversions and canals.	Historic timber management practices and the associated impacts to both terrestrial and aquatic species and habitats.
Water quality limitations result from reservoir fluctuations and low pool management	The impacts of current and historic range manipulations for livestock grazing and grazing intensity.
Habitat loss resulting from stream and riparian habitat alteration.	Non-native plant and animal species introductions and invasions detrimental to native species and habitats.
Past management of aquatic species, that is, the impacts from introductions of non-native species.	

*Issues are separated by aquatic and terrestrial species and habitats although the issues may overlap.

For ecosystems to provide the maximum amount of habitat quantity and quality for native species, all components of the ecosystem must be functioning properly. Each component of the ecosystem performs a different function, although none of the components function in isolation. The Assessment (Part I) dissected the ecological issues into more specific manageable components. These components are focal habitats, focal species, and their specific limiting factors.

Focal Habitats and Focal Species

Focal species either have special ecological, cultural, or legal status, or can be used to evaluate the health of the ecosystem and effectiveness of management actions. The following selection criteria were used in identifying focal species:

- Federal/State classification
- Cultural/economic significance
- Critical ecological function
- Indicator of environmental health
- Locally significant or rare
- Guild representative
- Habitat obligate
- Managed species
- Relationship to salmon
- Data availability

Using the above criteria as a starting point, the Technical Team identified focal species and focal habitats to serve as the representative key ecological components within the USP. Understanding the ecological roles of focal fish and wildlife species in their respective focal habitats is important to decision makers because it aids in understanding the consequences of management actions. For this reason, focal species were also selected for each focal habitat as health indicators. Focal species include fish, mollusks, wildlife, and vegetative species depending on what species best represented a particular habitat type. Focal habitats and associated focal species were chosen by the Technical Team and are described in detail in the Assessment. Five species represent aquatic habitat and 24 species represent terrestrial habitats. The rationale for their selection is presented in the Addendum to the Assessment.

Limiting Factors

The identification of limiting factors to focal habitats and focal species is the scientific basis of this planning process. Limiting factors describe the source of ecological disruption to individual focal habitats and focal species and provide a framework for creating specific, measurable biological objectives and strategies (Table 2). Limiting factors were defined by the Technical Team and modified by the Planning Teams based on information presented in the Assessment and Addendum to the Assessment.

TABLE 2
Focal Habitats, Focal Species, and Limiting Factors

Focal Habitats	Focal Species	Limiting Factors
I) Aquatic:	Yellowstone cutthroat trout Bull trout Mountain whitefish Utah valvata snail Snake River physa snail	**Impoundment and Dam Operation:** A. Altered hydrograph below dams prevents natural stream processes B. Fish passage barriers C. Low reservoir levels degrade the habitat of over-wintering focal species D. Low reservoir levels degrade reservoir and downstream water quality **Diversions/Canals:** E. Fish passage barriers F. Habitat connectivity — reduced natural flows G. Water quality H. Water quantity **Habitat Alteration:** I. Channel bank stability J. Instream habitat K. Diking/channelization **Focal Species Stability:** L. Introduced species M. Isolation/fragmentation N. Focal species recruitment N1. Survival N2. Abundance
II) Riparian/Wetland:	Western toad Yellow-billed cuckoo American beaver	A. Altered hydrograph (dams/diversions) B. Changes in land use C. Transportation impacts D. Overgrazing E. Recreation activities are damaging riparian and wetland areas F. Spring flows and associated habitats are being lost to spring capping/piping for livestock tanks G. Beaver management

TABLE 2
Focal Habitats, Focal Species, and Limiting Factors

Focal Habitats	Focal Species	Limiting Factors
III) Open Water/Ponds/ Impoundments:	Western grebe American white pelican Trumpeter swan Common loon	A. Water fluctuations affect loafing, feeding, nesting, and brood rearing habitat for waterfowl, colonial waterbirds, and shorebirds B. Human disturbance during nesting and brood rearing C. Lack of available or suitable habitat for waterfowl and shorebirds on ponds and impoundments
IV) Pine/Fir Forest:	Black-backed woodpecker Great gray owl Boreal owl, Northern goshawk	A. Loss of large, late-seral stands B. Fragmentation of forest complexes C. Lack of natural fire regime D. Insect and disease damage
V) Juniper/Mahogany:	Curl-leaf mountain mahogany	A. Lack of natural fire regime B. Invasive plant species competition C. Loss of regeneration
VI) Whitebark Pine:	Whitebark pine	A. White-pine blister rust
VII) Aspen:	Quaking aspen	A. Conifer encroachment B. Inadequate regeneration C. Insect and disease damage
VIII) Mountain Brush:	Antelope bitterbrush Green-tailed towhee Mule deer Rocky Mountain elk	A. Mountain brush regeneration B. Fire C. Invasive plant species competition D. Land use change
IX) Shrub-Steppe:	Northern sagebrush lizard Greater sage-grouse Sage sparrow	A. Loss of shrub-steppe habitat B. Undesirable invasive plant species competition C. Land conversion/development D. Fire E. Juniper encroachment

CHAPTER 3

Biological Objectives and Strategies

Biological objectives describe the physical and biological changes needed to achieve the vision for the Management Plan and are consistent with the scientific principles established by the NPCC. Strategies provide specific steps necessary to accomplish the biological objectives. The biological objectives and strategies were developed from the identified factors that are limiting focal habitats and associated focal species. One of the underlying premises of the Management Plan is that ecosystem components rarely function independently. Hence, most of the objectives and strategies that were developed are considered to be interrelated. That is, the successful implementation of one objective will likely help to ensure the success of one or more additional objectives, furthering the vision of protecting and enhancing species, populations, habitats, and ecological functions within the USP.

While the objectives and strategies have a biological focus, they also have important social, political, and economic implications. Indeed, social factors are important determinants of future success of the Management Plan. For example, the accomplishment of some of the objectives and strategies will require the cooperation of private land owners and local communities. Ongoing efforts with public education will continue to help resolve challenges that arise before and during the implementation phase of the plan or any specific project. An important component of the objectives and strategies is that they are consistent with and supportive of the Shoshone-Bannock Tribal (SBT) culture.

The biological objectives and strategies were developed by the Planning Team and are consistent with the four biological objectives for the 2000 Columbia River Basin Fish and Wildlife Program (NPCC 2004):

1. A Columbia River ecosystem that sustains an abundant, productive, and diverse community of fish and wildlife.
2. Mitigation across the basin for the adverse effects to fish and wildlife caused by the development and operation of the Columbia Basin hydropower system.
3. Sufficient populations of fish and wildlife for abundant opportunities for Tribal trust and treaty right harvest and for non-Tribal harvest.
4. Recovery of fish and wildlife that are listed under the ESA and that are affected by the development and operation of the Columbia Basin hydropower system.

The following text presents the biological objectives and strategies categorized according to their aquatic and terrestrial focal habitats, focal species, and corresponding limiting factors:

I. Focal Habitat: Aquatic
Focal Species: Yellowstone Cutthroat Trout, Bull Trout, Mountain Whitefish, Utah Valvata Snail, Snake River Physa Snail

A) Limiting Factor: Altered hydrograph below dams.

Biological Objective:

1. Restore natural river processes below dams (hydropower and irrigation), including peak flows that access the floodplain, to benefit focal aquatic species.

Rationale: Dam operations prevent natural seasonal flows and fluctuations and can disrupt ecological processes within and outside the stream channel.

Strategies:

a) Assess the hydrologic regime under which the impounded river has developed.

b) Assess the hydrologic regime needed to maintain properly functioning conditions with a goal of long-term benefits to focal aquatic species.

c) Evaluate the State, Tribal, and Federal contractual obligations to the water users within the river.

d) Develop a range of hydrologic operation alternatives that incorporates the State, Tribal, and Federal contractual obligations to the water users that maximize the natural hydrograph and benefit focal aquatic species.

e) Educate the public and interested parties on the range of alternatives developed to maximize the natural hydrograph and benefit focal aquatic species.

f) Develop a cooperative dam operational plan from A1d and A1e.

g) Implement operational flows that incorporate A1a through A1f.

h) Monitor and evaluate the effectiveness of the implemented operations and modify, if necessary, within the State, Tribe, and Federal contractual obligations that best meet the life history needs of focal species.

i) Involve the public in developing the cooperative dam operation plan.

B) Limiting Factor: Fish passage barriers are created by the dam structures.

Biological Objective:

1. Restore upstream connectivity around dams.

Rationale: Hydropower and irrigation structures were not designed with fish passage components for native fishes. Downstream migration occurs either through the turbines or over spillways. There are no vectors for upstream migrations, which results in restricted seasonal migrations and can cause genetic isolation of meta-populations.

Strategies:

a) Inventory the priority impounded rivers and streams for instream barriers that restrict upstream connectivity for focal aquatic species.

b) Develop a range of alternatives that examines the cost/benefit of various passage methods to present to the owners/operators of the structures.

c) Develop methods to secure funding for implementing restorative passage for focal species at priority sites.

d) Select a priority alternative with the involvement of owners and operators.

e) Monitor and evaluate the effectiveness of the selected passage design to meet the long-term life history needs of focal species.

f) Involve the public in developing the passage restoration plan.

C) Limiting Factor: Low reservoir levels can degrade the habitat of over-wintering focal aquatic species within reservoir impoundments.

Biological Objective:

1. Maintain sufficient reservoir levels to support over-wintering focal species.

Rationale: Low reservoir levels remove protective habitat for over-wintering species and increase their susceptibility to predation by non-native predators.

Strategies:

a) Evaluate focal species' life history needs as they relate to over-wintering within reservoirs.

b) Examine a range of operational opportunities that would result in long-term benefits to focal species within reservoirs.

c) Evaluate the State, Tribal, and Federal contractual obligations to the water users within the reservoir.

d) Develop a range of reservoir operation alternatives that incorporates the State, Tribal, and Federal contractual obligations to the water users that also benefit focal aquatic species within reservoirs.

e) Educate the public and interested parties on the range of alternatives to benefit focal aquatic species.

f) Develop a cooperative operational plan from C1d and C1e.

g) Implement the operational methods that will provide long-term benefits to focal species within reservoirs that incorporates the State, Tribal, Federal contractual obligations to water users.

h) Involve the public in developing in-reservoir levels.

D) Limiting Factor: Low reservoir levels can degrade reservoir and downstream water quality.

Biological Objective:

1. Maintain water quality downstream of dams that meets the life history needs of focal aquatic species.

Rationale: Wave action from winds resuspends fine sediments when the reservoirs are low, increasing turbid conditions, decreasing physico-chemical suitability of the water column and resulting in transporting, exchanges, and redeposition of fine sediments within overlying and outflowing waters. These conditions can be detrimental to survival and growth downstream fish and other aquatic biota and spawning habitats.

Strategies:

a) Assess water quality conditions downstream of dams.

b) Evaluate the water quality needs of focal species downstream of dams.

c) Evaluate the State, Tribal, and Federal and contractual obligations to the water users within the reservoir.

d) Educate the public and interested parties on the range of alternatives developed to maximize the natural hydrograph and benefit focal aquatic species.

e) Develop a range of reservoir operations that incorporates the State, Tribal, and Federal contractual obligations to water users and benefits focal species downstream.

f) Develop an operational plan.

g) Implement the most effective cost/benefit alternative that supports D1e.

h) Monitor and evaluate the effectiveness of D1g and modify, if necessary, within State, Tribal, and Federal contractual obligations that best meet the life history needs of focal species.

Biological Objective:

2. Maintain reservoir water levels to support water quality requirements of focal species.

Rationale: This objective focuses on in-reservoir species that try to survive with the fluctuating in-reservoir water levels as a result of water releases for either hydropower needs or irrigation demands. These water level fluctuations are especially damaging during the heat gain periods of low summer pools and the oxygen deprivation period of ice covered winter pools. This objective is different from the earlier objective that focused only on focal fish species that reside downstream of reservoirs.

Strategies:

a) Assess reservoir water quality conditions as they relate to fluctuating reservoir levels.

b) Evaluate the in-reservoir water quality needs of focal species.

c) Evaluate the State, Tribal, and Federal contractual obligations to the water users within the reservoir.

d) Develop a range of operational opportunities that would best support in-reservoir water quality needs of focal species.

e) Educate the public and interested parties on the range of alternatives developed in D2d to meet the applicable water quality standards.

f) Develop a cooperative operational plan from D2a and D2e.

g) Implement the operational methods that will provide long-term benefits to focal species within reservoirs.

h) Monitor and evaluate the effectiveness of D1g and modify if necessary, within the State, Tribal, and Federal and contractual obligations that best meet the in-reservoir needs of focal species.

i) Involve the public in developing in-reservoir water level options.

E) Limiting Factor: Fish passage can be restricted by diversions and canal structures.

Biological Objective:

1. Restore upstream connectivity around diversions for fish passage.

Rationale: There are State, Tribal, and Federal mandates that control the operation of irrigation dams and diversion structures that are different from hydropower facilities. That is why fish passage objectives and strategies for irrigation structures are separately addressed from hydropower structures.

Strategies: Apply Strategies B1a through B1f as applicable to diversions and canals.

a) Inventory the priority impounded rivers and streams for instream barriers that restrict upstream connectivity for focal aquatic species.

b) Develop a range of alternatives that examines the cost/benefit of various passage methods to present to the owners/operators of the structures.

c) Develop methods to secure funding for implementing restorative passage to benefit focal species at priority sites.

d) Select a priority alternative with the involvement of owners and operators.

e) Monitor and evaluate the effectiveness of the selected passage design to meet the long-term life history needs of focal species.

f) Involve the public in developing a fish passage restoration plan.

F) Limiting Factor: Diversions and canals reduce natural stream flows, potentially causing problems with habitat connectivity.

Biological Objective:

1. Maintain flows below dams/diversions that support focal species.

Rationale: Stream flows can be reduced by water diversions. Overall location of water in many areas of the USP makes it difficult to keep enough water within some stream reaches to support focal species. This objective will quantify the seasonal water needs of focal species and evaluate the operations to determine whether irrigation demands can be met while providing better releases to meet the needs of focal species.

Strategies: Apply Strategies A1a through A1i as applicable to diversions and canals.

a) Assess the hydrologic regime under which the impounded river has developed.

b) Assess the hydrologic regime needed to maintain properly functioning conditions with a goal of long-term benefits to focal aquatic species.

c) Evaluate the State, Tribal, and Federal contractual obligations to the water users within the river.

d) Develop a range of hydrologic operation alternatives that incorporates the State, Tribal, and Federal contractual obligations to the water users that maximize the natural hydrograph and benefit focal aquatic species.

e) Educate the public and interested parties on the range of alternatives developed to maximize the natural hydrograph and benefit focal aquatic species.

f) Develop a cooperative operational plan from F1d and F1e.

g) Implement operational flows that incorporate F1a through F1f.

h) Monitor and evaluate the effectiveness of the implemented operations and modify, if necessary, within the State, Tribal, and Federal contractual obligations that best meet the life history needs of focal species.

i) Involve the public in developing the dam operational plan.

Biological Objective:

2. Identify and reduce artificially blocked streams or unscreened diversions.

Rationale: Some irrigators use push-up dams and other temporary structures to divert water into irrigation ditches, creating temporary fish barriers. Also, many irrigation diversions do not have fish screens to prevent fish from being directed away from the channel and into a field or pasture where they cannot survive.

Strategies: Apply Strategies B1a through B1f as applicable to diversions and canals.

a) Inventory the priority impounded rivers and streams for instream barriers that restrict upstream connectivity for focal aquatic species or have unscreened diversions.

b) Develop a range of alternatives to resolve blockage/screening issues for owners/operators of the structures and/or unscreened diversions.

c) Develop methods to secure funding for implementing restorative passage or screening options for focal species at priority sites.

d) Select a priority alternative with the involvement of owners and operators.

e) Monitor and evaluate the effectiveness of the alternative selected for implementation to meet the long-term life history needs of focal species.

f) Involve the public in the strategy to screen diversions and remove stream barriers.

G) Limiting Factor: Water quality can be degraded as a result of water withdrawals.

Biological Objective:

1. Restore water quality conditions, including stream flows, to meet focal species' needs as well as applicable water quality standards.

Rationale: Water diversions remove water from the riverine system and can affect various life stages of focal fish species. Some irrigation return flows carry heavy loads of suspended sediments and nutrients from agricultural fields and discharge back to rivers and streams. This objective focuses on potentially poor water quality caused by irrigation diversions (attributed to low flows) and polluted irrigation return flows. The focus is on helping operators find solutions that improve irrigation operation while reducing impacts to focal species.

Strategies:

a) Prioritize and evaluate streams to assess their water quality conditions as they relate to the life history needs of focal species as well as applicable water quality standards and guidelines.

b) Prioritize areas or reaches where existing conditions fail to support the life history needs of focal species or that fail to meet applicable water quality standards and guidelines.

c) Educate the public on the findings and evaluate the cost/benefit of corrective measures within priority areas that support G1b.

d) Develop a cooperative water quality improvement plan from G1a through G1c.

e) Implement plan/methods from G1d.

f) Monitor and evaluate the effectiveness of G1e and modify, if necessary, to best meet the life history needs of focal species and meet applicable water quality standards and guidelines.

H) Limiting Factor: Irrigation diversions and canals can reduce instream water quantity.

Biological Objective:

1. Maintain flows to support focal species' needs including migration.

Rationale: Maintaining water quantity is closely related to water quality for meeting a variety of life history needs of focal species. If flows are reduced greatly during summer irrigation season, water temperatures can rise, algal problems can occur, and dissolved oxygen (DO) concentrations can drop.

Strategies: Apply Strategies A1a through A1d and A1f through A1h as applicable to diversions and canals.

a) Assess the hydrologic regime under which the impounded river has developed.

b) Assess the hydrologic regime needed to maintain properly functioning conditions with a goal of long-term benefits to focal aquatic species.

c) Evaluate the State, Tribal, and Federal contractual obligations to the water users within the river.

d) Develop a range of hydrologic operation alternatives that incorporates the State, Tribal, and Federal contractual obligations to the water users that maximize the natural hydrograph and benefit focal aquatic species.

e) Develop a cooperative dam operational plan from H1d and H1e.

f) Implement operational flows that incorporate H1a through H1f.

g) Monitor and evaluate the effectiveness of the implemented operations and modify, if necessary, within the State, Tribal, and Federal contractual obligations that best meet the life history needs of focal species.

h) Develop and implement a public education program and/or incentives that focus on conservation and mitigation programs and improve stream flows to benefit focal species.

I) Limiting Factor: Habitat Alteration – Some natural stream channels have become unstable.

Biological Objective:

1. Restore or stabilize stream reaches that have become unstable (e.g., braided channels, down-cutting, etc.) from land management practices.

Rationale: Added flows and increased sediment inputs (i.e., anthropogenically derived) alter channels and can degrade habitat quality and quantity, particularly spawning habitats.

Strategies:

a) Inventory and prioritize unstable stream reaches that can support critical life history functions for focal species.

b) Identify sources that have caused channel instability.

c) Develop a cooperative restoration plan that identifies cost/benefit alternatives to stabilize priority reaches that support the needs of focal species and support applicable standards.

d) Educate the public on problems in I1b and the cooperative restoration plan in I1c.

e) Implement I1d.

f) Monitor and evaluate the effectiveness of I1e and modify, if necessary, within the framework of I1c.

Biological Objective:

2. Protect, enhance, and restore riparian health and function along streams supporting focal species and to meet applicable water quality standards.

Rationale: By protecting or enhancing riparian areas through altering land management impacts, stream health can be protected from potential damage or restored from degradation. Low-gradient streams are most vulnerable to becoming unstable once vegetation has been removed or damaged along the stream banks. The previous objective focused on actively repairing damaged streams, while this objective focuses on managing the land to protect or restore riparian function as it relates to stream stability.

Strategies:

a) Inventory and prioritize riparian reaches that support critical life history functions for focal species.

b) Identify sources (e.g., riparian roads, vegetation management, etc.) that contribute to degraded riparian conditions instream reaches.

c) Develop a cooperative plan that identifies cost/benefit alternatives for protecting and/or improving riparian function as it relates to stream stability and providing habitat needs for focal species.

d) Educate the public on the effects of the impacts identified in I2b and restoration plan in I2c.

e) Implement I2c.

f) Evaluate the effectiveness of I2e and modify, if necessary, within the framework of I2d.

J) Limiting Factor: Instream habitats for fish can be lost or degraded because of channel alterations.

Biological Objective:

1. Protect, enhance, and restore instream structure, diversity, and complexity (e.g., riffle/pool ratio, LWD, width/depth ratio, etc.) necessary for supporting the life history functions of focal species.

Rationale: This objective does not look at stream health based on stability and function but examines the specific biological needs of focal fish species at all life stages.

Strategies:

a) Inventory and prioritize reaches that support critical life history functions for focal species.

b) Identify sources (e.g., riparian roads, vegetation management) that have resulted in degraded instream conditions of focal species' habitats.

c) Develop a cooperative restoration plan that identifies cost/benefit alternatives of improving priority instream reaches that support the needs of focal species.

d) Educate the public on the effects of the impacts identified in J1b and restoration plan in J1c.

e) Implement J1c.

f) Monitor and evaluate the effectiveness of J1e and modify, if necessary, within the framework of J1d.

K) Limiting Factor: Some stream segments have been artificially diked or channelized.

Biological Objective:

1. Restore or mitigate aquatic habitats and stream banks that have been artificially diked and/or channelized (note: mitigate where restoration is not possible).

Rationale: Stream channels have been altered to protect against flooding, armor unstable channels, or to completely move stream channels. Many past alterations created ecological problems and can be corrected.

Strategies:

a) Inventory and prioritize stream reaches that have been diked or channelized that could support critical life history functions of focal species.

b) Evaluate the State, Tribal, and Federal contractual obligations to the water users within the river.

c) Develop a cooperative restoration plan that identifies cost/benefit alternatives to rehabilitating or mitigating priority reaches that support the needs of focal species.

d) Educate the public on the effects of the impacts identified in K1a and benefits from the restoration plan in K1c.

e) Implement K1c.

f) Monitor and evaluate the effectiveness of K1e and modify, if necessary, within the framework of K1d.

L) Limiting Factor: Introduced species have adversely affected the life histories of focal species.

Biological Objective:

1. Protect, enhance, and restore genetic integrity of focal species.

Rationale: Introductions of non-native rainbow trout have often resulted in hybridization with native Yellowstone cutthroat trout where these species co-occur in the USP. This hybridization has resulted in fragmented populations of pure strains of the native trout and reduced the genetic integrity of Yellowstone cutthroat trout in much of the USP.

Strategies:

a) Identify genetic strongholds of resident and migratory focal species (especially Yellowstone cutthroat trout) within the USP subbasins.

b) Identify hybridization threats to L1a.

c) Evaluate hybridization risks with barrier removals.

d) Develop priorities within a cooperative restoration plan that protect and expand the distribution of L1a species (consider Tribal subsistence).

e) Implement high-priority projects from L1d that protect and expand the distribution of L1a species.

f) Monitor and evaluate the effectiveness of L1e within the framework of L1d.

g) Monitor and evaluate the role of hatcheries as a tool for enhancing focal species in their present and historic range.

Biological Objective:

2. Maintain flows to provide connectivity/migration to meet focal species' life history needs.

Rationale: This objective examines the specific connectivity and migration needs of focal fish species. Previous connectivity issues addressed passage opportunities around dam and irrigation structures only, whereas this objective evaluates the biological connections needed to maintain all life stages of focal species.

Strategies: Apply Strategies A1b through A1i as applicable to flows.

a) Assess the hydrologic regime needed to maintain properly functioning conditions with a goal of long-term benefits to focal aquatic species.

b) Evaluate the State, Tribal, and Federal contractual obligations to the water users within the river.

c) Develop a range of hydrologic operation alternatives that incorporates the State, Tribal, and Federal contractual obligations to the water users that maximize the natural hydrograph and benefit focal aquatic species.

d) Educate the public and interested parties on the range of alternatives developed to maximize the natural hydrograph and benefit focal aquatic species.

e) Develop a cooperative operational plan from L2c and L2d.

f) Implement operational flows that incorporate L2a through L2e.

g) Monitor and evaluate the effectiveness of the implemented operations and modify, if necessary, within the State, Tribal, and Federal contractual obligations that best meet the life history needs of focal species.

h) Involve the public in developing a hydrologic operational plan.

i) Consider L1c above (evaluate hybridization risks with barrier removals) in any connectivity restoration plan.

M) Limiting Factor: Some meta-populations of focal species have been isolated because of habitat fragmentation.

Biological Objective:

1. Improve connectivity of meta-populations of focal species (e.g., stream flow).

Rationale: Genetic diversity within a species is an important requirement to sustain that species. Meta-populations of aquatic species often were linked during winter migrations but now, because of low flows and dams, some of these connections have been broken, leaving isolated sub-populations.

Strategies: Apply Strategies A1b through A1i as applicable to stream flows between focal species' populations.

a) Assess the hydrologic regime needed to maintain properly functioning conditions with a goal of long-term benefits to focal aquatic species.

b) Evaluate the State, Tribal, and Federal contractual obligations to the water users within the river.

c) Develop a range of hydrologic operation alternatives that incorporates the State, Tribal, and Federal contractual obligations to the water users that maximize the natural hydrograph and benefit focal aquatic species.

d) Educate the public and interested parties on the range of alternatives developed to maximize the natural hydrograph and benefit focal aquatic species.

e) Develop a cooperative operational plan from M1c and M1d.

f) Implement operational flows that incorporate M1a through M1e.

g) Monitor and evaluate the effectiveness of the implemented operations and modify, if necessary, within the State, Tribal, and Federal contractual obligations that best meet the life history needs of focal species.

h) Involve the public in developing a dam operational plan.

i) Consider L1c above (evaluate hybridization risks with barrier removals) in any connectivity restoration project.

Biological Objective:

2. Remove physical barriers that prevent migration of focal species.

Rationale: There are known or potential barriers to fish passage such as dams, diversions, stream push-up dams, and impassable culverts that need to be evaluated and prioritized collectively for the biological needs of focal species. These barriers were addressed in prior objectives individually based on barrier category, land ownership, and corresponding regulations. With this objective, these barriers are evaluated and prioritized based on the greatest biological needs of the focal species.

Strategies: Apply Strategies B1a through B1e for restoring connectivity to upstream habitats.

a) Inventory the priority impounded rivers and streams for instream barriers that restrict upstream connectivity to focal aquatic species.

b) Develop a range of alternatives that examines the cost/benefit of various passage methods to present to the owners/operators of the structures.

c) Develop methods to secure funding for implementing restorative passage for focal species at priority sites.

d) Select a priority alternative with the involvement of owners and operators.

e) Monitor and evaluate the effectiveness of the selected passage design to meet the long-term life history needs of focal species.

f) Consider L1c (evaluate hybridization risks with barrier removals) in any connectivity restoration project.

N) Limiting Factor: Focal species recruitment can potentially be limited at all life stages.

Biological Objective:

1. Survival: Improve survival of focal species in all life stages.

Rationale: This objective covers those biological needs for focal species not already addressed by other objectives.

Strategies:

a) Identify and prioritize specific threats to focal species' survival.

b) Develop priorities within a cooperative restoration plan to improve survival within and among focal species populations.

c) Educate the public and interested parties on threats to focal species' survival and plan to implement high-priority projects.

d) Implement N1b.

e) Monitor and evaluate the effectiveness of N1d and modify, if necessary, within the framework of N1b.

Biological Objective:

2. Abundance: Increase focal species numbers to viable usable population according to the Title 36 mandate of the Idaho Department of Fish and Game (IDFG).

Rationale: It is important to manage for numbers that are beyond minimum thresholds, and provide numbers that support the important economic contribution of fishing and related outdoor recreation to the rural economy of the USP.

Strategies:

a) Develop and implement a public information program for rural communities of the Province and broader public regarding the importance of healthy fisheries to rural economies.

b) Monitor and evaluate the distribution and population strength of focal species within the subbasins.

c) Develop priorities within a cooperative restoration plan to maintain and improve focal species populations (consider Tribal subsistence) within priority areas.

d) Enlist support and involvement of rural communities for restoring and protecting viable fisheries

e) Implement high-priority projects within priority areas identified in N2b.

f) Monitor and evaluate the effectiveness of N2c and modify, if necessary, within the framework of N2b.

II. Focal Habitat: Riparian/Wetland
Focal Species: Western Toad, Yellow-billed Cuckoo, American Beaver

A) Limiting Factor: Altered hydrograph (dams/diversions).

Biological Objective:

1. Protect and enhance the riparian cottonwood forests in river bottoms.

Rationale: Natural flow regimes are critically important to maintain and perpetuate cottonwood riparian communities along rivers and streams. Cottonwood riparian communities, along with other riparian and wetland communities, are the most important wildlife habitats in the Upper Snake Subbasin. Without seasonal high flows, cottonwood riparian communities degrade over time as older trees die and they are not replaced by new plants. Protecting and enhancing existing cottonwood stands is extremely important to many wildlife species.

Strategies:

a) Develop and implement a public information program for land owners and the general public regarding the importance of cottonwood riparian communities and carry this through the entire project.

b) Identify key cottonwood/willow areas within the subbasins including existing and potential stands. Use specific yellow-billed cuckoo habitat requirements to determine key habitat parameters. Further define other factors important to identifying sites with potential for development of viable cottonwood/willow communities including, but not limited to: stream or river gradient, floodplain width, natural or altered flow regime, geomorphology, adjacent land uses, historic photos, etc.

c) Determine ownership status and general management needs relative to ownership (i.e., review management on Federal lands; acquire management ability on private lands).

d) Acquire and/or secure key cottonwood and other riparian/wetland habitat areas through mechanisms such as conservation easements, fee-title acquisition, land owner agreements, or management rights for mitigation, long-term management, and restoration.

e) Develop general and specific goals for vegetation conditions based on riparian focal species' habitat requirements with an emphasis on multi-tiered stands with multiple age classes of cottonwoods.

f) Assess the condition of key existing and potential cottonwood stands in terms of specific focal species' habitat requirements defined in A1b above.

g) Prioritize sites for project implementation based on habitat needs and cost/benefit assessment.

h) Develop site-specific management plans to achieve vegetation goals within specified time frames (e.g., NPCC process of management).

i) Implement site-specific projects based on site prioritization.

j) Monitor and evaluate progress toward goals and modify implementation if needed.

Biological Objective:

2. Restore bank-full discharge events below dams for riparian maintenance production.

Rationale: Natural flow regimes are critically important to maintain and perpetuate cottonwood riparian communities along rivers and streams. Bank-full discharge events (equal to about a 1.5- to 2-year interval peak flow) are important for maintaining existing riparian communities. Bank-full flows allow recharge of floodplain alluvium, providing important moisture as plants begin their annual growth. Bank-full flows that saturate the floodplain early in the growing season provide critical moisture to support riparian vegetation through the growing season as water stored in the alluvium is released back to the river or stream later in the summer.

Strategies:

a) Develop and implement a public information program for land owners and the general public regarding the importance of bank-full discharges to riparian and wetland vegetation and associated wildlife and carry this effort through the entire project.

b) Identify stream and river reaches where bank-full discharges are constrained by reservoirs or major diversions.

c) Determine which of these reaches have current or potential riparian stands or other desired riparian habitats that would benefit from bank-full, riparian maintenance discharges (based on Biological Objective A1 for Riparian/Wetland Focal Habitat).

d) Work with dam operators, water managers, and stakeholders to develop opportunities for short-duration, peak water releases below dams and major diversions to enhance riparian areas. These releases should coincide with normal hydrograph peaks and occur during years with adequate water supply or high snow packs.

Biological Objective:

3. Restore discharges below dams that activate floodplain function.

Rationale: Periodic flood flows that exceed bank-full discharge, followed by gradual recession to summer flow levels, are necessary for cottonwood regeneration and the long-term survival of cottonwood communities. Flood flows of this type erode river banks and create point bars with exposed mineral soils, which are needed for cottonwood seeds to germinate. Following germination, seedling root growth must be fast enough to keep up with the rate at which alluvial groundwater levels recede or the seedlings will dry out and not survive their first growing season. Under natural conditions, the successful establishment of a new cottonwood age class requires flows high enough to create sites suitable for germination timed to match the timing of cottonwood seed release, followed by a slow recession in discharge and groundwater levels. If seedlings survive the first year, they must also have the proper conditions for several subsequent years in order to survive to maturity. Naturally, the combination of conditions that results in a successful establishment of a new cottonwood age class may occur only once every 20 to 30 years.

Strategies:

a) Develop and implement a public information program for land owners and the general public regarding the importance of periodic flow levels that activate floodplain functions and carry this through the entire project.

b) Identify stream and river reaches below dams and diversions where flows exceeding bank-full discharges have been eliminated.

c) Determine which of these reaches have current, potential, or desired riparian habitats that would benefit from flows exceeding bank-full, riparian

establishment discharges (based on information from Biological Objectives A1 and A2 for Riparian/Wetland Focal Habitat).

d) Determine the desired discharge, duration, and timing of flows exceeding bank-full for each reach where flows are controlled by upstream storage and where flows exceeding bank-full would substantially benefit existing or potential cottonwood/willow riparian communities.

e) Determine which of the reaches identified in A3c and A3d could accommodate flows exceeding bank-full without causing substantial (as determined with land owner input) economic losses.

f) Work with dam operators, water managers, and stakeholders to create short-duration, peak water releases below dams and major diversions that exceed bank-full to regenerate decadent cottonwood stands and promote cottonwood and willow development in non-functioning riparian areas. Peak discharge periods would likely complement existing operations and would need to coincide with normal peak hydrograph dates during years of high snow pack.

Biological Objective:

4. Conserve water within the existing legal framework and identify and develop opportunities to improve stream flows that will benefit riparian/wetland habitats and focal species.

Rationale: Adequate instream flows are vital for the maintenance of healthy riparian and wetland communities, which support the riparian focal species as well as many other riparian-obligate species.

Strategies:

a) Develop and implement a public information program for land owners and the general public related to the importance of water conservation to improve stream flows (recognizing that there are no Federal or State instream flow water rights outside of the minimum stream flow rights held by the IWRB) that will benefit riparian/wetland habitats and focal species and carry this through the entire process.

b) Focusing on the sites identified in A1b, identify important geographic areas where water diversions adversely affect stream flows and riparian habitat and where water conservation would benefit stream flows and associated riparian areas.

c) Identify local and regional aquifer recharge function that might be detrimentally affected as a result of enacting water conservation in the identified geographic areas and develop plans to maintain aquifer recharge.

d) Assess and pursue those water conservation projects that would benefit priority riparian/wetland areas and where aquifer recharge would not be reduced.

e) Identify local and regional aquifer recharge practices that work to the detriment of focal riparian/wetland habitats and identify options for altering those practices to restore those habitats.

f) Create economic incentives that encourage water conservation practices (e.g., drip and sprinkler irrigation) in those focal areas that promote riparian/wetland health.

g) Study and identify opportunities to develop agreements and arrangements such as "willing buyer/willing seller" to obtain water rights that would be used to provide stream flow benefits for riparian and wetland habitats, recognizing that there are no Federal or State instream flow water rights outside of the minimum stream flow rights held by the IWRB.

h) Provide opportunities to support monitoring of water right allocations where outcomes will likely achieve mutual benefits to riparian/wetland habitats in addition to water users.

Biological Objective:

5. Reduce the impact of invasive plant species on native species and ecosystems.

Rationale: Invasive herbaceous and woody plants (including noxious weeds) compete with and often displace native species. This can occur at all strata within riparian communities (herbaceous, shrub, and tree layers). Invasive plant species provide poor-quality wildlife habitat compared to native species.

Strategies:

a) Develop, implement, and support a public information program for land owners and the public on invasive plant species and their legal responsibilities to treat noxious weeds on their lands.

b) Work with Federal agencies and State, local, and Tribal governments to develop a program that secures funds for the control of invasive plant species.

c) Develop economic incentives for land owners to control invasive plant species in and adjacent to riparian areas.

d) Identify project opportunities for near- and longer-term treatment and eradication of invasive plant species and continuation of existing invasive plant species control actions on important habitat areas.

e) Design projects involving the application of herbicides such that herbicide applications will not degrade current riparian habitat, hinder regeneration of cottonwoods and willows, or adversely impact insect species used by focal species such as the yellow-billed cuckoo for food.

f) Evaluate the benefits and risks of various weed control methods: using hand control measures (such as pulling weeds and grubbing), applying bio-controls, or using chemical controls.

g) Herbicides should only be applied by hand in buffer areas around high-priority riparian areas. Aerial and broadcast spraying should not be permitted in priority riparian and wetland areas.

B) Limiting Factor: Changes in land use.

Biological Objective:

1. Prevent future loss of riparian/wetland areas.

Rationale: Land use changes that can adversely affect riparian communities include clearing for agriculture, development of housing projects or single "trophy" homes, and construction of power-related facilities along corridors. The removal of riparian vegetation for any of these activities destroys wildlife habitat. In addition, the presence of people and pets disturbs and displaces many species of wildlife. Developments of all types in riparian areas fragment larger blocks of habitat into smaller patches, which do not support species that require larger areas.

Strategies:

a) Develop and support programs, such as the Soil Conservation Commission (SCC)/Natural Resources Conservation Commission (NRCS) Idaho One Plan or similar concepts, as a means of educating land owners on the incentive programs available for land use modifications that benefit riparian/wetland areas.

b) Identify riparian and wetland areas vulnerable to development.

c) Prioritize riparian sites in need of protection from conversion to other uses that would degrade riparian habitat values.

d) Work with cooperative partners to develop alternatives and funding sources that provide riparian habitat protection; include the South Idaho Mitigation Plan where appropriate.

C) Limiting Factor: Transportation impacts.

Biological Objective:

1. Protect, enhance, and restore riparian and wetland function.

Rationale: Construction and use of transportation corridors can result in both direct and indirect impacts on wetland and riparian communities. Construction of new facilities in wetland and riparian areas removes habitat and fragments larger blocks of habitat. Traffic results in direct wildlife mortality when vehicles collide with or run over wildlife.

Strategies:

a) Review and evaluate impacts of transportation systems on riparian/ wetland environments.

b) Coordinate responsible entities on methods for improving road management along or within riparian areas.

c) Work with county highway districts (or their equivalent) and the Idaho Transportation Department to modify road and right-of-way management practices to first avoid and then minimize impacts to riparian/wetland habitats.

D) Limiting Factor: Overgrazing.

Biological Objective:

1. Protect, enhance, and restore riparian and wetland habitats where they are being impacted by grazing activities.

Rationale: Livestock grazing can be detrimental to riparian vegetation and wildlife habitat values. Livestock can remove the current growth of existing plants, readily browse young cottonwoods and willows to the point that young plants do not survive, girdle and kill smaller trees, compact soil, degrade stream banks, and are a source of noxious and other invasive weed seeds. Livestock grazing also can cause erosion and stream head-cutting, resulting in incised channels and lowered groundwater levels on former floodplains. When groundwater levels are lowered, riparian and wetland vegetation that occurred on the original floodplain is replaced by upland species or weeds tolerant of drier conditions. Livestock overgrazing is not compatible with healthy riparian communities and prevents improvement in the condition of wetland and riparian areas.

Strategies:

a) Coordinate public, Tribal, and private owners and managers with permits to reduce grazing impacts on riparian/wetland areas.

b) Where livestock grazing is impacting existing or potential key riparian and wetland habitats, work with the land management agencies, grazing permit holders, and private land owners to modify livestock grazing in terms of season-of-use, livestock numbers, duration of grazing, and grazing locations to avoid impacts and promote recovery of healthy riparian vegetation conditions.

c) Work with land management agencies and private land owners to restrict livestock grazing to promote willow and cottonwood growth and recruitment. The goal is to improve the condition of riparian communities and meet the habitat needs of the yellow-billed cuckoo, other focal species, and other riparian obligates.

Biological Objective:

2. Protect, enhance, and restore springs that have been impacted by overgrazing.

Rationale: Many of the natural springs that have not been developed to provide livestock water are subject to heavy livestock grazing pressure, which removes vegetation and severely degrades or eliminates wildlife habitat value.

Strategies:

a) Identify springs that are impacted by developments for grazing purposes and evaluate their role in grazing management.

b) Implement strategies that promote the protection, enhancement, or restoration of spring developments in relation to D2a.

E) Limiting Factor: Recreation activities can damage riparian and wetland areas.

Biological Objective:

1. Protect, enhance, and restore riparian and wetland habitats where they are being impacted by recreation activities.

Rationale: Trail development and human recreation activities can have detrimental effects on vegetation and wildlife through the introduction of weed species, direct removal of habitat, fragmentation of larger habitat patches, and increased wildlife disturbance because of human presence.

Strategies:

a) Identify riparian and wetland habitats that have been damaged by recreation activities and seek protection through appropriate processes.

b) Work with land managers to close, repair, or maintain offending trails in riparian/wetland areas.

F) Limiting Factor: Spring flows and associated habitats are being lost to spring capping/piping for livestock tanks.

Rationale: Many natural springs have been developed to provide livestock water. Spring development for this purpose usually involves diverting the spring at its source into a water trough of some type. In the process, the spring is dried up and its value for wildlife is eliminated.

Biological Objective:

1. Restore and protect springs at livestock watering developments that lost, or will lose wetland and riparian vegetation.

Strategies:

a) Work with resource specialists to identify spring developments that may or will lose wetland and riparian vegetation.

b) Identify and implement alternatives for physically modifying spring developments that would restore natural spring function and re-establish wetland and riparian vegetation at the spring source while meeting water right requirements.

G) Limiting Factor: Beaver management.

Biological Objective:

1. Reintroduce beavers as a means of restoring and enhancing riparian and wetland habitats.

Rationale: Beavers historically played a vital role in developing wetlands along many of the smaller drainages in the subbasins. Beaver dams raise groundwater levels, thereby improving soil moisture conditions on adjacent floodplains and supporting wetland and riparian species. Assuming there is enough food present, reintroducing beavers into streams with incised channels traps sediment and often results in higher groundwater levels on floodplains adjacent to beaver dams, which will then support riparian communities. These riparian areas and the wetlands created behind the beaver dams are extremely valuable wildlife habitat.

Strategies:

a) Develop and implement an information program for land owners and the public on the benefits of beavers over the range of resources.

b) Expand cooperative efforts to reintroduce beavers on public, Tribal, and private lands where appropriate.

c) Identify and prioritize stream reaches that could benefit most from beaver reintroduction and focus efforts on those segments.

d) Implement and monitor and evaluate reintroduction projects.

III. Focal Habitat: Open Water/Ponds/Impoundments
Focal Species: Western Grebe, American White Pelican, Trumpeter Swan, Common Loon

A) Limiting Factor: Water fluctuations can affect loafing, feeding, nesting, and brood rearing habitat for waterfowl, colonial waterbirds, and shorebirds.

Biological Objective:

1. Manage water levels to benefit loafing, nesting, feeding, and brood rearing habitat for waterfowl, colonial waterbirds, shorebirds, and other aquatic focal species and their habitats.

Rationale: Increasing water levels during the nesting season often floods and destroys nests. Decreasing water levels can expose floating nests to mammalian predation and desiccate shallow feeding areas for these birds. Minimizing these changes or slowing the rate of change can benefit these and other species.

Strategies:

a) Identify the most important loafing, nesting, feeding, and brood rearing habitats within reservoirs and other major impoundment waters in the province and identify the most important reservoirs that provide this function.

b) Evaluate open water/pond/impoundment focal species' life history needs as they relate to and are negatively influenced by water level fluctuation and water quality degradation resulting from sediment entrainment from fluctuation effects on the reservoir.

c) Examine and identify a range of operational opportunities that would result in long-term benefits to focal species within reservoirs.

d) Examine and identify a range of different system configurations within the existing operation's authorized purposes, contract obligations to space holders, State law, and State water plans that would result in long-term desired benefits to open water/pond/impoundment focal species.

e) Evaluate reservoir operations within authorized purposes, applicable water rights, and contractual obligations to space holders within all reservoirs.

f) Develop a range of reservoir operation alternatives within authorized purposes, contractual obligations to space holders, and State laws that provides the most benefit to open water/pond/impoundment focal species within reservoirs (this considers both existing and alternative operation scenarios).

g) Work with dam operators and reservoir/impoundment managers to determine the best operation alternative(s) to manage water elevation fluctuations and provide for focal species' life history needs.

h) Educate the public and interested parties on the range of alternatives to benefit focal aquatic species.

i) Develop a cooperative operational plan from A1g and A1h.

j) Implement the operational methods that will provide long-term benefits to focal species within reservoirs.

k) Involve the public in developing a plan to maintain reservoir water levels.

l) Identify, enhance, and protect heavily impacted stream and reservoir banks (eroded or sloughed) from reservoir fluctuations that negatively impact open water focal species.

m) Enhance and protect areas identified in A1l.

B) Limiting Factor: Human disturbance during nesting and brood rearing.

Biological Objective:

1. Protect colonial rookeries and waterfowl broods from disruptive human disturbance. Colonial water birds are sensitive to human disturbance, especially early in the nesting season. Reducing human disturbance will increase nesting success.

Strategies:

a) Identify colonial rookeries and key waterfowl nesting and brood rearing areas on reservoirs and other water bodies.

b) Collaborate with fisheries managers to establish population goals for interactive avian and focal aquatic species.

c) Complete Strategy A1 above for open water/pond/impoundment focal species and then work with dam operators and reservoir/impoundment managers to protect the most important nesting and brood rearing areas from the adverse effects of recreation and achieve avian population goals.

d) Work with regulatory authorities to enact and enforce seasonal wake restrictions and seasonal water recreation closure zones to protect important nesting and brood rearing areas.

C) Limiting Factor: Lack of available or suitable habitat for waterfowl and shorebirds on ponds and impoundments.

Biological Objective:

1. Protect, enhance, and restore nesting habitat for waterfowl and shorebirds on ponds and impoundments.

Rationale: Nesting habitat for ground-nesting waterfowl and shorebirds generally consists of residual herbaceous vegetation left over from the previous growing season. Residual nesting habitat can be adversely affected by livestock grazing during and after the previous growing season. Actions to substantially limit or eliminate livestock grazing in the vicinity of ponds and impoundments would improve cover for ground-nesting waterfowl and shorebirds.

Strategies:

a) Identify ponds or impoundments in the USP that now have suitable nesting habitat for waterfowl and shorebirds or have the potential to be converted to nesting habitat.

b) Acquire ponds or impoundments that now have suitable nesting habitat for waterfowl and shorebirds or have the potential to be converted to nesting habitat.

IV. Focal Habitat: Pine/Fir Forest
Focal Species: Black-backed Woodpecker, Great Gray Owl, Boreal Owl, Northern Goshawk

A) Limiting Factor: Loss of large, late-seral stands.

Biological Objective:

1. Identify, enhance, and protect potential late-seral forest habitats to benefit focal species and achieve forest Desired Future Conditions (DFC). These and other

wildlife species require large blocks of late-seral pine/fir forests for their survival.

Strategies:

a) Work with land managers to create large contiguous, late-seral stage habitats where lacking.

b) Determine, through literature research, the relationship between snag availability and population dynamics of the great gray owl and boreal owl.

c) Determine, through literature research, the seasonal habitat requirements of the northern goshawk and the distribution of suitable goshawk habitat within the subbasins.

d) Work with land managers to preserve and enhance the condition of breeding and wintering habitats of focal species and other late-seral pine/fir forest obligates.

B) Limiting Factor: Fragmentation of forest complexes.

Biological Objective:

1. Use forest management practices to achieve DFC of large stands of healthy forests. These focal species as well as many other species that use late-seral pine/fir forests require large blocks of undisturbed forest complexes for their survival. This is especially true of larger carnivores such as the Canada lynx, wolverine, and grizzly bear. Forest practices, including timber harvest and road-building and use, as well as trail development and use, can fragment these large blocks of habitat into smaller areas interrupted by areas of unsuitable habitat, thereby degrading remaining surrounding forest areas. These actions also introduce sources of human disturbance that displace wildlife, degrade habitat value, and result in predator mortality.

Strategies:

a) Identify where public forest lands have been fragmented to the detriment of focal species and correct those past actions.

C) Limiting Factor: Lack of natural fire regime.

Biological Objective:

1. Reduce fuel loads where appropriate. Use fire management to achieve DFC of healthy forests.

Rationale: Human control of fires during the last 100 years has resulted in many areas with dense stands of smaller conifers that compete with each other for water, light, and nutrients. Managing for a more natural fire regime would improve the health of forest vegetation and reduce the potential for very large fires. Note however, that lodgepole pine, one of the dominant trees of the subbasins, is a relatively short-lived, fire-dependent species and fires in lodgepole pine forests are a normal process needed for forest regeneration. Reducing fuel loads should not be

used as a reason for building new roads into roadless areas as this results in habitat fragmentation.

Strategies:

a) Reduce fuel loads through use of forest management practices (commercial/pre-commercial thinning, timber harvest, prescribed burning) in stands where fire loss is a threat.

b) Allow the use of natural wild fires to burn in Wilderness Areas, Roadless Areas, Wilderness Study Areas, and where fire is a useful event for achieving natural fire regime and DFC of pine/fir and aspen focal habitats.

D) Limiting Factor: Insect and disease damage.

Biological Objective:

1. Use forest management practices to control the spread of insects and disease.

Strategies:

a) Based on recent timber inventories, identify the most important areas within each subbasin that have insect and disease problems relative to improving habitat for focal species.

b) Prescribe and implement management actions accordingly.

V. Focal Habitat: Juniper/Mahogany

Focal Species: Curl-leaf Mountain Mahogany

A) Limiting Factor: Lack of natural fire regime.

Biological Objective:

1. Restore the natural fire regime to prevent juniper encroachment and restore mahogany stands.

Rationale: Juniper encroachment into mountain mahogany stands was historically controlled by periodic fires that probably burned into mahogany from adjacent shrub-steppe communities. Fire control during the last 100 years has allowed junipers to encroach into both mountain mahogany and shrub-steppe communities. Careful use of fires in mahogany stands can eliminate the encroaching junipers while promoting regrowth of mahogany.

Strategy:

a) Allow natural fires to burn in areas of Wilderness Areas, Roadless Areas, and Wilderness Study Areas where this will benefit mountain mahogany.

B) Limiting Factor: Competition with invasive plant species.

Biological Objective:

1. Limit/treat invasive plant species that compete with mahogany.

Rationale: Invasive plant species compete for moisture and nutrients. Control of these plants will improve the health of mountain and curl-leaf mahogany stands.

Strategy:

a) Use integrated management techniques to manage invasive plant species.

C) Limiting Factor: Loss of regeneration.

Biological Objective:

1. Limit livestock and elk grazing/browsing to allow successful mahogany regeneration.

Rationale: Mahogany is a preferred browse species for elk and livestock. All efforts to regenerate mahogany stands must be accompanied by limiting browsing by elk and livestock until the plants are large enough to withstand this pressure without jeopardizing their survival.

Strategy:

a) Use appropriate techniques for stand establishment and to manage wildlife and livestock browsing where improved mountain mahogany regeneration is a goal.

VI. Focal Habitat: Whitebark Pine
Focal Species: Whitebark Pine

A) Limiting Factor: White-pine blister rust.

Biological Objective:

1. Protect remaining stands of whitebark pine from white-pine blister rust.

Rationale: White-pine blister rust has killed a large percentage of whitebark pines in southern and central Idaho in recent years. Historically, whitebark pines have been fairly resistant to pine bark beetles because the beetles could not complete their life cycle in 1 year due to the high elevation and cold conditions where whitebark pines grow. However, warmer average temperatures of the last 15 years have allowed pine bark beetles to complete their life cycle in whitebark pines within one season rather than two, thereby increasing whitebark pine mortality, in addition to the problems from white-pine blister rust. Any actions that can protect remaining stands of whitebark pines from white-pine blister rust and pine bark beetles should be considered.

Strategy:

a) Support ongoing research on white-pine blister rust and encourage establishment of stands of whitebark pine in its historic range.

Biological Objective:

2. Understand and establish conditions that support existing and new stands of whitebark pine.

Strategy:

a) Restore the natural fire regime.

VII. Focal Habitat: Aspen
Focal Species: Quaking Aspen

A) Limiting Factor: Conifer encroachment.

Biological Objective:

1. Manage to have 80 percent of the mixed conifer/aspen habitat complex occur in 100 percent aspen stands.

Rationale: Aspen habitats are extremely valuable for many wildlife species. Fire control has allowed conifers to encroach into and replace aspens. The absence of fire has also allowed many aspen stands to become old and decadent, but without disturbance these old stands cannot be regenerated. Management actions that remove conifers and promote aspen regeneration will improve and perpetuate this valuable habitat type.

Strategy:

a) Identify existing aspen stands and use appropriate forest management techniques to restore 80 percent of those stands to a pure aspen habitat type.

Biological Objective:

2. Manage aspen stands against pine/fir encroachment.

Rationale: Same as A1 for quaking aspen immediately above.

Strategies:

a) Use prescribed burns to control pine/fir encroachment.

b) Allow natural fires to burn in areas in Wilderness Areas, Roadless Areas, and Wilderness Study Areas where this will benefit aspen.

B) Limiting Factor: Inadequate regeneration.

Biological Objective:

1. Reintroduce fire to regenerate aspen in decadent/diseased aspen stands.

Rationale: Same as A1 for quaking aspen immediately above.

Strategy:

a) Use prescribed burns to regenerate decadent stands.

Biological Objective:

2. Manage livestock and big game to allow aspen regeneration after fire in decadent stands.

Rationale: Browsing by livestock and big game species, especially elk when at high density, during the first few years after management to regenerate aspens during the first few years after management to regenerate aspens substantially reduces the long-term success of the action. Early browsing kills young sprouts and those that survive can be substantially deformed, reducing long-term survival.

Strategy:

a) Rest and protect regenerating aspen from livestock grazing for 3 to 4 years following restoration efforts (or longer if needed) on public land allotments where prescribed burns occur.

C) Limiting Factor: Insect and disease damage.

Biological Objective:

1. Manage insect and disease problems in aspen stands.

Rationale: If insects and disease are problems in aspen regeneration areas, they would need to be controlled to increase the chances of long-term success.

Strategy:

a) Determine if insects or disease are factors in aspen decline or regeneration problems and implement measures to address these issues, if appropriate.

VIII. Focal Habitat: Mountain Brush
Focal Species: Antelope Bitterbrush, Green-tailed Towhee, Mule Deer, Rocky Mountain Elk

A) Limiting Factor: Mountain brush regeneration.

Biological Objective:

1. Restore, enhance, and protect the geographic extent of remaining mountain brush habitats. Mountain brush communities can be degraded by many factors including development, long-term fire control, and declining wildlife value as stands age. Maintaining wildlife habitat values of mountain brush stands requires that they be protected from all forms of degradation and that decadent stands be managed to regain habitat value.

Strategies:

a) Determine the distribution of mountain brush communities and begin a cooperative program with public land managers and private land owners to

use appropriate vegetation IDFG to use appropriate vegetation management techniques to improve habitat for focal species.

b) Develop and implement a program to educate the public regarding the importance of mountain brush communities for focal species and other wildlife.

B) Limiting Factor: Fire.

Biological Objective:

1. Manage fire to maintain mountain brush habitats.

Rationale: Historically, fire played a key role in the long-term maintenance of mountain brush communities. However, fire control, recreation developments, and the presence of invasive plant species have changed the fire dynamic of mountain brush communities. Productive stands must receive priority for fire suppression. Fire may need to be used to regenerate decadent mountain brush communities. However, the presence of invasive plant species affects fire behavior and temperature as well as post-fire succession and restoration. All fires in mountain brush communities, whether natural or prescriptive, will likely require active post-fire restoration actions to promote desired native shrub, grass, and forb species and control invasive plant species.

Strategy:

a) Work with land managers to determine which mountain brush communities are high priority for fire suppression, post-fire restoration, and beneficial fire prescriptions.

C) Limiting Factor: Invasive plant species competition.

Rationale: See B1 for mountain brush immediately above regarding control of invasive plant species following fires. Invasive plant species are encroaching into mountain brush communities and degrading habitat values. Once established, invasive plant species such as cheatgrass substantially increase the risk of fire and can dramatically shorten the interval between fires compared to the interval of pre-European settlement times. More frequent fires in mountain brush communities infested with invasive plant species favor the weeds and eventually lead to the loss of shrubs and native grasses and forbs.

Biological Objective:

1. Control invasive plant species such as cheatgrass from encroaching/replacing mountain brush habitats.

Strategy:

a) Work with land managers and private land owners to identify and control invasive plant species and to reduce the extent and spread of existing invasive plant species infestations within mountain brush communities.

D) Limiting Factor: Land use change.

Biological Objective:

1. Identify and protect important mountain brush habitats that lie in winter range areas and/or are vulnerable to development. Mountain brush communities are often extremely valuable big game winter range and are also popular sites for home development. Roads, houses, and the associated people and pets are not compatible with maintaining high-value winter range.

Strategies:

a) Identify mountain brush communities that provide big game winter range and designate these areas as a high priority for fire suppression.

b) Identify mountain brush communities that are privately owned and provide big game winter range or are in danger of development. Designate these areas as a very high priority to protect from conversion to other uses. Develop a thorough range of action alternatives, potential cooperative entities, and funding sources that could be enlisted to assist in protecting these privately owned mountain brush communities threatened by development.

IX. Focal Habitat: Shrub/Steppe
Focal Species: Northern Sagebrush Lizard, Greater Sage-grouse, Sage Sparrow

A) Limiting Factor: Loss of shrub-steppe habitats.

Biological Objective:

1. Protect, enhance, and restore shrub-steppe habitats.

Rationale: Thousands of acres of shrub-steppe habitats have been converted to agricultural uses throughout the Upper Snake Subbasin. Most of those that remain have been degraded by more than 100 years of livestock grazing and related range vegetation manipulation. The three focal species, as well as many others. The three focal species, as well as many others, are sagebrush obligates. Maintaining or improving habitat for these wildlife species requires that remaining shrub-steppe habitats be protected from conversion to other uses and that degraded shrub-steppe habitats be enhanced and restored.

Strategies:

a) Improve on and use the existing program to educate the public regarding the importance of shrub-steppe communities for focal species and other wildlife.

b) Determine the distribution of shrub-steppe communities and begin a program to use appropriate vegetation management techniques to improve habitat of focal species.

Biological Objective:

2. Minimize impacts to native bunch grasses and forbs from livestock grazing and maintain diverse shrub-steppe canopy cover.

Rationale: High-quality habitat for the focal species and other sagebrush obligates requires a diverse mix of native bunch grasses and forbs, along with a healthy sagebrush component. Livestock grazing reduces both native forbs and grasses. The rate of successful nesting by greater sage-grouse increases substantially when there is high-quality residual grass cover from the previous growing season. Chick survival is dependent on the presence of native forbs. Livestock grazing removes bunch grasses so that residual nesting cover for sage-grouse and other species is degraded and also substantially reduces forbs over time. Livestock are also a vector for the establishment of invasive plant species, which further directly and indirectly degrade habitat value for sagebrush obligates.

Strategy:

a) Identify key shrub-steppe communities for focal species (especially greater sage-grouse) and reduce livestock grazing levels so that native bunch grasses and forbs recover.

B) Limiting Factor: Undesirable invasive plant species competition.

Biological Objective:

1. Control undesirable invasive plant species competition.

Rationale: Invasive plant species have encroached or are encroaching into shrub-steppe communities and are degrading habitat values. Invasive plant species out-compete native grasses and forbs, degrading habitat values for all focal species. Once established, invasive plant species such as cheatgrass substantially increase the risk of fire and can dramatically shorten the interval between fires compared to that of pre-European settlement times. More frequent fires in shrub-steppe communities infested with invasive plant species eventually lead to the total loss of shrubs and native grasses and forbs. When this occurs, habitat value for sagebrush obligates is eliminated.

Strategies:

a) Map the distribution of invasive plant species and prioritize treatment.

b) Expand the coordinated effort of those who are treating invasive plant species.

c) Monitor the treatment of invasive plant species

C) Limiting Factor: Land conversion/development.

Biological Objective:

1. Reduce or eliminate land use conversion and habitat fragmentation.

Rationale: Thousands of acres of shrub-steppe habitats have been converted to agricultural uses throughout the Upper Snake Subbasin. Further conversion of shrub-steppe to other land uses will eliminate additional habitat for focal species. Fragmentation of large stands of shrub-steppe habitat by roads, power and fuel rights-of-way, wind turbines, and other developments degrades habitat value of remaining habitats up to 2 miles from the site of the activity, increases human disturbance, increases the occurrence of invasive plant species, and substantially increases the potential for fires. In the presence of invasive plant species, fires severely degrade the habitat value of native shrub-steppe habitats.

Strategies:

a) Encourage land managers to place high importance on shrub-steppe communities for focal species and prevent habitat fragmentation by roads or rights-of-ways or by land conversion.

b) Minimize the amount of shrub-steppe sold or traded out of Federal ownership and then converted to other uses.

c) Create and develop offsite mitigation for land conversion.

Biological Objective:

2. Restore planted crested wheatgrass areas to shrub-steppe habitats.

Rationale: Crested wheatgrass has virtually no value for wildlife. Restoring crested wheatgrass areas to shrub-steppe habitats would provide substantial benefits to focal species and other wildlife.

Strategy:

a) Restore crested wheatgrass seedings to shrub-steppe habitat where the seedings have fragmented shrub-steppe areas.

Biological Objective:

3. Restore shrub-steppe habitats in areas displaced by cheatgrass monocultures.

Rationale: Cheatgrass monocultures have virtually no value for wildlife. Restoring cheatgrass monocultures to shrub-steppe habitats would provide substantial benefits to focal species and other wildlife.

Strategy:

a) Treat cheatgrass monocultures and plant native shrub-steppe vegetation.

D) Limiting Factor: Fire.

Biological Objective:

1. Prevent invasive plant species establishment.

Rationale: Invasive plant species are encroaching into shrub-steppe communities and degrading habitat values. Invasive plant species out-compete native grasses and

forbs, degrading habitat values for all focal species. Once established, invasive plant species such as cheatgrass substantially increase the risk of fire and can dramatically shorten the interval between fires compared to that of pre-European settlement times. More frequent fires in shrub-steppe communities infested with invasive plant species eventually lead to the total loss of shrubs and native grasses and forbs. When this occurs, habitat value for sagebrush obligates is eliminated.

Strategy:

a) Implement post-fire restoration so that shrub-steppe communities can be re-established.

E) Limiting Factor: Juniper encroachment.

Biological Objective:

1. Treat Utah juniper encroachment on shrub-steppe habitat. Juniper encroachment into shrub-steppe habitats displaces native shrubs, grasses, and forbs and generally degrades habitat values for shrub-steppe focal species and other shrub-steppe obligates. Reducing existing juniper encroachment will improve shrub-steppe habitat values. Controlling future juniper encroachment will maintain shrub-steppe habitat value.

   Strategy:

   a) Treat juniper encroachment (e.g., Utah Juniper) into shrub-steppe habitat to maintain long-term shrub-steppe habitat value.

CHAPTER 4

Coordination with Existing Programs

For the USP Plan to be adopted by the NPCC, it must conform to existing Federal guidelines of the ESA and CWA. The USP Plan provides an important context for prioritizing areas for ecological protection and restoration that can mutually assist in the recovery of ESA species and their critical habitat while supporting components of the State of Idaho's Water Quality Management Plan. The following is a brief description of the ESA and CWA mandates and the applicable biological objectives that mutually contribute to addressing species recovery and supporting improved water quality.

Endangered Species Act Considerations

The USP contains species listed as threatened or endangered under the ESA (16 U.S.C. §§ 1531–1544). The ESA, as amended, establishes a national program for the conservation of threatened and endangered species of fish, wildlife, and plants and the habitats on which they depend. Section 7(a)(2) of the ESA requires Federal agencies to consult with the USFWS and National Marine Fisheries Service (NOAA Fisheries), as appropriate, to ensure that their actions are not likely to jeopardize the continued existence of endangered or threatened species or to adversely modify or destroy their designated critical habitats.

Section 7 of the ESA also makes it clear that all Federal agencies should participate in the coordination of programs that involve listed species. Under this provision, Federal agencies often enter into partnerships and memoranda of understanding with the USFWS or NOAA Fisheries for implementing and funding conservation agreements, management plans, and recovery plans developed for listed species. Development of these types of partnerships is encouraged under the ESA to enable proactive approaches for managing listed species.

Consistency with Existing Recovery Plans

The USFWS and NOAA fisheries are developing, or have developed, recovery plans for species listed under the ESA. Actions called for in the USP Plan, which includes listed species under USFWS jurisdiction, are consistent and integrated with USFWS recovery plans in their objectives, application, performance measures, and recovery criteria.

There are presently 12 species listed as endangered or threatened, or are a candidate for listing, under the ESA that exist or have potential habitat within the USP (Table 3). Four of these ESA-listed or candidate species are also focal species identified in the USP Plan for assessing the long-term health of focal habitats. These species are the Utah valvata snail (endangered), Snake River physa snail (endangered), and bull trout (threatened) for aquatic habitats, and the yellow-billed cuckoo (candidate) for riparian and wetland habitats. Bull trout is the only fish species listed under the ESA that currently exists in the USP, and occurs specifically in the Upper Snake Closed Subbasin.

TABLE 3
List of Threatened, Endangered, and Candidate Species by USP Subbasin

	Listed and Candidate Species				
		Subbasin Occurrence			
Species	Status	Snake Headwaters	Upper Snake	Upper Snake Closed	Focal Species
Utah valvata snail (*Valvata utahensis*)	LE		X		X
Idaho springsnail (*Pyrgulopsis idahoensis*)	LE				
Snake River physa snail (*Physa natricina*)	LE		X		X
Bliss Rapids snail (*Taylorconcha serpenticola*)	LT		X		
Banbury Springs lanx (*Lanx n* sp.)	LE		X		
Bull trout (*Salvelinus confluentus*)	LT			X	X
Gray wolf (*Canis lupus*)	Exp/Non	X	X	X	
Grizzly bear (*Ursus arctos*)	LT	X	X		
Ute ladies'-tresses orchid (*Spiranthes diluvialis*)	LT	X	X		
Bald eagle (*Haliaeetus leucocephalus*)	LT	X	X	X	
Canada lynx (*Lynx canadensis*)	LT	X	X	X	
Yellow-billed cuckoo (*Coccyzus americanus*)	C	X	X	X	X

C = ESA Listing candidate
LT = ESA listed threatened
LE = ESA listed endangered
Experimental / Nonessential

Utah Valvata Snail and Snake River Physa Snail

The Utah valvata snail and Snake River physa snail are two of five Snake River snail species that were listed concurrently as threatened or endangered on December 14, 1992 (57 FR 59244). Figure 2-29 in the USP Assessment identifies the known locations of the Utah valvata snail and Snake River physa snail. *The Snake River Aquatic Species Recovery Plan* (Snail Recovery Plan; USFWS 1995), which covers the middle Snake River (from C. J. Strike Reservoir to American Falls Dam), lists the impounding of the previously free-flowing river reaches, reductions in cold-water habitats, deteriorating water quality, and the introduction and invasion of non-native species as the primary threats to the Snake River mollusks, including the Utah valvata snail and Snake River physa snail (USFWS 1995).

The strategy for recovery of the Snake River mollusks is identified within the Snail Recovery Plan (1995) and includes:

- Secure, restore, and maintain essential aquatic habitats (Priority 1)
- Rehabilitate, restore, and maintain watershed conditions (Priority 1)
- Monitor native fauna populations and habitat (Priorities 1 and 2)
- Update and revise recovery plan criteria and objectives (Priority 2)

Table 4 shows the common links between the Snake River mollusks recovery strategies and the Management Plan's corresponding biological objectives.

TABLE 4
Snake River Mollusks Recovery Strategies and Corresponding Management Plan Objectives

Snake River Mollusks Recovery Strategies	Corresponding USP Plan Objectives
Secure, restore, and maintain essential aquatic habitats	I-A1, I-D1, I-D2, I-F1, I-G1, I-H1, I-I1, I-I2, I-J1, I-L2, I-M1
Rehabilitate, restore, and maintain watershed conditions	All aquatic objectives (I-A1 through I-N2)
Monitor native fauna populations and habitat	I-A1, I-D1, I-D2, I-F1, I-G, I-H1, I-I1, I-I2, I-M1, I-N1
Update and revise recovery plan criteria and objectives	All aquatic objectives (I-A1 through I-N2)

Bull Trout

All populations of bull trout within the contiguous U.S. (lower 48 states) were listed under the ESA as threatened on November 1, 1999 (64 FR 58910). The *Draft Bull Trout Recovery Plan* (Recovery Plan, USFWS 2002) provides a framework for implementing recovery actions and identifying critical habitats for the species. Within the USP, bull trout are only found in the Little Lost Watershed, part of the Upper Snake Closed Subbasin. Bull trout is identified as a focal species in the USP Assessment specifically to address the limiting factors affecting the Little Lost Watershed. This Management Plan identifies aquatic and riparian/wetland limiting factors, biological objectives, and strategies that encompass the limiting factors and objectives listed in the Recovery Plan.

The Recovery Plan states reasons for bull trout declines are primarily from elevated stream temperatures caused by a combination of natural and management-induced conditions. Temperature problems are exacerbated by stream water loss from irrigation diversions, stream habitat degradation from improper livestock grazing practices, and historic stream-side timber harvesting. Other, less important, factors contributing to bull trout declines include sediment and pollutant runoff from transportation networks, mining, and land developments. Habitat fragmentation from barriers genetically isolates populations. Past fisheries management practices have introduced competing non-native fishes that threaten bull trout populations.

The Recovery Plan (USFWS 2002) identifies four objectives for the successful recovery of bull trout in the Little Lost Watershed.

- Maintain current distribution of bull trout and restore distribution in previously occupied areas within the Little Lost Recovery Unit
- Maintain stable or increasing trend in abundance of bull trout in the Little Lost Recovery Unit
- Restore and maintain suitable habitat conditions for all bull trout life history stages and strategies.
- Conserve genetic diversity and provide opportunity for genetic exchange

Table 5 shows the common links between the bull trout recovery objectives and the Management Plan's corresponding biological objectives.

TABLE 5
Bull Trout Recovery Plan Objectives and Corresponding Management Plan Objectives

Bull Trout Recovery Plan Objectives	Corresponding Management Plan Objectives
Maintain and restore bull trout distribution	I-B1, I-E1, I-F2, I-G1, I-H1, I-L2.
Maintain or increase bull trout abundance	All aquatic objectives (I-A1 through I-N2)
Restore and maintain habitat for all life stages	I-F1, I-F2, I-H1, I-I1, I-I2, I-J1, I-K1,
Conserve genetic diversity/provide genetic exchange	I-L1, I-L2, I-M1, I-M2, I-N1, I-N2

Yellow-billed Cuckoo

The yellow-billed cuckoo is a candidate species with the USFWS for listing under the ESA. The final rule, dated October 30, 2001, lists the western Distinct Population Segment (DPS) as warranted for Federal listing but precluded by higher priority species. There is no USFWS recovery plan or proposed critical habitat for this species in Idaho. It is a rare, sometimes erratic visitor and breeder in the Snake River Valley, which includes portions of the USP. However, the primary threats to the species include habitat loss, overgrazing, tamarisk invasion of riparian areas, river management, logging, and pesticides as causes of decline.

Yellow-billed cuckoos in the western U. S. appear to require large blocks of healthy riparian habitat for nesting (particularly multi-layered cottonwood/ willow complexes). Nesting occurs almost exclusively close to water, possibly due to humidity requirements for hatching and rearing young.

The biological objectives in the Management Plan that benefit cottonwood/willow complexes along the lower reaches of the USP could potentially benefit yellow-billed cuckoos. Depending on location of a project, implementation of the following objectives could provide a mutual benefit to the yellow-billed cuckoo: biological objectives I-A1, I-I2,

and all objectives listed under the riparian/wetland focal habitat (includes II-A1 through II-G1).

Clean Water Act Considerations

The EPA administers the Federal CWA, requiring enforcement of water quality standards by states. These standards are segregated into point and non-point source water pollution, with point sources requiring permitting. Although controversial, this segregation means that most farming, ranching, and forestry practices are considered non-point sources and, thus, do not require permitting by the EPA. A TMDL, or total maximum daily load, is a tool for implementing water quality standards where impairment of beneficial uses exists (EPA 2004). Stream reaches that are impaired are listed according to CWA Section 303(d). Once a stream is 303(d) listed, a TMDL is developed that analyzes or quantifies the sources of impairment and their contribution to meeting water quality standards. The State of Idaho is required to develop an implementation plan within 18 months once a TMDL is completed by the State and approved by the EPA. The plan describes what management action will be implemented to correct the pollution problem and bring the stream reach into compliance. Management actions to improve non-point sources are voluntary. As a result, many State and Federal programs exist that provide cost-share incentives to private land owners to implement management actions to correct exceedences identified in the TMDL.

Implementation of the Management Plan's biological objectives and associated strategies would mutually aid water quality attainment for 303(d)-listed water bodies. The following summarizes where the Plan's biological objectives are consistent with correcting particular pollution sources that have been documented in completed TMDLs and are a part of water quality implementation plans by the Idaho Department of Environmental Quality (IDEQ). The IDEQ manages the water quality program for the State of Idaho.

Consistency with Idaho's Water Quality Management Plan

The vision of the Idaho Non-point Source Management Program is that all long-term goals and short-term objectives be implemented in a manner to protect or restore (where possible) the beneficial uses of the State's surface water and groundwater (IDEQ 1999). The continuing focus for the State of Idaho within the foreseeable future will be to develop and implement TMDLs for 303(d)-listed water bodies. The State of Idaho has committed to the completion of TMDL implementation plans within an 18-month period following the EPA approval of a TMDL (IDEQ 1999).

303(d)-Listed Segments

Section 303(d) of the CWA requires that water bodies violating State or Tribal water quality standards be identified and placed on a 303(d) list. Water bodies that do not meet water quality standards with implementation of existing management measures are listed as impaired under §303(d) of the CWA. It is each state's responsibility to develop its respective 303(d) list and establish a TMDL for the parameter(s) causing water body impairment (USEPA 2004).

Within the USP subbasins, there are 162 water-quality-limited water body segments. Existing pollution controls or requirements are inadequate to provide for the attainment and

maintenance of water quality standards (i.e., impaired or threatened by pollution) for these stream segments. In total, more than 3,000 km (1,800 miles) of rivers and streams, excluding reservoirs, are currently water-quality-limited in the USP subbasins. In order to have the most current list and data on 303(d) streams, Section 1.7.1 of the Assessment was revised with the recently EPA-adopted list. This revision is found in Appendix X of the Addendum to the Assessment.

TMDLs in Upper Snake Province

A TMDL is a tool for implementing water quality standards and is based on the relationship between pollution sources and instream water quality conditions. The TMDL establishes the allowable loadings or other quantifiable parameters for a water body and thereby provides the basis to establish water-quality-based controls. These controls should provide the pollution reduction necessary for a water body to meet water quality standards.

Assessments of TMDLs have been completed for many of the 303(d)-listed waterbodies in the USP. Table 6 presents these waterbodies, their listed pollutants, and the corresponding biological objectives from the Management Plan that would directly improve these pollution problems.

TABLE 6
Summary of Completed TMDLs Within the Upper Snake Province and Applicable Management Plan Objectives

Watershed (EPA Approval Date)	Pollutant(s)	Applicable Objectives from Management Plan
Big Lost River (August 2004)	Flow Alteration	I-A1, I-D1, I-F1, I-G1, I-H1
	Dissolved Oxygen	I-D1, I-F1, I-G1, I-I2
	Ammonia	I-G1
	Sediment	I-D2, I-I1, I-I2, II-A3, II-C1, II-D1, II-E1, II-G1
	Temperature	I-A1, I-D1, I-F1, I-G1, I-H1, I-I1, I-I2, II-A1, II-A2, II-A4, II-B1, II-C1, II-D2, II-E1, II-F1, II-G1
Fall Creek (April 2004)	Sediment	I-D2, I-I1, I-I2, II-A3, II-C1, II-D1, II-E1, II-G1
	Temperature	I-A1, I-D1, I-F1, I-G1, I-H1, I-I1, I-I2, II-A1, II-A2, II-A4, II-B1, II-C1, II-D2, II-E1, II-F1, II-G1
Upper Henry's Fork (Not required)	Dissolved Oxygen	I-D1, I-F1, I-G1, I-I2
	Sediment	I-D2, I-I1, I-I2, II-A3, II-C1, II-D1, II-E1, II-G1
Lemhi River (March 2000)	Sediment	I-D2, I-I1, I-I2, II-A3, II-C1, II-D1, II-E1, II-G1
	Bacteria (fecal coliform)	I-I2, II-A1, II-B1, II-C1, II-D1, II-D2, II-F1
Idaho Falls (Draft)	Sediment	I-D2, I-I1, I-I2, II-A3, II-C1, II-D1, II-E1, II-G1
	Flow Alteration	I-A1, I-D1, I-F1, I-G1, I-H1
Little Lost River (September 2000)	Sediment	I-D2, I-I1, I-I2, II-A3, II-C1, II-D1, II-E1, II-G1
	Temperature	I-A1, I-D1, I-F1, I-G1, I-H1, I-I1, I-I2, II-A1, II-A2, II-A4, II-B1, II-C1, II-D2, II-E1, II-F1, II-G1

TABLE 6
Summary of Completed TMDLs Within the Upper Snake Province and Applicable Management Plan Objectives

Watershed (EPA Approval Date)	Pollutant(s)	Applicable Objectives from Management Plan
Medicine Lodge (May 2003)	Sediment/Nutrients	I-D2, I-I1, I-I2, II-A3, II-C1, II-D1, II-E1, II-G1
	Temperature	I-A1, I-D1, I-F1, I-G1, I-H1, I-I1, I-I2, II-A1, II-A2, II-A4, II-B1, II-C1, II-D2, II-E1, II-F1, II-G1
	Flow Alteration	I-A1, I-D1, I-F1, I-G1, I-H1
	Habitat Alteration	I-I2, I-J1, I-K1, II-A2, II-C1, II-D1, II-D2, II-G1
Palisades (February 2001)	Sediment	I-D2, I-I1, I-I2, II-A3, II-C1, II-D1, II-E1, II-G1
	Flow Alteration	I-A1, I-D1, I-F1, I-G1, I-H1
Teton (February 2003)	Sediment/Nutrients	I-D2, I-I1, I-I2, II-A3, II-C1, II-D1, II-E1, II-G1
	Temperature	I-A1, I-D1, I-F1, I-G1, I-H1, I-I1, I-I2, II-A1, II-A2, II-A4, II-B1, II-C1, II-D2, II-E1, II-F1, II-G1
	Flow Alteration	I-A1, I-D1, I-F1, I-G1, I-H1
	Habitat Alteration	I-I2, I-J1, I-K1, II-A2, II-C1, II-D1, II-D2, II-G1
Teton Supplement (Sept 2003)	Sediment/Nutrients	I-D2, I-I1, I-I2, II-A3, II-C1, II-D1, II-E1, II-G1
	Temperature	I-A1, I-D1, I-F1, I-G1, I-H1, I-I1, I-I2, II-A1, II-A2, II-A4, II-B1, II-C1, II-D2, II-E1, II-F1, II-G1
	Flow Alteration	I-A1, I-D1, I-F1, I-G1, I-H1
	Habitat Alteration	I-I2, I-J1, I-K1, II-A2, II-C1, II-D1, II-D2, II-G1
Willow Creek (June 2004)	Sediment/Nutrients	I-D2, I-I1, I-I2, II-A3, II-C1, II-D1, II-E1, II-G1
	Temperature	I-A1, I-D1, I-F1, I-G1, I-H1, I-I1, I-I2, II-A1, II-A2, II-A4, II-B1, II-C1, II-D2, II-E1, II-F1, II-G1
	Flow Alteration	I-A1, I-D1, I-F1, I-G1, I-H1
American Falls (Draft)	Dissolved Oxygen	I-D1, I-F1, I-G1, I-I2
	Flow Alteration	I-A1, I-D1, I-F1, I-G1, I-H1
	Sediment/Nutrients	I-D2, I-I1, I-I2, II-A3, II-C1, II-D1, II-E1, II-G1
	Bacteria	I-I2, II-A1, II-B1, II-C1, II-D1, II-D2, II-F1
	Temperature	I-A1, I-D1, I-F1, I-G1, I-H1, I-I1, I-I2, II-A1, II-A2, II-A4, II-B1, II-C1, II-D2, II-E1, II-F1, II-G1
Blackfoot River (April 2002)	Sediment/Nutrients	I-D2, I-I1, I-I2, II-A3, II-C1, II-D1, II-E1, II-G1
	Flow Alteration	I-A1, I-D1, I-F1, I-G1, I-H1
	Organics	I-I2, II-A1, II-B1, II-C1, II-D1, II-D2, II-F1

TABLE 6
Summary of Completed TMDLs Within the Upper Snake Province and Applicable Management Plan Objectives

Watershed (EPA Approval Date)	Pollutant(s)	Applicable Objectives from Management Plan
Portneuf River (April 2001)	Sediment/Nutrients	I-D2, I-I1, I-I2, II-A3, II-C1, II-D1, II-E1, II-G1
	Bacteria	I-I2, II-A1, II-B1, II-C1, II-D1, II-D2, II-F1
	Flow Alteration	I-A1, I-D1, I-F1, I-G1, I-H1
	Dissolved Oxygen	I-D1, I-F1, I-G1, I-I2
	Oil and grease	I-G1
Goose Creek (July 2004)	Sediment /Phosphorus	I-D2, I-I1, I-I2, II-A3, II-C1, II-D1, II-E1, II-G1
	Bacteria	I-I2, II-A1, II-B1, II-C1, II-D1, II-D2, II-F1
	Temperature	I-A1, I-D1, I-F1, I-G1, I-H1, I-I1, I-I2, II-A1, II-A2, II-A4, II-B1, II-C1, II-D2, II-E1, II-F1, II-G1
	Dissolved Oxygen	I-D1, I-F1, I-G1, I-I2
	Flow Alteration	I-A1, I-D1, I-F1, I-G1, I-H1
Lake Walcott (June 2000)	Sediment/Nutrients	I-D2, I-I1, I-I2, II-A3, II-C1, II-D1, II-E1, II-G1
	Dissolved Oxygen	I-D1, I-F1, I-G1, I-I2
	Pesticides	I-G1
	Oil and grease	I-G1
Raft River (June 2000)	Temperature/Nutrients	I-A1, I-D1, I-F1, I-G1, I-H1, I-I1, I-I2, II-A1, II-A2, II-A4, II-B1, II-C1, II-D2, II-E1, II-F1, II-G1
	Bacteria	I-I2, II-A1, II-B1,II-C1, II-D1, II-D2, II-F1
	Sediment	I-A1, I-D1, I-F1, I-G1, I-H1
	Flow Alteration	I-D2, I-I1, I-I2, II-A3, II-C1, II-D1, II-E1, II-G1
	Habitat Alteration	I-I2, I-J1, I-K1, II-A2, II-C1,II-D1, II-D2, II-G1
Upper Snake-Rock (August 2000)	Sediment/Nutrients	I-D2, I-I1, I-I2, II-A3, II-C1, II-D1, II-E1, II-G1
	Bacteria	I-I2, II-A1, II-B1, II-C1, II-D1, II-D2, II-F1
	Ammonia	I-G1
	Pesticides	I-G1
	Oil and grease	I-G1

Water Quality Anti-Degradation Policy (39-3603)

The State of Idaho has a Water Quality Anti-degradation Policy that, in general, states that surface water quality shall be maintained at a level to support the designated beneficial uses.

Many of the biological objectives and strategies of the USP Plan are very applicable to, and supportive of, the anti-degradation policy. Some streams, though not listed as polluted yet, have been degraded by natural and anthropogenic causes over time and are vulnerable to future listing. Appendix B presents a qualitative rating of the Plan's biological objectives to the applicable Federal CWA and ESA mandates. One consideration within the CWA rating of each objective is its contribution to the anti-degradation policy.

ESA and CWA Qualitative Evaluation of Biological Objectives

Appendix B is a matrix that provides a qualitative evaluation of the biological objectives in the Plan and their contribution to the Federal CWA and ESA mandates. In other words, do the objectives contribute to addressing problems with the 12 listed or candidate ESA species, and those recently and currently petitioned species for ESA consideration (pigmy rabbit, sage-grouse, Jackson Hole spring snail, and sharpe-tailed grouse) and do the objectives contribute to improving 303(d)-listed water bodies and/or are supportive of the anti-degradation policy? The rating criteria used in Appendix B follows:

(++) highly supportive = there is a direct benefit to the Federal mandate
(+) supportive = there is an indirect benefit to the Federal mandate
(0) neutral = no expected direct or indirect benefits to the Federal mandate
(-) negative = direct or indirect negative effects to the Federal mandate

The qualitative matrix in Appendix B could be used as a tool by planners in evaluating project submittals. Each project submittal will likely employ multiple objectives and their associated strategies to correct limiting factors. Submittals could be rated on their cumulative benefits to CWA and ESA issues as part of the overall evaluation process. The local project application review committee could expand or modify this matrix.

CHAPTER 5

Project Application Preparation and Evaluation Process

Participant Status

In the past, the fish and wildlife program of the Shoshone-Bannock Tribe's (SBT) and the Idaho Department of Fish and Game (IDFG) have received FWP funding for implementing and managing wildlife mitigation projects based on their regulation-mandated fish and wildlife responsibilities and technical expertise with in the USP. The NPCC encourages other Federal, State, Tribal agencies, and non-governmental organizations to be involved in the Fish and Wildlife Program that funds fish and wildlife projects.

Upper Snake Basin Working Group—Projects Planning

The SBT-and IDFG representatives agreed to facilitate a working group of participants with the goal of preparing and submitting coordinated project applications. By developing a collaborative working group for project submissions, it will bring local technical expertise together from Federal, State, Tribal agencies, and non-governmental organizations. The working group will guide fish and wildlife managers and other interested parties through a coordinated process to identify priority areas, projects, time frames for project development, and applications that fits within the NPCC time-frame for the appropriate FWP program period. This time frame is described as a rolling 3-year review that spans the 15-year program period.

Core Group—Projects Submission

Some agency participants of the Planning Team (SBT, IDFG, BLM, and USFWS) for the USP Plan also agreed to function as a Core Group to evaluate project submittals as an interim step prior to final proposal submission to the NPCC. The planning has developed evaluation criteria for the Core Group to use in their evaluation and ranking criteria for proposed projects that are submitted to the NPCC. The Core Group will provide regional planning expertise through their evaluation criteria that will aid the NPCC in their decision-making process. Each application submitted to the NPCC for funding will include a review form or letter of support from the Core Group that provides a review of each proposal and the level to which the proposal is consistent with the USP Plan. The following section describes the criteria proposed for use by the Core Group in their evaluation.

Criteria Guiding Prioritization

Habitat-Based Program: Does the project help complete mitigation for adverse effects to fish and wildlife caused by the development and operation of the hydropower system?

- Assesses resident fish losses in terms of various critical population characteristics of key species
- Quantifies wildlife losses caused by the construction and inundation of hydropower projects
- Addresses and quantifies wildlife losses caused by operation and secondary losses due to operation of the hydropower system
- Addresses mitigation previously estimated by existing fish and wildlife loss assessments

Build From Strength: Does the project help to protect healthy ecosystem features within the province or subbasin that support existing populations that are healthy and productive?

- Protects existing high-quality habitats as determined by the Assessment
- Expands high-quality habitats by connecting or improving adjacent habitat
- Protects existing benefits from fish and wildlife valued by the people of the USP or subbasin

Restore Ecosystems: Does the project improve the Columbia River ecosystem to sustain an abundant, productive, and diverse community of fish and wildlife?

- Expands and maintains diversity within and among species
- Significantly increases abundance, productivity, and/or life history diversity
- Addresses problems identified in water quality implementation plans
- Artificial production will complement habitat improvements and be used consistently with ecological principles for fish recovery and clearly benefit wild populations.

Use Native Species: Does the program protect and restore natural ecological function and native species in native habitats as a starting point and direction for needed biological conditions?

- Benefits focal species
- Provides protection and works to restore ESA-listed species
- Benefits species and populations of concern to provincial and subbasin fish and wildlife managers

Cost Effective: Projects will be new and existing, applied to desired outcome and physical and biological realities (do-able).

- Collaborative with affected stakeholders
- Coordinated throughout the subbasin and USP
- Connects fish and wildlife mitigation and restoration efforts
- Implementation can occur timely, relative to NPCC time frames and funding review process
- Consistent with an adequate, efficient, economical, and reliable electrical power supply

CHAPTER 6

Research, Monitoring, and Evaluation

The research, monitoring, and evaluation (RM&E) protocol for the USP Plan is not included in this planning document. Although the technical guide for plan development recommends including this section, the NPCC has recently recommended not including this element in the USP Plan for this planning cycle. The NPCC is in the process of clarifying and standardizing RM&E guidance to provide more consistency among subbasin and province plans. The NPCC time frame is described as a rolling 3-year review of plans across a 15-year period of the FWP. It is expected that the NPCC's RM&E guidance will be included in the next 3-year planning cycle for the USP Plan. However, in the absence of programmatic guidance for RM&E by the NPCC, all proposals submitted to the NPCC will be required to contain individual monitoring and evaluation components that will be used to measure and evaluate proposed project successes.

CHAPTER 7

References

EPA. See U.S. Environmental Protection Agency.

FWS. See U.S. Fish and Wildlife Service.

Idaho Department of Environmental Quality. 1999. Idaho nonpoint source management plan. http://www.deq.state.id.us/water/nps/nps.htm

IDEQ. See Idaho Department of Environmental Quality.

Martin, R.C. and G.A. Meuleman. 1989. Minidoka Dam wildlife impact assessment. Idaho Department of Fish and Game. Boise, Idaho. 69 pp.

Northwest Power and Conservation Council. 2000. Columbia River Basin Fish and Wildlife Program. <http://www.nwcouncil.org/library/2000/2000-19/Default.htm>

Northwest Power Planning Council (NPPC). 2001a. Subbasin planning overview. Northwest Power Planning Council Document 2001-19, Northwest Power Planning Council, Portland, Oregon, 3 pp. <http://www.nwppc.org/fw/subbasinplanning/admin/guides/overview.htm>

Northwest Power Planning Council (NPPC). 2001b. Technical guide for subbasin planners. Northwest Power Planning Council Document 2001-20, NPCC, Portland, Oregon, 24 pp. <http://www.nwppc.org/library/2001/2001-20.htm>

NPCC 2004. Fish and Wildlife Program, Northwest power and Conservation Council. 12/30/2004. http://www.nwppc.org/fw/program/Default.htm

NPCC. See Northwest Power and Conservation Council.

NPPC. See Northwest Power Planning Council.

Sather-Blair, S. and S. Preston. 1985. Wildlife impact assessment palisades project, Idaho. U.S. Fish and Wildlife Service, Office of Ecological Services, Boise, Idaho. 84 pp. plus attachments.

U.S. Environmental Protection Agency (EPA). 2004. Total maximum daily load program: Region 10: The Pacific Northwest. http://yosemite.epa.gov/R10/water.nsf/

USFWS. See U.S. Fish and Wildlife Service.

U.S. Fish and Wildlife Service (USFWS). 1995. Snake River Aquatic Species Recovery Plan. November 26, 1995.

U.S. Fish and Wildlife Service (USFWS). 2002. Bull trout (*Salvelinus confluentus*) Draft Recovery Plan. Region 1, Southwest Idaho recovery unit, Idaho. Chapter 18 *in* U.S. Fish and Wildlife Service. U.S. Fish and Wildlife Service, Portland, Oregon.

Appendix A

DRAFT MANAGEMENT PLAN APPENDIX B

Comparison of Biological Objectives with CWA and ESA Mandates

Appendix A

DRAFT MANAGEMENT PLAN APPENDIX A-1

Contract Entities and Plan Participants

Contract Entities and Plan Participants

Multiple agencies and entities are involved in managing and protecting fish and wildlife populations and their habitats in the Upper Snake subbasins. Numerous Federal, State, and local land managers are responsible for multipurpose land and water use management, including protecting and restoring fish and wildlife habitat. Many natural resource specialists from these various organizations contributed to developing the Upper Snake Province (USP) Plan in addition to those contracted by the Northwest Power and Conservation Council (NPCC). The contract entities and plan participants involved in development of the USP Plan are outlined below.

Overview of the Upper Snake Province Planning Process

The USP Plan is distinguishable from most plans prepared for the NPCC because it addresses multiple subbasins covering multiple states.

Contractors Retained by the NPCC to Develop the Plan

The USP Plan was developed in general accordance with guidelines provided by the NPCC for subbasin planning (NPPC 2001a, 2001b). This plan, as with other plans, consists of three primary elements:

Part I. An Assessment of the current and potential physical and biological characteristics of the three subbasins. This includes identification of species and habitats that are the focus of the Management Plan.

Part II. An Inventory of programs and projects implemented over the last 5 years that "…relate to watershed planning, restoration, and protection of fish and wildlife habitats and species recovery" (NPPC 2001b).

Part III. A Management Plan that includes a vision of the future condition of fish and wildlife in the USP that is made up of the three subbasins; biological objectives that describe changes needed to achieve the vision; strategies to meet the biological objectives; a discussion of how the plan integrates recovery goals for species listed under the Endangered Species Act (ESA); and State water quality management plans.

The NPCC entered into a contract with the Idaho Department of Fish and Game (IDFG) in Boise to complete Part 1 and Part 2 of the planning process, and with the Shoshone-Bannock Tribes in Fort Hall, Idaho, to complete Part 3 of the planning process and to combine all elements into a comprehensive planning document. The Shoshone-Bannock Tribes contracted Bannock Technologies, Inc. (BTI) of Pocatello and Idaho Falls to complete Part 3 , which received additional support from Portage Environmental, Inc., Idaho Falls, and Gregory Aquatics, Mackay.

IDFG organized a technical team of natural resource specialists familiar with the province to prepare the assessment and inventory documents. BTI organized and facilitated a planning team for preparing the management plan and soliciting public involvement on the plan.

The intent of the original work plan with the Shoshone-Bannock Tribes and IDFG (NPPC 2003b) was to develop the Draft Upper Snake Province Plan within a thirteen-month time frame. The actual time frame was compressed to nine months as a result of delays in contracting (August 2003 – May 2004). It was always the intent of the technical and the planning teams to work in parallel, however, due to additional contractual delays, the planning teams did not get organized until January of 2004. The technical team proceeded with the development of the assessment and inventory and provided updated portions of those documents to BTI as their development progressed.

The final draft version of the assessment and inventory was completed on May 27, 2004. Due to the delays in the development of the draft management plan, the Upper Snake Planners decided that the assessment and inventory would be attached as an appendix to the draft management plan.

The management plan was completed with the limited time remaining and submitted to the NPCC. An independent scientific review panel found the assessment (Part 1) adequate but the Inventory (Part 2) and the Management Plan (Part 3) incomplete. As a result, the Upper Snake Province Plan was found to be lacking and was not approved by the NPCC.

CH2M HILL was contracted in September 2004 to rewrite the plan through the same collaborative process used by BTI. CH2M HILL was also contracted to complete the project inventory; and create an addendum to the Assessment that described the biological linkage and rationale between the limiting factors described in the Assessment and the focal habitats and focal species described in the Management Plan. Even though the planning process was conducted according to the plan originally proposed by IDFG and the Shoshone-Bannock Tribes, and as envisioned by the Council, time constraints forced it to be curtailed at the point when information from the planning teams was becoming available for consideration by the technical team.

An overview of the organizations and individuals responsible for various aspects of the planning process is presented in Table 1.

TABLE 1
Time Frame of Principle Contractors and Staff Responsible for Preparing Upper Snake Province Plan

September 2004 – **December 2004** September 2004 – Initial contract issued by the NPCC – CH2M HILL begins work November 2004 – last planning meeting December 2004 – submittal of Addendum, Inventory, and Management Plan	**Addendum to Assessment, Project Inventory, and Management Plan**	**Primary Contractor:** CH2M HILL **Contact:** Tom Haislip **Staff:** Jonathan Matthews Doug Bradley Chuck Blair
August 2003 – **May 2004** SBT begins process of identifying potential subcontractors Sept 2003 – IDFG convenes first Technical Team meeting in Pocatello, Idaho May 2004 – Last Technical Team meeting conducted in Idaho Falls, Idaho; drafts of Assessment and Inventory documents transferred from IDFG to BTI	**USP Assessment and Project Inventory**	**Primary Contractor:** Idaho Department of Fish and Game **Contact:** Gregg Servheen **Staff:** Jon Beals, Wildlife Biologist Lance Hebdon, Fisheries Jeff Semmens, Database Kathy Cousins, Wildlife Wendy Eklund, GIS Analyst Jacob Mundt, GIS Analyst
August 2003 – **May 2004** January 2004 – Contract negotiations begin between SBT and BTI; BTI staff attend Technical Team meeting March 2004 – BTI conducts public meetings in Burley, Pocatello, Idaho Falls, Driggs, Ashton, and Arco, Idaho, and in Jackson, Wyoming April 2004 – BTI organizes Planning Teams for three subbasins and conducts two meetings with each Planning Team in Idaho Falls, Idaho; Arco, Idaho; and Jackson, Wyoming May 2004 – BTI prepares final document for submission to the NPCC	**USP Management Plan**	**Primary Contractor:** Shoshone-Bannock Tribes **Contacts:** Chad Colter John Fred **Technical and Planning Team Participants:** Hunter Osborne, Fisheries Dan Christopherson, Wildlife Russell Haskett, Game Officer **Subcontractor:** Bannock Technologies, Inc. **Contact:** Karen Haskett **Staff:** Kyle Babbitt, Facilitator Sheryl Hill, Biologist Andrea Ramone **Planning Team Organizers and Responsibilities:** Kyle Babbitt: Facilitator Sheryl Hill: Lead planner Karen Haskett: Documents

Technical Team

Idaho Fish and Game Department

The original technical team was assembled and facilitated by Jon Beals and Lance Hebdon of IDFG's Natural Resources Bureau in Boise. Based on the recommendations of local IDFG staff, a contact list was compiled consisting of individuals affiliated with the following agencies and organizations: the Shoshone-Bannock Tribes, U.S. Fish and Wildlife Service, Caribou-Targhee National Forest, Salmon-Challis National Forest, Grand Teton National Park, Bureau of Land Management, Natural Resources Conservation Service, Idaho State University, Idaho Department of Environmental Quality, Idaho Department of Fish and Game, Idaho Department of Water Resources, and Wyoming Game and Fish Department. These individuals were contacted by electronic mail and asked to participate in the assessment process. Those who did not participate in technical team meetings remained on the contact list throughout the process.

The Technical Team was divided into aquatic and terrestrial component groups in order to utilize available expertise most effectively in the time allotted to complete the Assessment. Component group members were asked to: 1) recommend focal habitats and species for the entire USP; 2) list and describe factors that limit focal habitats and species in the USP; 3) develop biological objectives for fish and wildlife populations and habitats in the USP; 4) suggest strategies for achieving biological objectives; and 5) provide data and documentation and/or sources of data and documentation to support their recommendations and suggestions. Between component group meetings, team leaders compiled and interpreted information gathered from team members and collaborated to ensure that the aquatic and terrestrial components of the Assessment were compatible and complementary.

Aquatic and terrestrial component groups met separately for the first five of seven Technical Team meetings held between September 2003 and May 2004. The individuals who participated as Technical Team members or who contributed information to the Assessment document are listed in Table 2. The component groups reconvened as a single team for meetings in March and May 2004. Meetings in September, October, and November were held at the IDFG office in Pocatello; meetings in January, February, March, and May were held at the IDFG office in Idaho Falls. Meetings were held from approximately 10:00 a.m. until 3:00 p.m. to accommodate travel from locations throughout the USP.

TABLE 2
Natural Resource Professionals in the Upper Snake Province Who Served as Members of Technical Team or Contributors to the Assessment

Aquatic Component Group		Terrestrial Component Group	
Deb Mignono Dick Munoz	USFWS	Bryan Aber	Caribou-Targhee National Forest
John Fred Hunter Osborne	SBT	Dan Christopherson	SBT
Dave Teuscher Dick Scully	IDFG, Southeast Regional Office	Dick Sjostrom Dick Munoz Larry Dickerson	USFWS
Dan Garren Jim Fredericks	IDFG, Upper Snake Regional Office	Geoff Hogander	BLM
Kevin Meyer	IDFG, Fisheries Bureau	Lauri Hanauska-Brown	IDFG, Upper Snake Regional Office
Sue O'Ney	Grand Teton National Park		

Contributors to the Assessment Document	
Doug Megeargle, Matt Campbell	IDFG
Bart Gamett	Salmon-Challis National Forest
Jim Capurso	Caribou-Targhee National Forest
Rob Gipson	WYG&F
Steve Lysne	USFWS
Ryan Neuman	USBR

CH2M HILL

Fisheries biologist Doug Bradley and wildlife biologist Chuck Blair co-wrote the Addendum to the Assessment. Mr. Bradley also redrafted the Inventory document. Mr. Bradley and Mr. Blair met with John Beal and reviewed IDFG Technical Team notes to better understand and document the rationale for selecting focal habitats and focal species and the linkage to their limiting factors.

Planning Team

Bannock Technologies, Inc.

The original Planning Team developed by BTI was composed of representatives from government agencies with jurisdictional authority in the subbasins, fish and wildlife managers, county and industry representatives, and private landowners (Table 2 and Table 3). A Planning Team was organized for each of the three subbasins located in the USP. The Planning Teams for the Snake Headwaters and Upper Snake Closed Subbasins met in Jackson, Wyoming, and Arco, Idaho, respectively. The Planning Team for the Upper Snake Subbasin met in Idaho Falls, Idaho.

The Planning Teams met monthly throughout the project period. The goals for each of the first Planning Team meetings were to: 1) continue developing the vision statement for the future condition of fish and wildlife in the subbasin; 2) review information contained in the draft Assessment document; and 3) begin reviewing the biological objectives developed by the Technical Team. The objectives of the second Planning Team meetings were to: 1) approve the final version of the vision statement; 2) continue to review information contained in the draft Assessment document; 3) discuss final recommendations regarding biological objectives; 4) encourage submissions for the Inventory; and 5) discuss research needs.

The lack of participation in the Planning Teams for these subbasins caused concern regarding adequate representation and thorough coverage of issues in the subbasins.

TABLE 3
Existing Groups in the Upper Snake Province that Could Be Utilized to Increase Awareness of the Northwest Power and Conservation Council, Its Fish and Wildlife Program, and the Planning Process

Type of Group	Examples of Groups in the Upper Snake Province	
Watershed council – A grassroots, locally based citizen's group intended to foster communication and education.	Blackfoot River Watershed Council Henry's Fork Watershed Council	
Watershed advisory group (WAG) – A stakeholder group that "advises the Idaho Department of Environmental Quality on the development and implementation of total maximum daily loads (TMDLs) and other State water quality plans" (Idaho Statute 39-3615).	American Falls WAG Continental Divide WAG Lake Walcott WAG Portneuf River WAG Willow Creek WAG	
Federal agency advisory groups – Groups composed of local residents who are appointed by the agency to serve in an advisory capacity on management programs and issues of interest to the public.	Idaho National Engineering and Environmental Laboratory Citizen Advisory Board (CAB) BLM, Central Idaho Resource Advisory Committee (RAC) BLM, South Central Idaho Resource Advisory Committee (RAC) BLM, Eastern Idaho Resource Advisory Committee (RAC) Caribou-Targhee National Forest Technical Advisory Committee (TAC)	
Nonprofit organizations – Locally based, nonprofit corporations that conduct advocacy, education, and/or research focused on a particular resource or area of interest.	Friends of the Teton River Henry's Fork Foundation Jackson Hole Alliance Jackson Hole Land Trust Rocky Mountain Elk Foundation Southeast Idaho Mule Deer Foundation	Jackson Hole One Fly Greater Yellowstone Coalition Teton Regional Land Trust Teton Science School Trout Unlimited The Nature Conservancy
Inter-agency working groups – Groups established through formal memoranda of agreements (MOAs) among any combination of local, State, Federal, and Tribal agencies.	The Greater Yellowstone Coordinating Committee (GYCC)	

CH2M HILL

CH2M HILL was contracted to rewrite the Management Plan in September 2004 and to complete the Management Plan by December 31, 2004. Previous participants in the BTI planning process for developing the original Management Plan (Part III) were asked to again participate in reviewing those issues not appropriately addressed in that original plan. Five meeting were held through the months of October and November. Those who attend at least one of these meetings are summarized in Table 4. Those who could not attend but were kept informed and participated via e-mail correspondence are listed in Table 5.

TABLE 4
Names And Affiliations of Regular Participants of the CH2M HILL Planning Team

UPPER SNAKE PLAN PARTICIPANTS	
Yvette Tuell	SBT
Leander Watson	SBT
Chad Colter	SBT
Dan Christopherson	SBT
Hunter Osborne	SBT
Tom Dayley	NWPCC
Jerry Rigby	Committee Of Nine
Travis Thompson	Committee Of Nine
Dick Munoz	USFWS
Dexter Pitman	IDFG – Region 5
Jonathan Matthews	CH2M HILL
Tom Haislip	CH2M HILL
Geoff Hogander	BLM
Greg Mladenka	DEQ

Table 5
Names and Affiliations of Participants of the CH2M HILL Planning Team That Followed the Process via e-mail

UPPER SNAKE CONTRIBUTORS	
Aida Farag	USBR
Dick Bauman	USBR
Rob Gipson	WG&FD
Jim Capurso	Caribou-Targee National Forest
Bryan Aber	Caribou-Targee National Forest
Roy Fowler	NRCS

Mike Etcheverry	DEQ
Kim Goodman	Teton Regional Land Trust
Greg Servheen	IDFG Headquarters
Clyde Lay	DEQ
Larry Dickerson	USFWS
Bart Gamett	Salmon-Challis National Forest
Pete Dittmar	Jackson Hole Land Trust
Dustin Miller	Idaho Farm Bureau

These meetings were held at the IDFG Region 5 headquarters in Pocatello and occurred on October 12, 19, 26, and November 2, and 30, 2004. A conference call was held on December 27, 2004, to finalize comments on the final text in the Management Plan.

Public Participation

The staff of BTI publicized the original USP planning process beginning the last week of February 2003. A four-page brochure (Appendix A-2) was mailed to more than 320 individuals, nonprofit organizations, special interest groups, and local, State, Federal, and Tribal agencies. The brochure contained information about the NPCC, the USP, and the USP planning process. It also listed the dates, times, and locations of the introductory public meetings and included a public comment sheet (Appendix A-3) that could be completed and returned to BTI by those who chose not to attend meetings. Contact information for BTI staff and sources of additional information, including the uniform resource locator (URL) for the NPCC's Internet web site and the URL for BTI's informational web site[1] (Appendix A-4), were also included in the brochure. Eleven of the comment sheets that were included in the brochures were returned to BTI, and comments submitted by the respondents in response to specific questions are summarized in Appendix A-3.

The brochures were mailed to representatives of the following stakeholder groups: city and county government, planning and zoning commissions, State legislature, Congress, State and Federal resource management agencies, Tribal resource management agencies, conservation districts, irrigation districts, weed control districts, extension agencies, environmental advocacy groups, motorized and non-motorized recreation groups, hunting and fishing groups, conservation groups, resource advocacy groups, environmental education groups, citizen's resource management groups, and community improvement groups. After the brochures were mailed, BTI staff continued the outreach efforts. Individuals who returned comment sheets were also invited to serve on a Planning Team. Representatives of stakeholder groups that are typically not participants in resource planning were sought to be part of plan development. Such groups included farmers, ranchers, and advocates of motorized vehicle recreation.

[1]This site was developed and maintained by Portage Environmental, Inc., Idaho Falls, Idaho. It became operational on March 18, 2004.

A press release (Appendix A-5) was issued describing the planning process and announcing meeting dates and locations to the following newspapers: *The Arco Advertiser,* Arco, Idaho; *Idaho State Journal* and *Idaho Unido*, Pocatello, Idaho; *Island Park News,* Island Park, Idaho; *Jackson Hole News and Guide,* Jackson, Wyoming; *Post Register,* Idaho Falls, Idaho; *Rexburg Standard Journal,* Rexburg, Idaho; *South Idaho Press,* Burley, Idaho; *Star Valley Independent,* Afton, Wyoming; *Teton Valley News,* Driggs, Idaho; *The Morning News,* Blackfoot, Idaho; and *The Times-News,* Twin Falls, Idaho. At least two newspapers ran stories based on the press release. Most people who attended the public meetings learned about them from sources other than the newspaper.

By enhancing understanding of the NPCC and its fish and wildlife program among the organizers and staff of groups such as those shown on Table 3, future planning efforts should be significantly enhanced. Table 3 includes examples of some of the groups in the USP that should be contacted by the NPCC for the purpose out of outreach efforts.

Public Meetings of the Planning Process

As a result of the demographics of the region, public meetings were held in one community (Jackson) in the Snake Headwaters Subbasin, in five communities (Burley, Pocatello, Idaho Falls, Ashton, and Driggs) in the Upper Snake Subbasin, and in one community (Arco) the Upper Closed Subbasin (Figure 2). Figure 2 also shows location of suggested future public meetings in the next planning cycle.

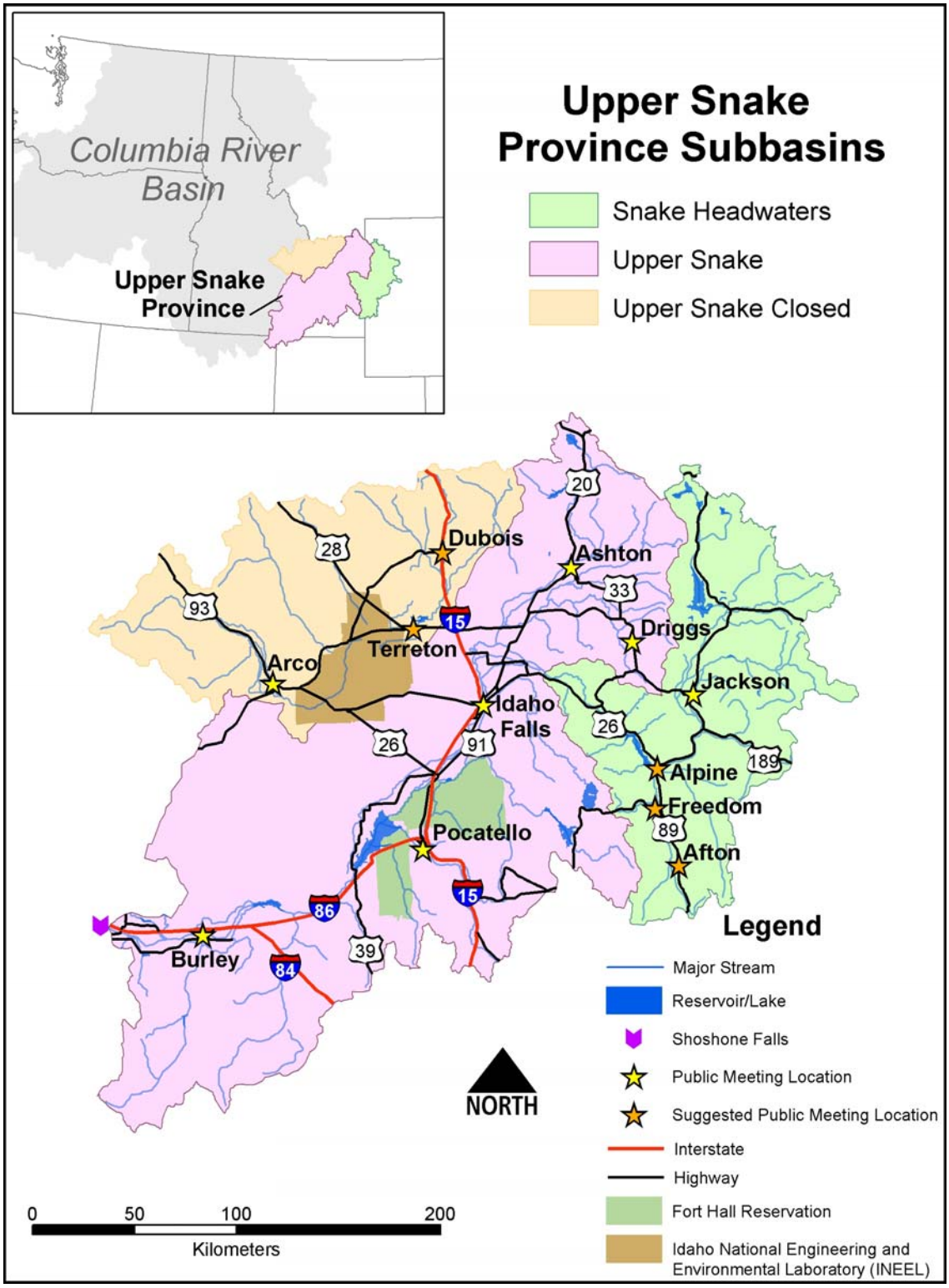


FIGURE 2
Map of the Upper Snake Province showing communities where public meetings were held to introduce the planning process. Communities where public meetings are recommended as part of future planning efforts are also shown

NEED TO FIX THIS FIGURE

BTI suggests that it would be desirable to conduct meetings in the southern part of the Snake Headwaters Subbasin and in the northern and central parts of the Upper Snake Closed Subbasin. In the Snake Headwaters Subbasin, the economies of Freedom, Afton, and Alpine are strongly associated with agriculture and phosphate mining, whereas the economy of Jackson, where the meeting was held, is related to tourism due to its proximity to Grand Teton and Yellowstone National Parks. Although the economy of the entire Upper Snake Closed Subbasin is largely dependent on ranching, additional meeting locations are desirable because the unique issues affect each of the subbasin.

Table 6 is a summary of people who attended the public meetings. Forty-seven people attended the seven meetings. Most were environmental professionals representing either State or resource agencies, the SBT, or nonprofit organizations. Approximately one-third were private citizens interested in fish and wildlife issues.

Each public meeting followed the same general format, although information was refined over time in response to questions posed in previous meetings. The objectives for each meeting were to: 1) introduce the NPCC's planning process; 2) begin creating a vision statement for the appropriate subbasin; 3) identify team members to assist with developing the individual subbasin plan; and 4) identify how to combine the subbasin Management Plans.

The agenda for the meetings consisted of introductions, an explanation of the NPCC, a summary of the planning process, and a discussion of fish and wildlife issues in the subbasin. Attendees also identified: 1) concerns associated with local fish and wildlife populations and their habitats; 2) goals for fish and wildlife and their habitats; and 3) projects that had been or could be implemented to benefit, enhance, or protect fish and wildlife and their habitats. The meetings ended with an invitation to participate in the Planning Team.

Information collected during the public meetings was documented and compiled into a comprehensive set of meeting minutes (Appendix A-7).

TABLE 6
Dates and locations of public meetings conducted in three subbasins of the Upper Snake Province, numbers of attendees, and stakeholder groups represented

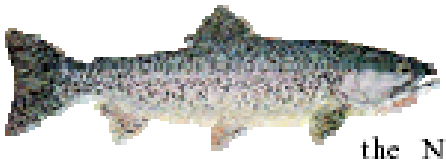
Date	Location	Subbasin	Number of Attendees	Agencies, Organizations and Stakeholder Interests Represented
March 16	Best Western Inn Burley, Idaho	Upper Snake	4	West Cassia Soil and Water Conservation District; USBR; DEQ, Twin Falls Regional Office; farming; irrigated agriculture
March 17	Ramada Inn Pocatello, Idaho	Upper Snake	10	NRCS, American Falls Service Center; DEQ, Pocatello Regional Office; SBT; Idaho State University (student); Southeast Idaho Mule Deer Foundation; real estate business
March 22	Teton County Commissioners Office Jackson, Wyoming	Snake Headwaters	9	WYF&G; Greater Yellowstone Coalition; USBR; USFS, Bridger Teton National Forest; Trout Unlimited; North Wind Environmental, Inc.; Jackson Hole Conservation Alliance
March 23	Idaho Falls Public Library Idaho Falls, Idaho	Upper Snake	12	SBT; Trout Unlimited; ISCC; Brigham Young University-Idaho (student); Willow Creek Watershed Advisory Group; Teton Regional Land Trust; citizen
March 25	Teton County High School Driggs, Idaho	Upper Snake	2	Friends of the Teton River; Teton Regional Land Trust
March 30	Ashton Community Center Ashton, Idaho	Upper Snake	6	Brigham Young University-Idaho (student), Ashton Area Development Committee, Teton Regional Land Trust, ranching, fishing guide and outfitter
March 31	Arco/Butte Business Incubation Center Arco, Idaho	Upper Snake Closed	4	Big Lost River Irrigation District, ranching, irrigated agriculture

DRAFT MANAGEMENT PLAN APPENDIX A-2

Brochure

Help Plan the Future of Fish and Wildlife in the Upper Snake Province

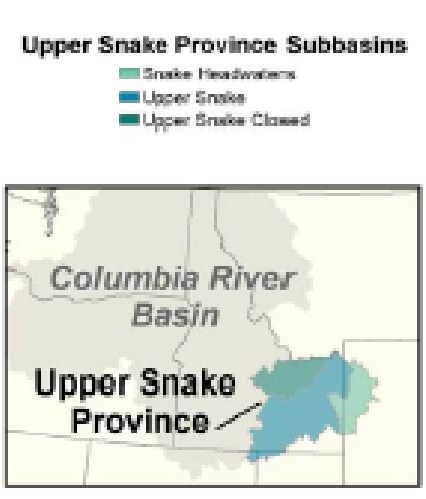
The Northwest Power and Conservation Council (NPCC) is asking for your help in developing a plan to protect and enhance fish and wildlife in the Upper Snake Province of the Columbia River Basin.

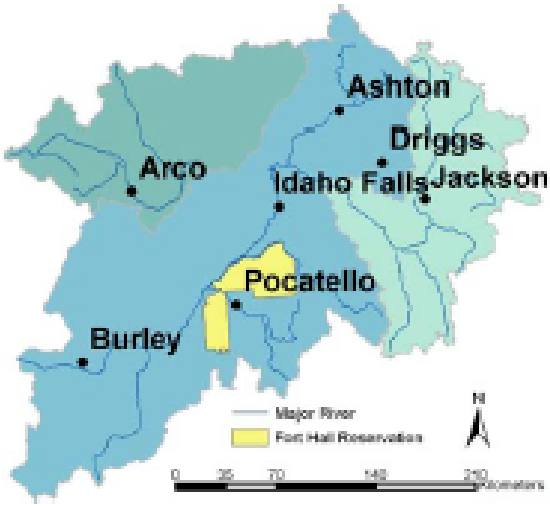


Created in 1980 by the Northwest Power Act, and formerly known as the Northwest Power Planning Council, the NPCC performs planning associated with the Columbia River Basin hydropower system. The Council is charged with maximizing energy conservation while providing electricity to Washington, Oregon, western Montana, and Idaho at the lowest possible cost. The Council is also charged with protecting and enhancing the fisheries resources of the Columbia River Basin and for mitigating the effects of the hydropower system on fish and wildlife populations and habitat.

In accordance with the Columbia River Basin Fish and Wildlife Program, the NPCC is currently developing management plans for 62 subbasins located in 11 provinces within the basin. These plans will provide a basis for evaluating and prioritizing hundreds of fish and wildlife mitigation and enhancement projects that will be proposed to the Council for funding over the next 15 years. Projects that meet the goals and objectives of the management plans will be implemented using funds administered by the BPA.

From 1978 to 2000, BPA directed approximately $2.6 billion toward anadromous fish such as salmon and steelhead, and approximately $875 million toward resident fish and wildlife. More than $13 million has been obligated by BPA for fish and wildlife enhancement in the Upper Snake Province since 1992.



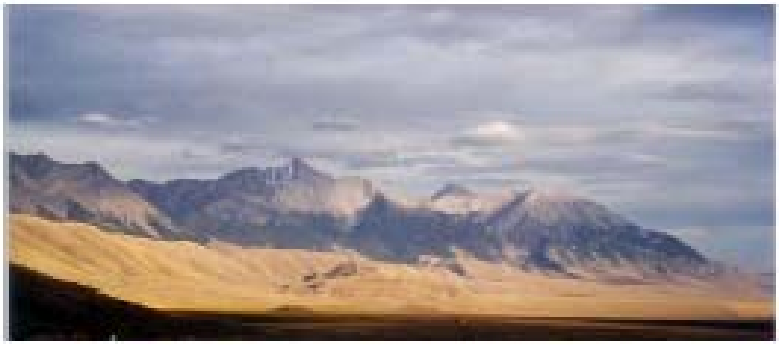


Three Subbasins in Western Wyoming and Southeastern Idaho

Comprise the Upper Snake Province

The Snake Headwaters Subbasin encompasses the headwater streams of the Snake River in Wyoming downstream to Palisades Dam in Idaho. Not far from its origins in Yellowstone National Park, the Snake River is dammed in Grand Teton National Park to form Jackson Lake. Before flowing into Palisades Reservoir in Idaho, the Snake River receives the Gros Ventre, Hoback, Greys, and Salt rivers.

The Upper Snake Subbasin includes the watersheds of the Henry's Fork of the Snake River, the South Fork of the Snake River from Palisades Dam to the Henry's Fork, the Blackfoot and Portneuf rivers, and the main stem of the Snake River to Shoshone Falls.



The Upper Snake Closed Subbasin is comprised of the closed drainages of the Big and Little Lost rivers and of Birch, Beaver-Camas, and Medicine Lodge creeks.

The Planning Process

The Northwest Power and Conservation Council (NPCC) encourages planning at the local level using technical teams, planning teams, and stakeholders.

The technical team is comprised of fish and wildlife professionals and resource managers. Planning teams will be created for each subbasin and will consist of a variety of stakeholders. Stakeholders are individuals or groups with an interest in the subbasin, and include individual members of the public, sporting groups, public lands users, conservation organizations, local government agencies, tribal government agencies, and state and federal natural resource management agencies.

The plan is being prepared by the Shoshone-Bannock Tribes in coordination with the Idaho Department of Fish and Game (IDFG) and Bannock Technologies, Inc.

IDFG is responsible for writing an assessment of natural resources and an inventory of current fish and wildlife enhancement projects. Bannock Technologies, Inc. will be facilitating public meetings to gather information from local stakeholders to incorporate into the management plan.

The assessment will provide the scientific foundation for the management plan

The Shoshone-Bannock Tribes and Bannock Technologies, Inc. will submit the plan in May 2004.

The Product

The **Upper Snake Province Plan** will be a document consisting of three sections:

1. An **assessment** of existing information and scientific data. The assessment is the foundation of the management plan.
2. An **inventory** of current projects and past accomplishments.
3. The **management plan**, which will document a vision of the future condition of fish and wildlife populations and habitat in the province, biological objectives based on the assessment and vision, and specific strategies for achieving the vision and implementing the biological objectives.

Your participation is essential to ensure that your opinions are represented in the management plan.

How You Can Participate

Attend a public meeting in your subbasin:

Burley	Burley Inn	Tuesday - March 16
Pocatello	Ramada Inn and Convention Center	Wednesday - March 17
Jackson, WY	County Commissioners Building	Monday – March 22
Idaho Falls	Public Library	Tuesday – March 23
Driggs	Driggs High School	Thursday – March 25
Ashton	Ashton Community Center	Tuesday – March 30
Arco	Business Satellite Center	Wednesday – March 31

Meetings will be held from 7:00 PM to 9:00 PM

Complete and mail the enclosed form. You may also submit your comments electronically at http://www.portageenv.net/usmp.

Volunteer to participate on a planning team. Team members will 1) ensure that the biological objectives for each subbasin is consistent with the overall vision for the province, 2) prioritize strategies for achieving the biological objectives, and 3) read and review the final document.

Visit the NPCC website at http://www.nwcouncil.org/fw/program/Default.htm to learn more about the Council, subbasin and province planning, and fish and wildlife population and habitat improvement projects.

Contact Karen Haskett or Kyle Babbitt, Bannock Technologies, Inc., at (208) 522-5007 or bannocktech@qwest.net.

Bannock Technologies, Inc.

DRAFT MANAGEMENT PLAN APPENDIX A-3

Comment Sheet and Summary of Comments Submitted

Upper Snake Province Plan
Public Comment Sheet

Name*_____ Today's Date_____
**You do not have to give your name. Your comments will be considered even if your name is not provided.*

Meeting Location (if applicable) _____

The Northwest Power and Conservation Council is asking for your help in developing a plan to protect and enhance fish and wildlife in the Upper Snake Province. The plan will be the basis for determining how funds administered by the Bonneville Power Administration (BPA) could be spent during the next 15 years to mitigate the effects of the Columbia River basin hydropower system.

Your responses to the following questions will be used to write a vision for the province and to develop objectives to achieve the vision.

What is your vision for the future condition of fish and wildlife in the Upper Snake Province? For example, the vision developed by stakeholders for the Clearwater Subbasin is *a healthy ecosystem with abundant, productive, and diverse aquatic and terrestrial species, which will support sustainable resource-based activities.*

_____

_____

_____

Please list specific goals that would help achieve your vision. For example, one of your goals might be *to have self-sustaining populations of wild native trout in 75% of the streams where they occurred historically.*

_____

_____

_____

Area (s) of Interest and/or Concern _____

Additional Comments _____

_____

How did you hear about this public comment opportunity? _____

For additional questions or comments, please contact Karen Haskett or Kyle Babbitt at Bannock Technologies, 208-522-5007; fax: 208-522-5010; or bannocktech@qwest.net.

If you want to be on a planning team or would like to receive a copy of the plan to review, please provide your

Name_____ Telephone_____

Address _____ E-mail_____

Summary of Comments Submitted

Eleven of the comment sheets that were included in the brochures were returned to Bannock Technologies, Inc. (BTI). Four were returned by mail with postage paid by the respondents, four were submitted at public meetings, and three were delivered personally to BTI staff. Five respondents attended a public meeting and/or participated in a Planning Team meeting, whereas six did not. Comments submitted by the respondents in response to specific questions are listed below. In some cases, comments have been paraphrased to make them more easily understood by readers unfamiliar with specific issues in the Upper Snake Province.

What is your vision for the future of fish and wildlife in the Upper Snake Province?

- Fewer drift boats operated by guides and outfitters. Deal with species that currently exist before re-introducing any others.

- A healthy ecosystem with abundant, productive, and diverse aquatic and terrestrial species, which will support sustainable resource-based activities while providing electricity at the lowest possible price.

- Healthy ecosystems, healthy economics that are created with sustainable industries; restored fisheries and watersheds; workable management plans; cooperative, fair, and progressive strategies toward larger landscape sustainability and health.

- I think the most pressing priority for the Upper Snake Province is to address the intense growth in land development through the protection of key wetlands and riparian areas through easements, IDFG land purchases.

- To have healthy populations of native fish and wildlife in their historic ranges. Healthy populations of native and wild fish are the best indications of watershed health. These populations need to be ecologically sustainable.

- Use Shoshone-Bannock Tribes Vision statement (i.e., *The Shoshone-Bannock Tribes will pursue, promote, and where necessary, initiate efforts to restore the Snake River system and affected unoccupied lands to a natural condition*). It is relatively simple, yet clear and concise.

- A healthy ecosystem with abundant, productive, and diverse aquatic and terrestrial species, which will support sustainable resource-based activities. Sustainable activities should include hunting, a variety of fishing methods, and recreation-oriented interactions with fish and animals, i.e., birdwatching, wildlife photography.

- Widespread viable populations of native aquatic and terrestrial species in the full complement of historic ecotypes.

- Healthy systems with self-sustaining fish populations.

- The Clearwater Subbasin vision is a good start. *A healthy ecosystem with abundant, productive, and diverse aquatic and terrestrial species, which will support resource-based activities.* This vision is equally valid for the Upper Snake Province. However, in my opinion, the single most critical factor in meeting this vision is water. By law the Upper Snake Province, its water and waterways, are nothing more than a water delivery system for agricultural and power generation purposes. Fish and wildlife are a by-product. As such, no vision would be complete without a strategic plan that would create a mechanism that would provide sufficient water flows to protect, maintain, or enhance critical habitat. Specifically, *quality flows at critical times*.

  On the Henry's Fork, it is my understanding that biologically the single most significant factor affecting fish mortality is too low of flows during critical winter months. Low flows also limit the effects of the spring spawn and degrade aquatic habitat critical to the river ecosystem. Since the 2000 fishing season, we have seen a steady decline in the quality of the fishing experience on the Henry's Fork. This time period coincides with low winter flows as a result of current drought management practices. This trend can be validated by Fish and Game studies correlating low (winter) flows with declining adult trout populations.

  Ideally, the outcome of a successful Fish and Wildlife management plan would include an improved water sharing process resulting in an enhanced trout fishery.

Please list specific goals that would help achieve your vision.

- Stop trying to re-introduce Yellowstone cutthroat trout to Thurman Creek in the Upper Henry's Fork watershed; there are better watersheds in which to restore cutthroat.

- 1. Provide self-sustaining, balanced populations of wild native and sport fisheries.
  2. Provide historic levels of hydroelectricity.

- Protect land surrounding viable fisheries.

- I think we should target all key wetlands and riparian areas for protection from development. Conservation easement acquisition could be a key tool here.

- Have quantities of cold, clean water sufficient to sustain healthy fish populations and to enable watershed restoration and wise fisheries management.

- Recovery of all threatened and endangered species, special attention to plants that are nearly extinct. At <u>least</u> 75% of the streams and lakes should have self-sustaining native trout.

- 1. Maintain/restore viable populations of all historic life history forms (adfluvial, fluvial, resident) of native trout in several subwatersheds.
  2. Maintain/restore winter range and migration routes for ungulates.
  3. Maintain/restore functioning riparian areas along all streams where such areas existed historically.

- Restore <u>native</u> fish populations to their traditional streams.

- A water management plan that would better balance the use of water for fish and wildlife with other resource-based activities (agriculture, power generation, etc.). Projects to achieve this goal include:
  1. A water management study that would determine the best practices to get more water for fish and wildlife.
  2. A socio-economic study that would place a monetary value to an enhanced fishery. If, through this plan, a monetary value could be assigned to fish (and the associated tourism/recreation dollars), a dialog could be started that could result in a more favorable allocation of water to trout, necessary to sustain a more economically viable fishery. As demonstrated by its fame, an improved fishery on the Henry's Fork would result in a sustained economic boom to the region based on fishing and tourism.

Areas of Interest and/or Concern

- Henry's Fork and Fall River.
- Rural economics; western way of life; a mix of sport and native wild fish streams on the landscape.
- Bonneville Power Administration's history of being unprofessional and unreliable in delivering already "allocated" funding.
- Land conservation.
- Watershed health, sustainable native fish populations.
- Education. In recent months, I have attended two forums where the need was expressed for a college or university that focuses on the Greater Yellowstone Ecosystem, including sustainable business development.
- Water management and hydrologic alteration, native trout conservation, open space.

Additional Comments

- Fishing guides routinely take clients to Fall River, in violation of regulations.
- What is the connection between this effort and Forest/ BLM plans?
- There is currently no recognition of minimum in-stream flows as important for fish/wildlife. In-stream flows are not recognized by the Idaho Department of Water Resources as a water right; this needs to be changed.
- As stewards for future generations, we need to employ sound science and work cooperatively with a broad spectrum of interests in defending and advocating for our natural resource legacy.

- More attention to teaching the value of natural resources conservation should be given to the development of educational curricula at all levels, from elementary and up.

- Although water management issues are important, the single biggest threat to fish and wildlife habitat in the Upper Snake is development of open space.

DRAFT MANAGEMENT PLAN APPENDIX A-4

Home Page for the Upper Snake Province Internet Web Site, Available from March 18 Through September 2004 at http://www.portageenv.net/usmp/

Planning for the Upper Snake Province of the Columbia River Basin

Help Plan the Future of Fish and Wildlife in the Upper Snake Province

- The Planning Process
- The Product
- Public Meetings
- The Upper Snake Province
- Comments
- Contact Us

Bannock Technologies, Inc.

Upper Snake Province|PDF

Subbasins:

Snake Headwaters|PDF

Upper Snake|PDF

Upper Snake Closed|PDF

Download the F:\Website\images\Newsletter.pdfNewsletter

Requires Adobe Reader

Get Adobe Reader

The Planning Process | The Product | Public Meetings | Upper Snake Province | Comments | Contact Us

DRAFT MANAGEMENT PLAN APPENDIX A-5

Press Release

Press Release

From: **Bannock Technologies, Inc.**
Date: **February 26, 2004**
Publication: **Immediate**
Contacts: **Karen Haskett or Kyle Babbitt, at Bannock Technologies, Inc., (208) 522-5007, Bannockinc@aol.com**

Help Plan the Future of Fish and Wildlife in the Upper Snake River Basin

The Northwest Power and Conservation Council is asking for your help in developing a plan to protect fish and wildlife in the upper Snake River basin.

This plan will be used to determine how funds administered by the Bonneville Power Administration (BPA) should be spent to mitigate the effects of the Columbia River basin hydropower system. More than $13 million has been spent by BPA on fish and wildlife enhancement projects in the upper Snake River basin since 1992.

Bannock Technologies, Inc. is conducting public meetings to obtain information about the desired future condition of fish and wildlife in the basin upstream of Shoshone Falls. This area includes the Gros Ventre, Hoback, Greys, Salt, and Snake river drainages in Wyoming and the Henry's Fork, South Fork, Snake, Blackfoot, Portneuf, Big Lost, and Little Lost river drainages in Idaho. The Beaver-Camas, Medicine Lodge, and Birch creek drainages are also part of the planning area.

Meetings will begin at 7 pm at the following locations: Burley Inn, Burley, on Tuesday, March 16; Chubbuck Ramada Inn, Pocatello, on Wednesday, March 17; County Commissioners Building, Jackson, WY, on Monday, March 22; Idaho Falls Public Library, Idaho Falls, on Tuesday, March 23; Driggs High School, Driggs, on Thursday, March 25; Ashton Community Center, Ashton, on Tuesday, March 30; and Arco Business Satellite Center, Arco, on Wednesday, March 31.

For more information, contact Karen Haskett or Kyle Babbitt at (208) 522-5007 or by e-mail at **Bannockinc@aol.com.** Additional information regarding the NPCC and the planning process is available at **http://www.nwcouncil.org/fw/subbasinplanning/Default.htm.**

#30#

DRAFT MANAGEMENT PLAN APPENDIX A-6

Policy of the Shoshone-Bannock Tribes for Management of Snake River Basin Resources

THE POLICY OF THE SHOSHONE-BANNOCK TRIBES FOR MANAGEMENT OF SNAKE RIVER BASIN RESOURCES

ISSUE DEFINITION

Beginning in 1989 and continuing through 2008, many non-Federal hydroelectric projects (Projects) within the Snake River Basin (Basin) will be reviewed under the Federal Energy Regulatory Commission relicensing process. In addition, subsequent to the listing of various salmon and snail species under the Endangered Species Act as well as the initiation of other conservation efforts, the Basin is being viewed, as never before, as a valuable resource contributing to the overall Pacific Northwest regional conservation framework. The Shoshone-Bannock Tribes support efforts to conserve, protect, and enhance natural and cultural resources within the Basin and therefore establish this policy to re-emphasize previous policy statements and provide new direction with regards to recently initiated Basin actions.

BACKGROUND AND INTRODUCTION

Since time immemorial, the Snake River Basin has provided substantial resources that sustain the diverse uses of the native Indian Tribes including the Shoshone-Bannock. The significance of these uses is partially reflected in the contemporary values associated with the many culturally sensitive species and geographic areas within the Basin. Various land management practices, such as the construction and operation of hydroelectric projects have contributed extensively to the loss of these crucial resources and reduced the productive capabilities of many resource systems. These losses have never been comprehensively identified or addressed as is the desire of the Shoshone-Bannock Tribes.

The Shoshone-Bannock Tribes reserved guaranteed continuous use Rights to utilize resources within the region that encompasses and includes lands of the Snake River Basin. The Fort Hall Business Council has recognized the contemporary importance of these Rights and resources by advocating certain resource protection and restoration programs and by preserving a harvest opportunity on culturally significant resources necessary to fulfill inherent, contemporary and traditional Treaty Rights. However, certain resource utilization activities including the operation of federal and non-federal hydroelectric projects effect these resources and consequently, Tribal reserved Rights.

It has always been the intent and action of the Shoshone-Bannock Tribes to promote the conservation, protection, restoration, and enhancement of natural resources during the processes that consider the operation and management of Federal projects and during the land management activities of other entities.

This Policy re-emphasizes the Tribes' previous policies with regards to these processes and activities. However, the formal relicensing process for non-federal projects (Projects) as well as other recent undertakings that will consider the overall management of the Basin represent previously unavailable opportunities to comprehensively identify and address impacts to and losses of, resources affected by these Projects.

The importance of considering Tribal goals and objectives for affected resources is specifically recognized in the regulations outlining the federal relicensing process. The Fort Hall Business Council has established the following policy for the Basin in order to provide guidance in determining these goals and objectives. This direction is intended to be consistent with existing Tribal policy for participating in processes dealing with other land and water management activities.

STATEMENT OF POLICY

The Shoshone-Bannock Tribes (Tribes) will pursue, promote, and where necessary, initiate efforts to restore the Snake River system and affected unoccupied lands to a natural condition. This includes the restoration of component resources to conditions which most closely represent the ecological features associated with a natural riverine ecosystem. In addition, the Tribes will work to ensure the protection, preservation, and where appropriate--the enhancement of Rights reserved by the Tribes under the Fort Bridger Treaty of 1868 (Treaty) and any inherent aboriginal rights.

CONCLUSION

In addition to the ongoing efforts of the Tribes and its cooperating agencies, the relicensing process as well as recently initiated Basin recovery efforts provide a firm basis for striving to meet Tribal needs regarding resource conservation, protection, and enhancement. This Policy will provide direction to Tribal staff for participating in regional processes as well as for the future development of resource and process specific Tribal plans and guidelines.

Tribal participation in the Project relicensing efforts will be used to identify the direct, indirect, and cumulative effects attributable to the construction, operation, and any proposed modifications of Project facilities. The Tribes expect the license applicant(s) and the Federal Energy Regulatory Commission, in consultation with the Tribes and agencies during the relicensing process, to identify alternative management strategies and develop mitigation measures to reduce or eliminate the identified impacts consistent with this Policy.

In combination with existing policy and direction, other natural and cultural resource management activities (typically those undertaken by the Tribes' cooperating agencies) will be utilized to identify additional land management impacts within the Snake River Basin and will similarly identify alternative management strategies and apply mitigation measures consistent with this Policy.

All cooperating agencies will be expected to utilize all available means, consistent with their respective trust responsibility mandates, to protect Treaty rights and Tribal interests consistent with this Policy.

SWR/swr/b:ipc\policy\policy

DRAFT MANAGEMENT PLAN APPENDIX A-7

Minutes of Public Meetings Conducted to Introduce the Upper Snake Province Planning Process

Upper Snake Province Plan

Minutes of Public Meetings Conducted on

March 16, 2004 at the Best Western Inn, Burley, Idaho
March 17, 2004 at the Ramada Inn, Pocatello, Idaho
March 22, 2004 at the Teton County Commissioners Office, Jackson, Wyoming
March 23, 2004 at the Idaho Falls Public Library, Idaho Falls, Idaho
March 25, 2004 at Teton County High School, Driggs, Idaho
March 30, 2004 at the Ashton Community Center, Ashton, Idaho
and
March 31, 2004 at the Arco/Butte Business Incubation Center, Arco, Idaho

Participants of Meetings in the Upper Snake Subbasin [1]

Burley: Clyde Lay, Idaho Department of Environmental Quality; Jack Peterson, West Cassia Soil and Water Conservation District; Earl J Christansen; Alicia Boyd, US Bureau of Reclamation

Pocatello: Roy Fowler, Natural Resources Conservation Service; Greg Mladenka, Idaho Department of Environmental Quality; Andrew Ray, citizen and Idaho State University student; Heather Ray, Shoshone-Bannock Tribes; Keith Kutchins, Shoshone-Bannock Tribes; Allen Rollins, Intermountain Land Exchange, Inc.; Jason Watson, citizen; Sona'e Watson, Shoshone-[2]Bannock Tribes; Mayo Haskett, Southeast Idaho Mule Deer Foundation; Hunter Osborne, Shoshone-Bannock Tribes

Idaho Falls: Chad Colter, Shoshone-Bannock Tribes; Matt Woodard, Trout Unlimited; Kathy Weaver, Soil Conservation Commission; Jim Mathias, Snake River Cutthroat Chapter of Trout Unlimited; Jim Gerber, citizen; Annie Kelley, Brigham Young University-Idaho student; Gary Dixon, Willow Creek Watershed Advisory Group; Rick Passey, Willow Creek Watershed Advisory Group; Hunter Osborne, Shoshone-Bannock Tribes; Russell Haskett, Shoshone-Bannock Tribes; Babette Thorpe, Teton Regional Land Trust; Kim Goodman, Teton Regional Land Trust

Driggs: John Rice, Friends of the Teton River; Michael Whitfield, Teton Regional Land Trust

[1]The organizational affiliation or profession of a participant is shown only if it was listed by the participant on the meeting registration form.

Ashton: Robert Wood, Brigham Young University-Idaho student; Janette Wood, Brigham Young University-Idaho student; Susan Baker, Ashton Area Development Committee; Dick Baker, rancher; Philip Chavez, Hyde Outfitters; Kim Goodman, Teton Regional Land Trust

Participants of the Meeting in the Headwaters Subbasin

Jackson: Rob Gipson, Wyoming Department of Game and Fish; Scott Bosse, Greater Yellowstone Coalition; Dick Bauman, Bureau of Reclamation; Dave Fogle, US Forest Service; Rick Stuck, Trout Unlimited; Lane Allgood; Randy Morris, North Wind Environmental, Inc.; Bill Wotkyns, Trout Unlimited; Tom Darin, Jackson Hole Conservation Alliance

Participants of the Meeting in the Closed Subbasin

Arco: Tip Harwood; Chuck McKee; Kenton L. Harwood, Big Lost Irrigation District; Jim Gregory

Facilitation Staff and Presenters: Karen Haskett, Kyle Babbitt, and Sheryl Hill, Bannock Technologies, Inc.; Tom Dayley, Northwest Power and Conservation Council; and John Fred, Shoshone-Bannock Tribes

Introduction to the Minutes: These minutes are intended to provide a record of the objectives and operational format that were common to each of seven public meetings conducted to initiate the public participation portion of the Upper Snake Province planning process. Although the agendas for the meetings were almost identical, each meeting was unique in what occurred during the portion of the meeting described upper the heading, *Vision, Goals, Concerns, and Opportunities.* Separate records of information collected during this portion of the meetings are appended to the minutes as Attachments A through G. All meetings occurred in the evening from 7:00 pm to 9:00 pm and generally began at approximately 7:15 pm.

Objectives: The objectives of each public meeting were to 1) introduce the Northwest Power and Conservation Council's planning process, 2) begin creating a vision statement for the Upper Snake Province that emphasized fish and wildlife populations and habitat, 3) identify potential planning team members to assist with development of the management portion of the Upper Snake Province Plan, and 4) gather ideas for incorporation into the management portion of the Upper Snake Province Plan.

Introductions and Presentations: Participants of each meeting were welcomed by Karen Haskett, who explained the role of Bannock Technologies, Inc. in the planning process and introduced the presenters and facilitator.

The first presentation at each meeting consisted of an explanation of the Northwest Power and Conservation Council, a description of the geographic region that comprises the Upper Snake Province and its three subbasins, and a brief summary of the planning process. This presentation was given on March 16 by Tom Dayley of the Northwest Power and Conservation Council (NPCC) and all other dates by Sheryl Hill of Bannock Technologies, Inc.

The Northwest Power and Conservation Council, which has requested the Upper Snake Province Plan, was authorized in 1980 by the Northwest Power Act. The Council, which was known as the Northwest Power Planning Council until 2003, is an interstate compact with representatives from Idaho, Montana, Washington and Oregon. The responsibilities of the Council are to 1) develop regional programs to "protect, mitigate and enhance fish and wildlife resources" of the Columbia River Basin affected by the construction and operation of hydroelectric dams, and 2) assure the "Pacific Northwest an adequate, efficient, economical and reliable power supply."

The Council is also responsible for involving the public and tribal, state, and federal fish and wildlife agencies in the planning process, and for ensuring that the Council's measures are consistent with the legal rights of the thirteen sovereign Northwest Indian Nations located within the Columbia River Basin.

The Upper Snake Province Plan will be considered by the Council as an amendment to its *2000 Fish and Wildlife Program.* If the plan is approved and amended, it will provide the Council with a basis for making decisions regarding distribution of mitigation funds available from the Bonneville Power Administration. Because the Council is mandated to ensure public involvement in the planning and decision-making processes, it has contracted with state and tribal fish and wildlife departments to conduct local planning in 62 subbasins that have been combined into 11 ecologically defined provinces within the Columbia River Basin. The Upper Snake Province is somewhat unique because it includes portions of Wyoming, a state that does not have representation on the Council.

The Upper Snake Province Plan will consist of the following three sections: an assessment of the biological potential of the province and opportunities for restoration; an inventory of fish, wildlife, and habitat protection, enhancement, and mitigation projects in the past five years; and a 1 to 15-year management plan and budget. The assessment and inventory portions of the plan are being prepared by the Idaho Department of Fish and Game with assistance from technical specialists representing a variety of state, federal and tribal agencies. The Shoshone-Bannock Tribes are responsible for submitting the completed plan to the Council, and have contracted with Bannock Technologies to conduct public meetings, encourage public participation, and write the management section of the plan. Elements of the management plan include 1) a vision for the desired future condition of the province, 2) biological objectives that describe the ecological conditions necessary to achieve the vision, 3) implementation strategies, procedures, and guidelines that describe the actions leading to the vision, 4) a research, monitoring, and evaluation program to evaluate progress toward the vision, and 5) requirements of the Endangered Species Act and Clean Water Act. The plan will be submitted to the Council by May 28 although the public will have opportunities to review and provide comments on the plan through approximately September 2004.

The second presentation of each meeting was given by John Fred of the Shoshone-Bannock Tribes, except on March 25, when it was given by Karen Haskett. John's presentation focused on the role of the Shoshone-Bannock Tribes in the planning process. John reiterated that the biological assessment and project inventory portions of the plan are being developed by the Idaho Department of Fish and Game with technical support from local,

state, federal, and tribal agencies. Based on these portions of the plan, a management plan will be developed using information gathered at public meetings and during meetings of planning teams comprised of interested members of the public. The Shoshone-Bannock Tribes and its contractor, Bannock Technologies, Inc., are responsible for developing the management section of the plan, for integrating the assessment, inventory, and management sections of the plan into a comprehensive document, and for submitting the final plan to the Council.

The interests of the Shoshone-Bannock Tribes in fish and wildlife management in the Upper Snake Province derive from two documents. The first is Article IV of the Fort Bridger Treaty, which grants hunting and fishing rights to Tribal members on all unoccupied lands of the United States. The second is the Shoshone-Bannock Tribes' policy for management of the Snake River Basin, which specifies that the Tribes will promote "the restoration of resources to conditions that most closely represent the ecological features of natural riverine ecosystems."

The Soda Springs Hills habitat project was presented by John as an example of the fish and wildlife mitigation projects that have been funded through the Council in the Upper Snake Subbasin. This project provides winter habitat for mule deer and elk, is managed by the Bureau of Land Management, and is open and accessible to the public.

Vision, Goals, Concerns and Opportunities: Following the introductory presentations, Karen introduced Kyle Babbitt, facilitator for the public participation portion of the meeting. Kyle reviewed the agenda for the meeting, reiterated the elements of the management portion of the Upper Snake Province Plan, and explained that the primary objective of the meeting was to develop a vision for the province for inclusion in the management portion of the plan. Kyle then showed examples of vision statements that had been developed for the Council's *2000 Fish and Wildlife Program*, the Salmon Subbasin, and when possible, for the Upper Snake Province at other meetings.

Kyle began the process by asking all participants to introduce themselves and to briefly discuss their interests and reasons for participating in the meeting. As participants spoke, Kyle captured their thoughts in writing. Words, thoughts and phrases that were intended for inclusion in the vision were displayed on a screen using an overhead projector. All other comments were written on pieces of paper that were placed on the wall for all to read and consider. These comments were categorized as *goals*, *problems/projects*, or *concerns*, and included specific goals consistent with the vision, existing problems that are inconsistent with the vision, projects that could be implemented to help achieve the vision, and concerns regarding the current status fish and wildlife within the subbasin. Questions and concerns specifically related to the Council's planning process were also encouraged and recorded. The vision statements and comments recorded at meetings in the Upper Snake Subbasin are shown in Attachments A through E, the vision and comments recorded at the meeting in the Headwaters Subbasin are shown in Attachment F, and the vision and comments recorded at the meeting in the Closed Subbasin are shown in Attachment G.

During closing comments, Karen thanked all participants for their involvement, asked them to share information with whoever might be interested, and invited all participants to

continue their involvement in the planning process by participating in meetings of the planning teams that will be scheduled for April. One planning team will be organized for each subbasin, and each planning team will meet twice. Karen explained that everyone attending the public meetings would receive copies of the meeting minutes and additional information regarding the dates, times and locations of the planning team meetings. Karen also asked all participants to submit information regarding protection, enhancement, and/or mitigation projects begun or completed within the past five years to the Idaho Department of Fish and Game for inclusion in the inventory section of the plan. The following contact information for the Department was provided to participants either at the meeting or after the meeting via e-mail messages:

The URL for submitting projects is http://www2.state.id.us/fishgame/subbasin/. If you have questions about the inventory or need help submitting projects, contact Jeff

Semmens of the Idaho Department of Fish and Game at 208-287-2796 or

jsemmens@idfg.state.id.us

Attachment A. Vision statement and comments recorded at the Burley public meeting on March 16, 2004

Vision

The Upper Snake Province is a productive and sustainable ecosystem in which impaired watersheds have been restored, watersheds with high biological diversity have been protected, and which provides for future growth.

Goals

- Protect stream banks
- Provide for economic growth
- Minimize impacts of growth on fish and wildlife
- Maintain biodiversity in areas where it still exists
- Outcomes of projects must affect positive change
- Reduce power rates

Problems/Projects

- Dams are limiting factors that cause changes in timing and amount of water flow
- Biological diversity is being lost *because* of emphasis on species protected by the Endangered Species Act
- Identify watersheds that have potential for improvement (for example, Rock Creek watershed in Power County once contained Yellowstone cutthroat trout and they could be restored; lower Goose Creek can probably not be improved; Almo and Edwards creeks are good examples of restoration projects that have been implemented)
- Implement the Lake Walcott total maximum daily load (TMDL)
- Implement the Raft River TMDL
- Implement the Goose Creek TMDL
- Identify watersheds where positive change can occur
- Identify areas of high biodiversity
- Determine the reasons that flows in Raft River and Goose Creek are intermittent

Concerns

- What type of growth will occur?
- Agricultural lands should be protected
- What is the status of leatherside chub?
- Water users are concerned that protection of fish and wildlife will increase public pressure to remove dams
- Some rivers go dry naturally or because of legal water rights
- Focus on conditions "now" and recognize that conditions are always changing
- How do we define "restored?" Can possibly use the goals of the Clean Water Act (fishable, swimmable, and drinkable) to guide restoration efforts
- Intermittent streams need to be identified as such, and should not be shown on maps used by the Council or by planners as discharging to the Snake River
- Why is "Province" (a term used to describe Canadian political boundaries) used? Why not use "watershed" or "subbasin?"
- Financial costs of projects – can we really expect to receive money from the Council?
- Planning efforts among agencies are disconnected (for example, subbasin assessments by DEQ, US Forest Service planning, Bureau of Reclamation planning)
- Agency personnel did not have enough information about the planning process to justify their participation or to obtain authorization to participate
- The Council should do more to inform agencies of the planning process and encourage participation

- Use existing committees and working groups to share information and collect data
- People and agencies that have information but are not participating should be identified in the plan as data gaps
- Why was attendance at this meeting so poor? Scheduling? Lack of interest? Timing? Do a survey later to find out how to encourage participation.
- The comment sheet should have contained specific questions so responders could give more specific responses regarding a vision and goals
- Projects must be prioritized to achieve best results

Attachment B. Vision statement and comments recorded at the Pocatello public meeting on March 17, 2004

Vision

A commitment to protect, enhance, and restore native species and their ecosystems and to plan for sustainable resource use in the Upper Snake Province.

Goals

- Meet water quality criteria in and below reservoirs, dams, and hydroelectric generating facilities
- Meet water quality criteria in all other areas
- Identify the fish and wildlife resources that were lost when projects were constructed (currently a data gap)
- Identify data gaps in the *lower* portion of the upper Snake River Province
- Do not sacrifice resident fish in the upper Snake River in order to meet biological objectives for anadromous fish in the lower Snake River
- Amount of water withdrawn from streams and rivers needs to be limited; establish in-stream flows
- Encourage "smart growth" practices to reduce the impacts of growth on fish and wildlife
- Achieve minimum stream flows
- Where possible, quantify and specifically address the impacts of hydroelectric projects
- Encourage reintroduction of beaver

Problems/Projects

- Good projects- bitterbrush and deer counts in Rudeen area
- Enforcement on lands acquired and protected as wildlife habitat is inadequate; wildlife and habitat that were protected when privately owned are now open to abuse by the public (Rudeen property an example)
- Funds are required to improve and maintain lands that have been acquired to protect habitat (Example: Soda Springs Hills)
- An "operation and maintenance" funding category is needed for projects already implemented
- Invasive species are competing with native species
- BPA and Council need to adhere to project funding recommendations of scientific review panel
- BPA and Council need to adhere to open and transparent project review and selection processes
- Mitigation funds and proposed funding increases are insufficient
- Implement total maximum daily loads (TMDLs)

Concerns

- BPA needs to honor its commitment to provide funding in Upper Snake Province (emphasize comment)
- As the Rolling Review process reached the upper Snake, the amount of money available got smaller and smaller
- Mitigation responsibilities in this area have not been met - Some areas of the Columbia River basin have received mitigation funds in excess of 100% of habitat units, and yet mitigation has not been completed in the Upper Snake
- Proposal writers need to know exactly how much money they are competing for in each cycle
- Are non-game, as well as game, species addressed by mitigation efforts?
- Plan should include assessments and inventories for nongame species
- What was the habitat like before reservoirs were constructed?
- Complete the adjudication of water rights
- Cattle ranching and its effects on streams
- Portneuf River in Pocatello
- When will funding be available again in the Upper Snake Province?

- Other areas in the Columbia River Basin have received more than 100% mitigation
- Need to know potential level of funding available through the Council
- Water quality
- Direct impacts of American Falls on Snake River, particularly annual sediment discharges
- Upper Blackfoot River, Marsh Creek, Portneuf River watershed
- What was "historical" habitat?
- Development in habitat areas/winter range
- Beaver and otter populations
- Cultural resources

Attachment C. Vision statement and comments recorded at the Idaho Falls public meeting on March 23, 2004

Vision (working draft - not completed by the group)
A healthy ecosystem characterized by abundant, productive, and diverse aquatic and terrestrial species, which support sustainable resource-based activities.

Goals
- Provide self-sustaining, balanced populations of wild, native, and sport fisheries
- Provide historic levels of hydroelectric power
- Fish and wildlife management that will provide abundant opportunities for fishing and hunting
- Protect and enhance resident fish and wildlife (emphasis on protection)
- Protect and restore riparian habitat
- Restore all types of habitats, wherever feasible
- Preserve open spaces, wildlife corridors, and the variety of habitat types required by species throughout their life cycles (i.e., shouldn't focus only on winter habitat for big game)
- Provide a mosaic of habitat types for a variety of species
- Protect native fish gene pool by reducing hybridization of Yellowstone cutthroat with rainbow trout
- Protect cottonwood riparian forests where they still exist
- Manage/shape water flows below reservoirs and dams to more closely resemble natural hydrographs and to achieve maximum benefits to both fisheries and other water users (example – current management of the South Fork Snake River below Palisades Dam)
- Balance of fish species -YCT, Brook, and Rainbow trout - habitats
- Prioritize areas for project implementation using well-defined criteria
- Protect habitats of all native species (fish, birds, game and non-game animals, plants)
- Keep healthy places healthy; don't allow additional degradation to occur
- Protect working agricultural land on private lands
- Protect component resources
- Increase populations of native species
- Do not attempt to re-establish Yellowstone cutthroat trout in artificial fisheries dominated by rainbow trout (for example, the Henry's Fork below Island Park Dam is a world-class rainbow trout fishery and it is not practical or desirable to alter it in order to re-establish Yellowstone cutthroat trout)
- Allow stocking of non-native, recreational fishes, but only in closed systems (for example, Birch Creek) or systems already dominated by non-natives (for example, Henry's Fork below IP Dam)
- Eliminate stocking of fish in flowing streams that are connected to other water bodies except in cases of native species recovery/re-introduction projects
- Decrease numbers of rainbow trout in the South Fork and other locations, where appropriate
- Protect Yellowstone cutthroat trout habitat from further degradation
- Re-establish healthy populations of native trout (i.e., Yellowstone cutthroat)
- Utilize adaptive management
- Educate the public regarding the importance of native species and other fish and wildlife issues
- Provide habitat that encourages development of self-sustaining populations of fish and wildlife
- Don't establish a time limit on efforts; process of fish and wildlife protection and enhancement must be self-perpetuating and on-going
- Use the presence of healthy populations of Yellowstone cutthroat trout as an indicator of watershed health

Problems/Projects:

- Law enforcement staff and services are inadequate to protect current and new land and resource acquisition and restoration projects
- A funding category for law enforcement should be created
- Willow Creek and Upper Snake Basin are good locations for water quality and land conservation projects
- South Fork – current efforts are to re-establish Yellowstone cutthroat trout populations
- Chesterfield Reservoir may be a good place for stocking Yellowstone cutthroat trout
- Riparian restoration projects by private landowners are currently underway throughout the subbasin
- Identify invasive and introduced species and their impacts (through competition and otherwise) on populations of native species
- Evaluate and identify areas where focus should be on best for YCT vs. another species (rainbows, browns, etc)
- Increase coordination of projects among state and federal agencies (BLM, FS, Idaho Department of Lands, F&G), non-governmental organizations (Trout Unlimited, Mule Deer Foundation) and private land owners
- Evaluate and identify potential ranges of wildlife and plants
- Develop criteria to use for prioritizing projects
- Identify, compile, distribute, and collect public feedback on wildlife corridor maps
- Need to evaluate the effects of "shrinking" and/or "diminishing" habitats on populations

Concerns

- What is the Council's and Bonneville Power Administration's commitment to spending funds in the Upper Snake Province? Some projects have not been funded as promised.
- Fisheries losses have not been as well characterized as wildlife losses
- A method for mitigating fish losses that is comparable to wildlife losses (i.e., habitat units) has not been developed
- What is the timeline for this management plan? Perpetual? Enduring? If hydroelectric projects have permanently altered habitat (for example, permanent loss of habitat when reservoirs fill); then mitigation and protection of mitigation projects should also be permanent.
- Protection of agricultural, as well as, natural resources
- Willow Creek subbasin
- How do we define "restore?"
- Lands management issues
- Tribal treaty rights are not well understood by the public and agencies
- Ensure that the plan inventory section includes projects implemented by soil and water conservation districts
- Ensure that the plan inventory includes the Yellowstone cutthroat trout presence/absence survey performed on the Caribou-Targhee Forest and lands managed by Bureau of Land Management
- What does the Council's vision of "providing for electricity at the lowest possible cost?" really mean? Does this refer only to economic costs, or does it include costs to fish, wildlife and habitat? Does this statement allow for the possibility that additional costs will be incurred by fish and wildlife?
- The true costs of generating hydroelectric power, including monies spent for fish and wildlife mitigation, should be shared with the public

Attachment D. Vision statement and comments recorded at the Driggs public meeting on March 25, 2004

Vision (working draft - not completed by the group)
Protect, restore, and sustain native species and their habitats in order to recognize the key ecological and economic aspects of the Upper Snake Province.

Other key concepts that should be included in the vision:
- Long-term commitment
- Landscape-wide or landscape-level approach
- Long-term viability of key assets of the Province
- Public education
- *Stewardship*: awareness of resources and commitment to protect them

Goals:
- Educated public
- Protect and restore wetlands
- Protect Yellowstone cutthroat trout (YCT)
- Protect and restore riparian corridors
- Ensure long-term protection of intact riparian system
- Protect/keep healthy sections viable
- Protect and restore all habitats used seasonally during various stages of the life cycle of wildlife (for example, winter range, calving areas, nesting areas, fish spawning areas, fish rearing areas) and protect critical areas when known
- Protect and enhance two remaining cottonwood forests on South Leigh and Badger Creeks.
- Mitigate for loss of wetlands due to development and decreased water in historic wetlands.
- Restore connectivity among streams and rivers to enhance YCT
- Identify and control invasive and non-native species and their impacts, with particular focus on invasive reange plants

Problems/Projects
- Need research to elucidate the factors that limit fish and wildlife populations and habitats (for example, there is great concern over declining populations of YCT in the upper Teton, but little is known about the causes of the decline)
- The most important concern in the upper Teton watershed is water availability, opportunities to better utilize water, the relationship between ground and surface water, and the effects of major hydrologic alteration
- Teton regional Land Trust has developed conservation plans that can be included in the plan inventory
- Threats to habitats – growth in wrong areas and barriers to wildlife utilization and movement
- Need protection and to pursue opportunities for restoration of cottonwood forest on South Leigh and Badger creeks
- Need to study age structure of existing cottonwood forests and identify locations where hydrology supports regeneration
- Relationship between surface and ground water and effects of hydrologic modification
- An aquifer recharge and spring flood waters retention project is currently being sponsored by Friends of the Teton river
- There is a diminishing supply of ground water but it may be possible to mitigate the effects – need to study
- High population turnover due to popularity of area among second-home buyers requires a continuous effort to re-educate Teton Valley residents regarding resource issues
- Conservation easements a widely used tool to protect open land that provides wildlife benefits

Study how surface and groundwater hydrology has been altered historically

Concerns:

- Mule deer populations in decline relative to white-tailed deer; white-tailed deer are severely impacting cottonwood forests
- Riparian areas that historically served as migration corridors throughout Teton Valley are highly altered and badly degraded

Attachment E. Vision statement and comments recorded at the Ashton public meeting on March 30, 2004

Vision

Key concepts that should be included in the vision:

- Sustainable resource use that is economically beneficial
- Agriculture co-existing with fish and wildlife uses
- Maintain wildlife populations as they are currently
- Provide for future growth but at the same time, protect the quality of life (including fish and wildlife values) that are the reasons people want to move to this area
- Provide for future growth without impacting fish and wildlife
- Protect and enhance fish and wildlife habitat

Goals:

- Maintain the "most desirable" species
- Maintain healthy fish populations because they draw anglers, tourists, and other visitors to the area and are therefore economically important
- Maintain native species in order to maintain the ecosystem in a condition that is as close to a natural as possible
- Plan for future growth
- Establish minimum stream flows to protect fisheries and riparian areas
- Increase the numbers of Yellowstone cutthroat trout (YCT) in headwater streams to avoid Endangered Species Act (ESA) listing and alleviate concerns about rainbow trout in the Henry's Fork
- Protect water rights; protection of species should not threaten water rights
- Protect private property rights
- Preserve access to streams and rivers by the public
- Inform landowners and the public that the Upper Snake Province Plan cannot and will not affect water rights or private property rights and uses
- Increase public awareness and respect for the rights of landowners

Projects/Problems:

- Study and monitor the effects of whirling disease on fisheries populations
- Trumpeter swan populations and related issues
- Decreased numbers of sage grouse leks
- A management plan for sage grouse has been completed and should be included in the inventory section of plan
- Increase sage grouse numbers to prevent ESA listing
- Add provisions to conservation easement contracts that would allow owner to address problems caused by public use
- Humans are more important than fish and wildlife; the human element needs to be included in the process
- Can more be done in the upper Snake to help salmon?
- Study whether water used from the Henry's Fork basin to "flush" salmon smolts produces more fish or more hydroelectric power
- Moose and white-tailed deer seem to be losing fear of humans and spend more time in the vicinity of homes; creates problems due to human-wildlife interactions
- Determine the baseline populations of white-tailed deer and moose
- Study habitat requirements of all species
- Study how white-tailed deer populations are affecting mule deer populations
- Study the socioeconomics of water use in the area

- River access needs to be preserved (example, secure the boat ramp at the confluence of Warm and Henry's Fork rivers)
- Improve the reputation of sportspersons among land owners
- Increase public awareness of private property rights; support the "Ask First" program
- Minimum stream flows are ideal, but more can be gained from "water sharing"

Concerns:

- Why is there so much emphasis on native species?
- If hybrid fish are healthier, and fishermen want more fish, shouldn't the focus be on healthy fish, regardless of the species?
- Maintenance of adequate water in the Henry's Fork River and its tributaries
- More people are using the Henry's Fork area, so there is more pressure on it and local residents and landowners feel threatened
- Landowners fear that despite owning their land and paying taxes on it, *everyone* must be allowed on their land and owner loses ability to make choices
- Landowners fear they may be forced to sell their land for wildlife habitat; there is a need to inform landowners that properties are only purchased from willing sellers
- Access to rivers and streams by anglers is being lost because landowners are increasingly unwilling to allow the public to cross their property
- The public increasingly abuses private property, making it necessary for private landowners to prevent access (includes problems with anglers, hunters, snowmobile users, ATV users)
- Lands purchased by the Tribes to protect wildlife habitat using BPA funds are actually lands purchased by rate payers because BPA funds are from rate payer fees
- Sand Creek moose population is unique because it moves as a migrating herd (only other moose herd is in Alaska); ensure this information is in the plan (contact Dennis Aslett at IDFG)
- Moose, white-tailed deer, and cougars are more prevalent and seem to co-exist well with humans in the area
- Salmon and water policy
- Salmon "flush" using 427,000 acre-feet of upper Snake water just a way to take farmer's water; success of salmon more dependent on ocean conditions
- Do not create more wilderness areas
- Trumpeter swans
- Economic development in Ashton area, especially infrastructure
- Perception and fear that landowners will be forced to use their land in certain ways and that they will lose control of their land
- Humans are more important than fish and wildlife, but that seems to be left out of the planning process; this is threatening to people; the human element needs to be acknowledged
- Protect working landscapes

Attachment F. Vision statement and comments recorded at the Jackson public meeting on March 22, 2004

Vision: Working draft- not completed by the group.

- A healthy ecosystem including **connected habitats.**
- More natural ecological processes are allowed to occur which restore native species and healthy cottonwood forests
- A public that appreciates the value of these resources
- A commitment to protect, enhance, and restore native fish, wildlife, and vegetation species, and their ecosystems, including the natural processes on which they depend.

Goals:

- Educate public on recreational and/or resource use.
- Protect and enhance riparian cottonwood forests below Palisades and Jackson Lake dams
- More ecosystem processes, including river access to flood plains, natural hydrographs
- Healthy quaking aspens stands for mule deer and other species
- Regeneration of cottonwood forests through flooding
- Connected habitats
- Enhance &/or return adfluvial cutthroat populations in Jackson Lake to historic levels
- Protect and enhance fine-spotted Yellowstone cutthroat trout (YCT) populations and other native species
- Reduce hybridization of YCT and rainbows in the lower Salt River
- Restore native species and spawning areas below Palisades Dam
- Restore natural processes below dams
- Enhance public awareness of the value of native species and issues related to native species

Problems/Projects:

- Conduct research on how flow regimes below the dams vary from natural regimes
- Good example of an enhancement project: South Fork YCT project, which includes multiple components such as streambank restoration, in-stream habitat, fisheries management to enhance YCT and reduce rainbow numbers, entrainment projects
- Determine minimum and optimal in-stream flow for fisheries in Headwaters streams and especially in the Salt River
- New location for funding on the Lower Salt area
- Salt and Hoback rivers are good candidates for multi-component project:.
- Educational program on the impacts of non-native species on native species
- Enhance and protect Snake River CT spawning areas, particularly spring streams
- Issue: Getting public support for YCT. Native vs. non-native issues.
- Need more funding for projects, especially from the Council
- Flat Creek is a good example of a stream enhancement project

Concerns/Interests:

- The management planning process
- River management
- Habitat protection
- Restoring natural hydrograph
- Wildlife and fish in areas managed by the Forest Service
- In-stream flows
- Funding

Attachment G: Vision statement and comments recorded at the Arco public meeting on March 31, 2004

Vision:
Enhance the quality of life for people, fish, and wildlife by becoming better stewards of the water available in the Closed Subbasin

Goals:
- Fair and equitable management of water in the Big Lost drainage
- Increase the amount of water in the Big Lost River as far downstream as possible for fish and wildlife and aesthetics
- Enforce water rights
- Allow willing individuals to sell or donate their water rights to in-stream flow
- Improve downstream flow of water in the Big Lost by improving the river bed
- Take marginal farm land out of production through conservation purchases
- Obtain better information about groundwater aquifers
- Domestic water use should receive higher priority than livestock watering
- Find a means to implement a proposal by the Natural Resources Conservation Service to put land into dry land pasture to conserve water (may require special legislation)
- To have BPA money allocated to projects in the Closed Subbasin
- Enact water legislation that would make it possible to conserve water without losing the associated water right
- Increase the priority of beneficial use of water for aquifer recharge
- Reduce amount of land being irrigated

Projects/Problems:
- Water is over-appropriated in the Big Lost drainage
- What is the connection between surface water in the Big Lost drainage and ground water that emerges at Thousand Springs? Is Big Lost water ultimately being used for power generation on the lower Snake?
- Wells are going dry because there is no recharge of the aquifer
- Surface water in Big Lost does not flow past Leslie where it goes subsurface
- Study of sage grouse loss (working group information for inventory)
- Study loss of sandhill crane
- Study relationship between surface and groundwater and behavior of water in groundwater aquifers
- Water trading and/or water banking needed
- Need to study mountain whitefish to increase understanding of habitat requirements (this fish has not been well-studied although it is known to be a genetically unique population)
- Too many beaver in Antelope Valley and Alder Creek, which causes retention of water and spreading of water high in the drainage
- Need monitoring of ATV trails to protect private property, wildlife, and wildlife habitats
- Channelize water to improve stream flow beyond Leslie sinks
- Bull trout draft recovery plan should be in inventory
- Study of Antelope population decline in closed subbasin
- Establish minimum flows
- Coalition for Water, has been established locally to enhance research through INEEL and University of Idaho Water Resources Institute
- Install pipes to reduce evaporative loss of irrigation water during transmission
- Junior water rights are being filled before senior rights
- Projects are being implemented as part of bull trout recovery plan

- Cottonwood regeneration limited to upstream of Leslie; forest dying below Leslie
- Management, monitoring, and enforcement of ATV use

Concerns:

- Can funds obtained through the Council's process be used to mitigate problems not associated with hydropower?
- Idaho Department of Water Resources is "letting the water manage itself"
- More land was opened to irrigation when practices changed from flood to pressure irrigation; now water is spread too thin and more evaporates instead of percolating into the aquifer
- Water is being used on marginal farm land
- Poor understanding of ground and surface water
- Likelihood of allocation of BPA money to Closed Subbasin
- Frustrated by paying taxes on water rights that are never filled
- Many springs have dried up but not solely because of drought
- Arco is dying, more water in the Big Lost as far downstream as Arco will increase tourism and local economy
- Native fish in Big Lost is the mountain whitefish
- Native fish in Beaver, Camas, and Medicine Lodge creeks is Yellowstone cutthroat trout
- Native fish in Little Lost is bull trout

APPENDIX B

Upper Snake Province

QUALITATIVE COMPARISON OF BIOLOGICAL OBJECTIVES WITH CWA AND ESA MANDATES — ESA/CWA RATING: ++ HIGHLY SUPPORTIVE, + SUPPORTIVE, 0 NEUTRAL, - NEGATIVE

Focal Habitats/Focal Species	Limiting Factors	Biological Objectives	CWA	ESA
I) Aquatic: Yellowstone cutthroat trout Bull trout Mountain whitefish Utah valvata snail Snake River physa snail	**Impoundment and dam operation:** A. Altered hydrograph below dams prevents natural stream processes B. Fish passage barriers C. Low reservoir levels degrade the habitat of over-wintering focal species D. Low reservoir levels degrade reservoir and downstream water quality	A1. Restore natural river processes below dams (hydropower and irrigation), including peak flows that access the floodplain, to benefit focal species.	+	++
		B1. Restore upstream connectivity around dams.	+	++
		C1. Maintain sufficient reservoir levels to support overwintering focal species.	0	++
		D1. Maintain water quality downstream of dams that meets the life history needs of focal species.	++	++
		D2. Maintain reservoir water levels to support water quality requirements of focal species.	++	++
	Diversions/canals: E. Fish passage barriers F. Habitat connectivity – reduced natural flows G. Water quality H. Water quantity	E1. Restore upstream connectivity around diversions for fish passage.	+	++
		F1. Maintain flows below dams/diversions that support focal species.	++	++
		F2. Identify and reduce artificially blocked streams or unscreened diversions.	0	++
		G1. Restore water quality conditions, including stream flows, to meet focal species' needs as well as applicable water quality standards.	++	++
		H1. Maintain flows to support focal species needs including migration.	+	++
	Habitat alteration I. Channel bank stability J. Instream habitat	I1. Restore or stabilize stream reaches that have become unstable (e.g., braided channels, down-cutting, etc.) from land management practices.	+	++
		I2. Protect, enhance, and restore riparian health and function along streams supporting focal species and to meet applicable water quality standards.	+	++

Focal Habitats/Focal Species	Limiting Factors	Biological Objectives	CWA	ESA
	K. Diking/channelization	J1. Protect, enhance. and restore instream structure, diversity, and complexity (e.g., riffle/pool ratio, LWD, width/depth ratio, etc.) necessary for supporting the life history functions of focal species.	0	++
		K1. Restore or mitigate aquatic habitats and stream banks that have been artificially diked and/or channelized (note: mitigate where restoration is not possible).	0	++
	Focal species stability:	L1. Protect, enhance, and restore genetic integrity of focal species.	0	++
	L. Introduced species	L2. Maintain flows to provide connectivity/migration to meet focal species' life history needs.	++	++
	M. Isolation/fragmentation	M1. Improve connectivity of meta-populations of focal species (e.g., stream flow).	+	++
	N. Focal species recruitment	M2. Remove physical barriers that prevent migration of focal species.	+	++
	N1. Survival	N1. Improve survival of focal species in all life stages.	+	++
	N2. Abundance	N2. Increase focal species numbers to viable usable population according to the Title 36 mandate of IDFG.	+	++
II) Riparian/Wetland Western toad Yellow-billed cuckoo American beaver	A. Altered hydrograph (dams/diversions)	A1. Protect and enhance the riparian cottonwood forests in river bottoms.	+	++
	B. Changes in land use	A2. Restore bank-full discharge events below dams for riparian maintenance production.	+	++
	C. Transportation impacts	A3. Restore discharges below dams that activate floodplain function.	+	++
	D. Overgrazing	A4. Conserve water within the existing legal framework and identify and develop opportunities to improve stream flows that will benefit riparian/wetland habitats and focal species.	+	++
	E. Recreation activities are damaging riparian and wetland areas	A5. Reduce the impact of invasive plant species on native species and ecosystems.	0	++
	F. Spring flows and associated habitats are being lost to spring capping/piping for livestock tanks	B1. Prevent future loss of riparian/wetland areas.	+	++
	G. Beaver management	C1. Protect, enhance, and restore riparian and wetland function.	+	++
		D1. Protect, enhance, and restore riparian and wetland habitats where they are being impacted by grazing activities.	+	++

Focal Habitats/Focal Species	Limiting Factors	Biological Objectives	CWA	ESA
		D2. Protect, enhance, and restore springs that have been impacted by overgrazing.	+	+
		E1. Protect, enhance, and restore riparian and wetland habitats where they are being impacted by recreation activities.	+	++
		F1. Restore and protect springs at livestock watering developments.	0	+
		G1. Reintroduce beavers as a means of restoring and enhancing riparian and wetland habitats.	0	+
III) Open Water/Ponds/ Impoundments: Western grebe American white pelican Trumpeter swan Common loon	A. Water fluctuations affect loafing, feeding, nesting, and brood rearing habitat for waterfowl, colonial waterbirds, and shorebirds B. Human disturbance during nesting and brood rearing C. Lack of available or suitable habitat for waterfowl and shorebirds on ponds and impoundments	A1. Manage water levels to benefit loafing, nesting, feeding, and brood rearing habitat for waterfowl, colonial waterbirds, shorebirds, and other aquatic focal species and their habitats.	+	++
		B1. Protect colonial rookeries and waterfowl broods from disruptive human disturbance.	0	0
		C1. Protect, enhance, and restore nesting habitat for waterfowl and shorebirds on ponds and impoundments.	0	0
IV) Pine/Fir Forest: Black-backed woodpecker Great gray owl Boreal owl, Northern goshawk	A. Loss of large, late-seral stands B. Fragmentation of forest complexes C. Lack of natural fire regime D. Insect and disease damage	A1. Identify, enhance, and protect potential late-seral forest habitats to benefit focal species and achieve forest Desired Future Conditions (DFC).	0	++
		B1. Use forest management practices to achieve DFC of healthy forests.	+	++
		C1. Reduce fuel loads where appropriate. Use fire management to achieve DFC of healthy forests.	0	+
		D1. Use forest management practices to control the spread of insects and disease.	0	+
V) Juniper/Mahogany: Curl-leaf mountain mahogany	A. Lack of natural fire regime B. Competition with invasive plant species C. Loss of regeneration	A1. Restore natural fire regime to prevent juniper encroachment and restore mahogany stands.	0	0
		B1. Limit/treat exotic plants that compete with mahogany.	0	0
		C1. Limit livestock and elk grazing/browsing to allow successful mahogany regeneration.	0	0

Focal Habitats/Focal Species	Limiting Factors	Biological Objectives	CWA	ESA
VI) Whitebark Pine: Whitebark pine	A. White-pine blister rust	A1. Protect remaining stands of whitebark pine from white-pine blister rust.	0	0
		A2. Understand and establish conditions that support existing and new stands of whitebark pine.	0	++
VII) Aspen: Quaking aspen	A. Conifer encroachment	A1. Manage to have 80 percent of the mixed conifer/aspen habitat complex be in 100 percent aspen stands.	+	+
	B. Inadequate regeneration	A2. Manage aspen stands against pine/fir encroachment.	+	+
	C. Insect and disease damage	B1. Reintroduce fire to regenerate aspen in decadent/diseased aspen stands.	0	+
		B2. Manage livestock and big game to allow aspen regeneration after fire in decadent stands.	0	+
		C1. Manage insect and disease problems in aspen stands.	0	+
VIII) Mountain Brush: Antelope bitterbrush Green-tailed towhee Mule deer Rocky Mountain elk	A. Mountain brush regeneration	A1. Restore, enhance, and protect the geographic extent of remaining mountain brush habitats.	+	+
	B. Fire	B1. Manage fire to maintain mountain brush habitats.	0	0
	C. Invasive plant species competition	C1. Control invasive plant species such as cheatgrass from encroaching/replacing mountain brush habitats.	+	0
	D. Land use change	D1. Identify and protect important mountain brush habitats that lie in winter range areas and/or are vulnerable to development.	0	0

Focal Habitats/Focal Species	Limiting Factors	Biological Objectives	CWA	ESA
IX) Shrub-Steppe Northern sagebrush lizard Greater sage-grouse Sage sparrow	A. Loss of shrub-steppe habitat B. Undesirable invasive plant species competition C. Land conversion/ development D. Fire E. Juniper encroachment	A1. Protect, enhance, and restore shrub-steppe habitats. A2. Minimize impacts to native bunch grasses and forbs from livestock grazing and maintain diverse shrub-steppe canopy cover. B1. Control undesirable invasive plant species competition. C1. Reduce or eliminate land use conversion and habitat fragmentation. C2. Restore planted crested wheatgrass areas to shrub-steppe habitats. C3. Restore shrub-steppe habitats in areas displaced by cheatgrass monocultures. D1. Prevent invasive plant species establishment. E1. Treat Utah juniper encroachment on shrub-steppe habitat.	+ + 0 0 0 + 0 0	++ ++ ++ ++ ++ ++ ++ +